Ramgram Municipality

Office of the Municipal Executive

Lumbini Province

Parasi,Nawalparasi(Ba.Su.Paschim)

Municipality Transport Master Plan (MTMP)

Ramgram Municipality, Nawalparasi(Ba.Su.Paschim)

(Final Report)

Jestha, 2078

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(Final Report)

SUBMITTED BY:

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The study team

Executive Summary

Transport facilities help in developing access with the rural-urban linkages. Road accessibility can reduce isolation, stimulate crop production and marketing activities, encourage public services and help to transfer technology. Road building has been seen to bring about notable enthusiasm and visible changes in rural life. Road infrastructure is considered as "the infrastructure for infrastructure". However, in the absence of notable criteria and rational guidelines, road construction is carried out in adverse manner resulting in haphazard use and wastage of limited resources. Municipal Transport Master Plan is prepared for assessing and planning the present road and transport infrastructures and facilities within the municipality and the surrounding municipality.

Ramgram Municipality is located in Nawalparasi District, a Terai district of Lumbini Province, which was established in 2053 covering an area of 93.91 square kilometres with 18 numbers of wards and population of 60,069 according to CBS 2011.

This study also formulated the road hierarchy for the various roads namely Class A, B, and C. Class C basically deals with access while Class A and B basically deal with mobility and accessibility to higher services. The total lengths of Class A, B and C roads are 83.53Km, 80.65Km and 147.65Km respectively. Class A, B and C roads are proposed with appropriate cycle track, footpath, and green belt the cost of which is calculated as equivalent to the cost of gravelling.

Due to the limitation of the municipality budget, the roads are required to be ranked based on the provision of ToR. For the short term implementation of MTMP, it is assumed that roads are constructed upto gravel. And the budget capacity of municipality increases by 7.5% each year. Based on these assumptions, five-year implementation plan is prepared. This shows the budget required for the first five year as 1916 million rupees. There is gap between the estimated budget and the present municipality budget. For example in the case of first year plan, the estimated budget is 330 million whereas the projected budget of municipality for this year is 161 million. This gap in budget should be fulfilled by outer sources.

Non-motorised travel mode and green belt are given consideration while designing different class of roads. Median strip is used to separate opposing traffic flow and hence provide safety. Also separate footpath and cycle track is provided to facilitate the active user. Preparation of MTMP is the first effort for the planned development of the municipal area. This is an opportunity for implementing a sustainable transport system in the municipality. The study being its first should be periodically reviewed and revised along with integration with other plans. This will ensure efficient use of available resources and proper development of the municipality. For effective MTMP, it needs to be compatible with comprehensive town planning and land use policy

Acronyms/abbreviations

DDC	District Development Committee
DTMP	District Transport Master Plan
GIS	Geographic Information System
GPS	Global Positioning System
IDPM	Indicative Development Potential Map
MIM	Municipality Road Inventory Map
MRCC	Municipality Road Coordination Committee
NMT	Non- Motorized Transport
MTMP	Municipality Transport Master Plan
MTPP	Municipality Transport Perspective Plan
VDC	Village Development Committee
MTPP	Municipality Transport Perspective Plan
PCU	Passenger Car Unit
DOLI	Department of Local Infrastructure
OD	Origin and Destination
ToR	Terms of Reference
HH	Household
VDCs	Village Development Committees
PT	Public Transport
Min.	Minute
Km.	Kilometre
Sq. km	Square Kilometre
Ha	Hectare

Table of Contents

List of Tables

List of figures

CHAPTER I: INTRODUCTION

This chapter briefly explains the background and study of the study area along with the scopes and objectives associated with the preparation of Municipal Transport Master Plan of Ramgram Municipality, Nawalparasi (Bardaghat Susta Paschim).

1.1 Background:

Life in cities-i.e., organized human settlements, which are mostly referred to as communities is only possible if people have mobility in daily basis. Residential area is separate from workplaces, major shopping is concentrated in identifiable centers, and larger entertainment and relaxation facilities are found at specific locations. They have to have accessibility. Unlike in a rural context, very few of these destinations are reachable on foot; at least, they tend not to be within a convenient walking distance for all.

Transport facilities help in developing access with the rural-urban linkages. Road accessibility can reduce isolation, stimulate crop production and marketing activities, encourage public services and help to transfer technology. Road building has been seen to bring about notable enthusiasm and visible changes in rural life. Road infrastructure is considered as "the infrastructure for infrastructure". However, in the absence of notable criteria and rational guidelines, road construction is carried out in adverse manner resulting in haphazard use and wastage of limited resources.

Municipal area by its nature will attract more population as socio-economic growth and other infrastructure development will gain pace. The municipality and its surrounding municipalities will see a rapid increase in housing, infrastructure and urban services demand. In this regard, Ramgram Municipality is initiating the formulation of Municipal Transport Master Plan for assessing the present road and transport infrastructures and facilities within the municipality. So as to be presented as proper municipality or a city, it must have a very good mobility and accessibility by public or private means of transportation.

1.2 Objectives

The prime objective of this study is to prepare the Municipal Transport Master Plan (MTMP). The planning approach is participatory and bottom-up from the settlement level. It includes a constructive plan to incorporate all present and tomorrow's transportation needs. The specific objectives of the MTMP as indicated in ToR are as follows:

1. Prepare the Municipality Inventory (MIM) of all road networks.
2. Identify the major road networks linking the municipality with the surrounding areas.
3. Prepare Indicative Development Potential Map (IDPM).
4. Prepare visionary city development plan
5. Collection of demands for new/rehabilitation transport linkages from Municipalities/settlements based on city development plan.

6. Analyse the present mobility and accessibility situation.
7. Identify and prioritize the interventions based on mobility and accessibility situation.
8. Develop scoring criteria and its approval from Municipality.
9. Prepare the Perspective Plan of transport services and facilities (Municipal Transport Perspective Plan)
10. Prepare physical and financial implementation plan of prioritized roads for the MTMP period.
11. Prepare a five years Municipality Transport Master Plan (MTMP).

1.3 Scope of work:

The scope of this work is summarized as:

a. Accessibility data Collection and Analysis.

   The accessibility situation is evaluated from the settlement level and data is collected. Various surveys carried out to gain such data including their travel patterns, questionnaire surveys and origin-destination survey.

b. Analyze Mobility status of the municipality
   Mobility status is studied. This is important especially because the road network has provided accessibility in Nawalparasi district to nearly 100% of the population. The question then arises on how efficiently; economically and safely the goods and passengers are transported, which is indicated by mobility.
c. Assess the condition of public transportation
   Data on different public transportation routes and their operation characteristics, which operate within the municipal area and to other adjoining area, is collected and studied.
d. Assess safety status and issues
   Road safety status and issues is accessed. For this, roadside condition survey during road inventory survey and other accident data is reviewed. Possible interventions to make the roads safer are proposed and recommended.

e. Prepare the Indicative Municipality Development Potential Map (IDPM) and visionary city development plan

   IDPM is prepared using topographical base maps and digitized GIS maps. In the IDPM, potential areas for development are identified and prioritized through ranking.

f. Prepare Municipality Inventory Map (MIM) of existing roads within Ramgram Municipality.

   Municipality Inventory Map linking to strategic road networks such as national highways, district core road network, main trails and bridges is prepared. The inventory map has included the road names, total length and breadth of the roads, surface type, existing condition, Right of way, vehicular traffic and pedestrian traffic flow etc.

g. Collection of demands for New/Upgrading/Rehabilitation transport Linkages from Wards/Settlements

   Data regarding the construction, maintenance or rehabilitation of roads according to the existing condition and demand is done. Such data was collected through ward meeting or community level discussion. The demand data was collected in priority order for each ward. The roadside conditions of all the linkages were noted during the road inventory survey.

h. Scoring criteria

   Scoring criteria to screen and prioritize all interventions potential interventions for proper allocation of limited budget is developed and approved by the municipality.

i. Road classification and Nomenclature

   Metric system of nomenclature is used and applied the same classification throughout the data collection.

j. Preparation of perspective plan of interventions of services and facilities.

   The data collected through accessibility survey, demand survey and inventory maps are used to prepare a perspective plan of interventions of services and facilities. All the identified interventions are screened and rated on the basis of approved criteria and forwarded to Municipality council meetings. The final perspective plan has been shown in GIS maps.

k. Prepare a realistic physical and Financial Implementation Plan of Prioritised Roads for the MTMP period

   Resources required for the implementation of the MTMP is assessed and the financial plan (required) for the next five years is prepared.

l. Prepare Municipal Transport Master Plan (MTMP) of Ramgram Municipality.
   Municipal Transport Master Plan (MTMP) is prepared with due consideration to the existing situation of: vehicular parking, travel routes, modes of transport, etc and purpose for future urban growth. A base scenario of the existing road and transport network and management based on the O-D survey and O-D matrix, and prepare road inventory map and transport infrastructure network and management plan based on the travel demand forecast, population growth forecast, and growth rate of vehicular and transport infrastructure is prepared.

m. Medium term and long term planning
   The scope of work demands a detailed work plan for five years period (short term). Forecast/estimate of the demand for medium term (10 years) and long term (20 years) is done and recommended a framework to guide future interventions and planning processes.

1.4 Limitation of Study:

- ✓ Lack of Comprehensive Town Development Plan, Proper Land Use Policy and Drainage Network Master Plan, which could have affect the future overall development pattern, and hence future development of these policy need to be based on the proposed MTMP.
- ✓ Unavailability of alignment of East West Railway, presence of which could have leads to certain change in proposed class of roads.
- ✓ Lack of base year data for traffic the traffic projection is based on the sample data survey which could not represent the true condition.

1.5Approach and Methodology:

Municipal Transport Master Plan has been prepared using participatory bottom-up approach and differs from conventional practices of trickle-down approach. Techno-Political interface has been incorporated in the planning process, where active participation from representatives of political parties, line agencies, municipality officials is crucial. The Municipal Road Coordination Committee (MRCC) has been constituted as authorized legislative body of municipality. This body, comprising all political parties' representatives and concerned technical officials, helps in necessary policy decisions during the MTMP preparation and implementation process.

The study started with preliminary planning or desk study where basic background of municipality is studied with help of secondary data including census data, GIS data. The study got acceleration with formation of MRCC and inspection report. Various field surveys were carried out with objective of collecting primary data on transportation network, trip characteristics and service facilities. Along with the primary data, demands for various transportation projects (construction/upgrading/maintenance) were obtained from each ward. Also, potential areas/locations for various facilities were also identified based on interaction with local people and MRCC. The scoring criteria for prioritizing road network was identified based on ToR and will be approved by municipality. Then, the hierarchy of roads will be purposed and perspective plan of various interventions will be purposed and analysed based on available fund and finally physical and financial implementation plan of prioritized roads for MTMP period. After analysis, the study will come up with potential roads, that need immediate intervention and roads that need to be given consideration for effective future planning.

All the above-mentioned strategy adopted for data collection, processing and analysis is summarized in the following figure in next page.

1.5.1. Secondary Data Collection

Any sorts of data that were collected from secondary sources are called secondary data. These data were collected from annual report published by district level offices and consultation with various concerned stakeholders. Municipal Road Coordination Committee (MRCC), which compromises people from various fields and political parties, is the next source for various secondary data. Field study was also carried out for general socio-economic assessment of the Municipality that includes collection of data regarding high development potential areas such as extensive agriculture, horticulture, livestock farming, high value cash crops, cottage and agro-based industries, centre for business/commerce/markets places, tourism area, service centers (hospital, health post, agriculture service sub-center etc.). The information about demographic data of municipality, various maps showing service centers, transport infrastructure inventory, past plans and sector study reports, sector standards and policy targets were collected from the secondary sources, which includes Bureau of Statistics, Survey Department, Local NGOs, line agencies, DDC, municipality etc. Digitized topographic maps, administrative map of municipality, strategic road network map prepared by DoR, etc. were some other secondary data that were used during the study.

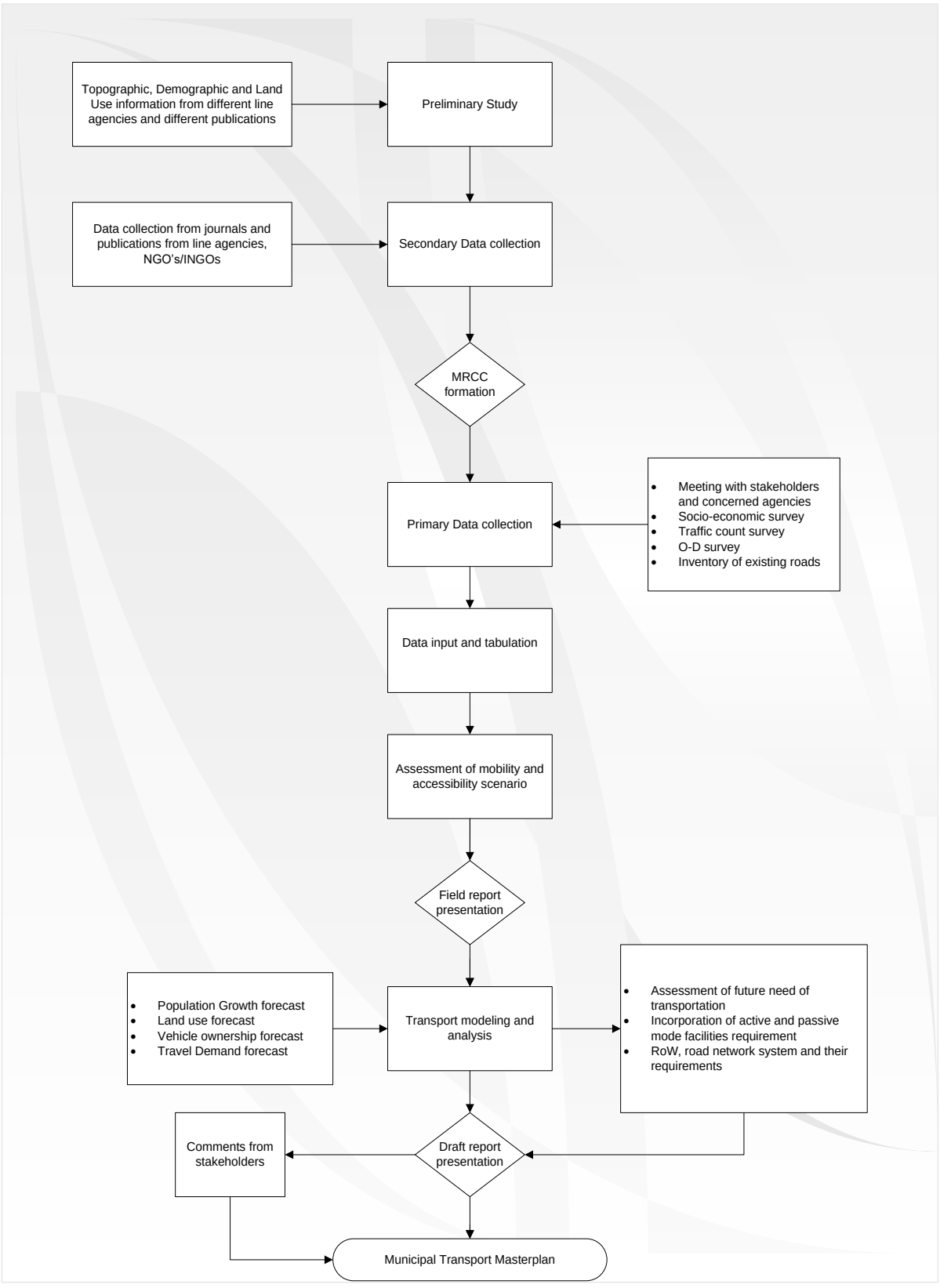


Figure 1: Methodological framework

1.5.2. Primary Data Collection:

Primary information on present household and trip characteristics, traffic characteristics, existing accessibility and mobility level of settlements, prioritized road network required for each ward are obtained via various reliable methods. Tracking of the existing road network along with detail information of its width, surface type and possible intervention required for the effectiveness of services is also carried out.

The primary data collection methods carried out in the field was:

- Origin and Destination (OD) Survey
- Road Inventory Survey
- Demand Survey
- Public Transport and Services Study

Household questionnaire method is used to conduct the OD surveys which gave various information on questionnaire reflecting personal, household and trip making characteristics. This survey will also help to visualize the accessibility and mobility scenario of road network and to public transportation from the settlement/wards. As all the household can't be covered a realistic and statistically significant sample size was calculated based on probabilistic method.

Road inventory survey was conducted to collect data on its condition of road, road linkage, road safety status and issues that need to be highlight. It helps in field validation of base maps and also assists in preparation of road inventory map, nomenclature and coding of the road linkages and to propose various interventions.

Road Demand survey comprised of interaction session with the members of *wada nagarik manch* followed by asking them to fill up demand survey form, which includes demand of new facility or interventions to improve existing roads based on priority.

Classified vehicle count will be conducted so as to reflect the usage of various vehicles in the certain route, especially where maximum volume occurs. Twelve-hour count has been planned at required location and the vehicles have to be classified to different types and finally traffic volume have to be converted to passenger car unit (PCU) to visualize the exact condition. This is not yet conducted due to less volume of traffic on the roads due to blockade in the fuels in market which don't gives the real condition of traffic.

Public Transport and Services Study highlights the services provided by public transportation and location of various services and facilities. It was carried out by directly interviewing the route operators.

1.5.3. Data Processing, Analysis and Presentation of Reports

Data collected at field were first entered at MS office tools (MS excel and Word) and GIS database. All the complete and reliable sets of data were transformed into useable information and the present scenario of municipality are shown through graphs, figures and tables. Similarly, those which were entered into GIS database provide various types of maps. Population and traffic were forecasted for the MTMP and MTPP time period. Various transportation models were used for interpretation and forecasting. And, finally various intervention were purposed and their economic analysis were also performed.

1.5.4. Preparation of Visionary city development plan

A creative description of Ramgram's future, the vision guides our decisions, helps us set direction and encourages us to align our priorities as we work to make Ramgram the city we want it to become in the year 2092/93 is the visionary city development plan. This will be finalised by the municipality. Based on this vision, the urban transportation planning is to be done.

1.5.5. Preparation of Indicative Development Potential Map (IDPM)

IDPM is basically the indication of the existing and potential market/service centers (key growth centers) and the areas having various development potentials such as high value cash crops, agro-based industries and tourism. Thus, IDPM shows the areas of high value cash crops, tourism potential, extensive agriculture, extensive horticulture, livestock farming, fisheries, hydropower location and the other social service centers areas such as hospital, post office, telecommunication, school, campus, ward centers, security offices and large settlements, important historic and religious places. Finally, it indicates the grading of various markets of the district thus providing the basis of network planning.

1.5.6. Digital Name Coding

Digital Name is a code given to each road which is unique and generated by an order of alphabetical and numerical digits. Each code is different to the other and forms the basis of differentiating from other road.

The first step taken in naming the streets is to identify the start and end point of a street. This was done with the help of municipal officials and local participation. A start point may be defined as a point located in the western end of a street, if the street is aligned in the West-East alignment and vice-versa. Similarly, in case of a street aligned in the North-South alignment, the start point shall be located in the Northern end of the street.

If the alignment of a street is not exactly North-South or West-East then the start point is defined by the angle by which a street is deviated from the North-South or the West-East line. If a street's deviation is within 45 degrees from North-South line then its start point shall be on the Northern end, else on the Western end of the West-East line. Although the above convention was followed, the situation of streets in some places can imply the method to be impractical. Hence, major service centres and markets or thoroughfares are also considered as the reference point for start point of a street.

After the designation of the start and end points, streets are assigned a unique code in the format A010101. The first letter in the Code represents a major road network (SRN, DRCN or Feeder Roads) in the municipality, which shall be taken as the reference for the Digital Name Coding of the municipal roads. The 2nd and 3rd number represent the number of primary branches from this major road network. Similarly, 4th and 5th number represent the number of secondary branches from the primary branches linking the major road and so on which maintains a hierarchy in coding. Each code may contain 1 letter only to a combination of 15 numbers and letters or more.

While coding, the streets branching from the main streets to the left are given only odd numbers (A01 or A13) and those branching from the right are given even numbers (A02 or A10). The major issue in Digital Name Coding process arises in the coding of new roads in the future. This issue is important as the codes are allocated progressively to each street and any new street shall be given a subsequent code after the last assigned code depending upon the left or right side of the street. The new Digital codes will break the continuity of the Digital naming of the streets but whatsoever these codes will be used for computer database as the local people only use street names for the recognition of the roads in the municipality.

1.5.7. Scoring criteria

A network consists of several links. It is not possible to construct all roads at a time due to resource and time constraint. Therefore, each link in a network needs to be prioritized. After developing a municipal level network, the cost estimate of the road is prepared. Existing population within the zone of influence, present road demand, future potential route, accessibility situation, land use pattern, environmental and social safeguard, proximity to the market/service centers, religious and tourism places were taken as the indicators for prioritization. The scoring criteria will be finalized after rigorous study and approval from municipality and MRCC.

Table 1: Scoring Criteria for prioritization of municipal roads

S.N	Scoring Criteria	Scoring Unit	Score
1	Link providing service to large settlement areas/population	Population served/km	30
2	Link providing service to existing	No of areas	30
	· market center		
	· tourist attraction areas		
	· other obligatory centres as decided by the Municipality		
3	Link providing service to the existing service centres such as health centres, education centres (schools/campuses), offices (Municipality office/Government office, etc.),	Number of different service sector	30
4	Link providing service to the areas recognised by the Municipality as areas for special consideration, such as areas inhabited by backward and poor ethnic groups/communities, isolated remote areas, historic sites, religious sites etc	Connection to the settlement of such criteria	10
		Sub Total	100

1.5.8. Presentation of results

The results obtained can only be perceived well by the readers if presented properly. Presentation tools such as charts, graphs, maps and reports have been used to present the analysis and results obtained. The specific presentations of results are summarized below:

- Reports: The analysed results have been properly explained in the reports. Report of the analysis has been presented at different levels as inception report, field report, draft report and final report. Any questions raised or clarifications demanded after the submission of draft report have been included in the final report.

- Charts and graphs: Relevant type of charts, tables and graphs have been used in the reports to present the information. Charts are especially useful to deliver the information more effectively.
- Maps: As the ToR demands, maps of road inventory, indicative development potential map, land use map and municipality transport prospective plan map has been prepared.
- In addition to the reports, the obtained results have been shared via presentation and electronic copy of GIS maps.

The analysed data and obtained results in the form of numbers/ tables and maps have been collected in and presented as final report in two volumes. The results have been presented and discussed among the municipality authorities and other stakeholders before preparing the final report.

1.6 Organization of Report

Section 1 presents the concept and context of MTMP and lists out the objectives and scope of the same.

Section 2 briefly explains the method used to conduct the study, analyse the data and presentation of the findings.

S*ection 3* presents the basic profile of the study area through the available census data and sample data collected and the existing scenario of the study municipality with reference to transport in the municipality.

Section 4 gives the comprehensive forecast of the population, transport and other development scenario. It also gives the picture of the implications that may arise and the transport infrastructure to meet the demand and accelerate the development. It also describes the short term, medium term and long term plan. It also describes the formulation of road hierarchy and name and description of different classes of roads

Section 5 is dedicated to the five year (short term) municipality transport master plan (MTMP). It gives the comprehensive strategic framework, perspective plan of the municipal roads, budget expenditure, financial institution, capital investment plan and the staging implementation plan.

Section 6 summarizes the report and gives necessary recommendations.

CHAPTER II: REVIEW OF EXISTING STATUS OF MUNICIPALITY

The chapter deals with the present condition and scenario of the municipality based on various primary and secondary data sources. Socio-economic, trip, land use and transportation characteristics are basically deals in this chapter along with analysing accessibility and mobility scenario within the municipality. The basic data source of the analysis is the collected primary data.

2.1 Income and Vehicle ownership

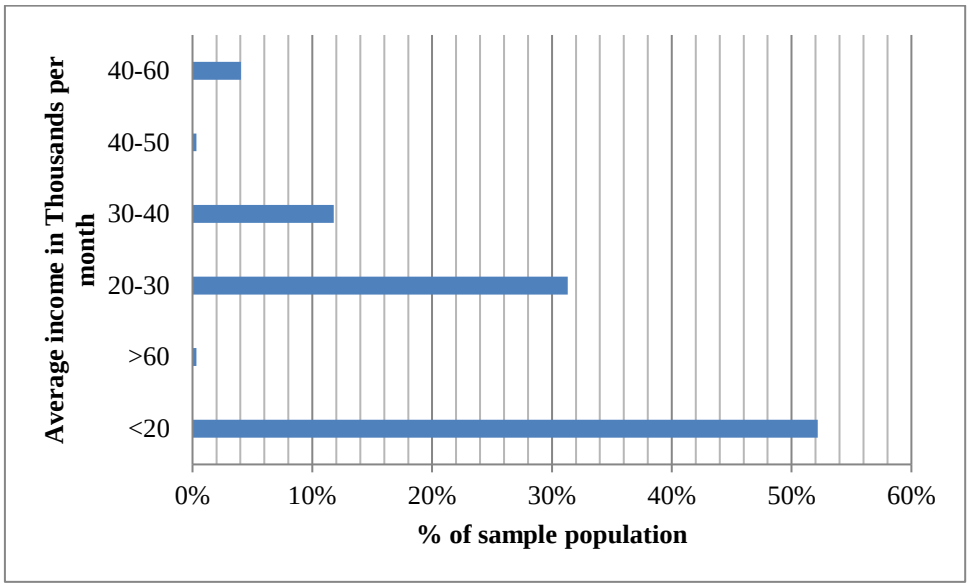


Figure 2:- Income status from sample population

Annual or monthly earning of each household has significant role in the trip characteristics and finally on the overall planning aspects of the locality. Higher the income, people tends to live luxurious life i.e. tends to have their own vehicle and so on. The income characteristics are aggregated in household level, which revealed that majority of them (52%) are at low income status (monthly income less than NRs. 20,000) and just a few (4.7%) have income level more than 40,000. Income level also affects vehicle ownership pattern. Most of the people with House Hold income less than 20,000 own cycle and as income increases ownership of motorbike increases.

Table 2: Income Status from sample data

Income in Thousands per month	Number of family	Family having Motorcycle	Family having Bicycle
<20	155	30	142

Income in Thousands per month	Number of family	Family having Motorcycle	Family having Bicycle
20-30	93	48	63
30-40	35	12	31
40-50	1	1	1
40-60	12	7	10
>60	1		1
Grand Total	**297**	**98**	**248**

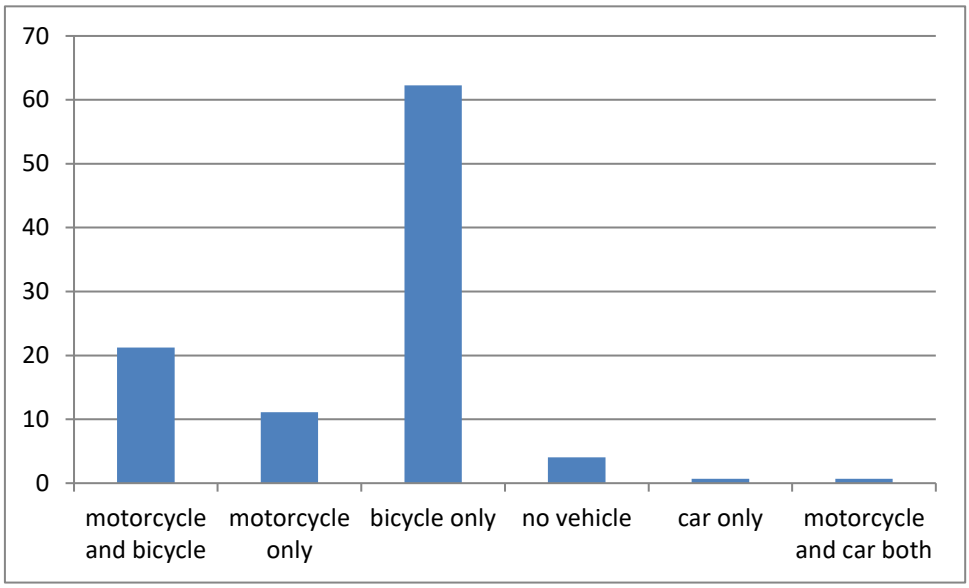


Figure 3 vehicle ownership of sample population

Vehicle ownership has a great role in trip making. Higher the number of personalized vehicles, higher will be the number of shopping and social/recreational trips. Cycle ownership proportion was found to be too high i.e.62. Around 11% household owned bike. This proportion is expected to rise in future as income level increases. The vehicle ownership level of sampled HH is summed up in table below.

Table 3 Vehicle ownership on the basis of population and household

	On the basis of population		On the basis of household	
	number	per 100 person	number	per 100 household
Car	4	0.3	5	1.7
Motorcycle	108	8.0	98	33.0
Bicycle	377	28	248	83.5
Other	8	0.6	6	2.0

2.2 Trip Purpose and Mode:

Trips are undertaken for various purposes, some trips are compulsory which involves trips made for educational and work purpose, whereas trips made for shopping or recreational might be regarded as optional trips, which can be managed.

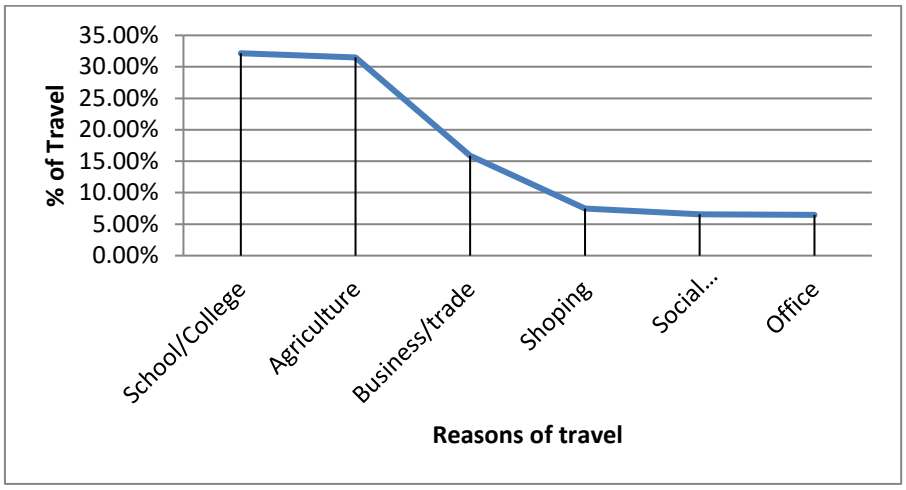


Figure 4: Trip purpose of sample data

Based on the respondents, educational trips covers about 32%, agricultural trip covers about 31% and other type of trips contribute less than half of the total trips. Summarizing, more than half trips are compulsory trips, whose timing can't be altered. These trips are basically done during morning or evening peak time, whereas timing of other trips can differs.

Different means of transport are used for different trips. Based on sample, walking, rickshaw and Cycling were found to be the most dominant modes as highlighted in above figure. Plain terrain favours the use of non-motorized travel (NMT) mode, which includes walking, cycling, rickshaw, cart, etc. In other words they are termed as ***active transport mode***. More than 70% of the trips are active mode user.

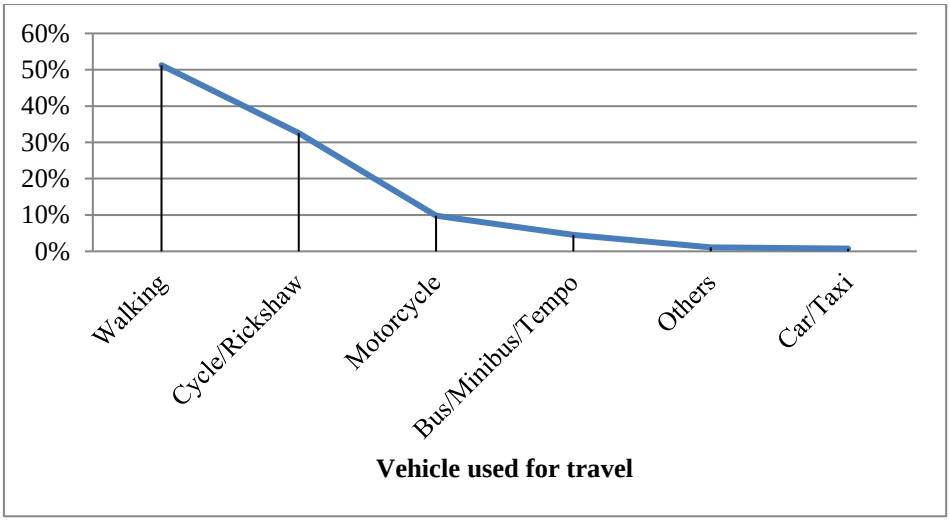


Figure 5: Mode Share

Active mode transport are essential mode of sustainable transportation system, as they provide access to all economic level of people along with reducing demand on motorized vehicle, reducing energy consumption and increasing average life expectancy.

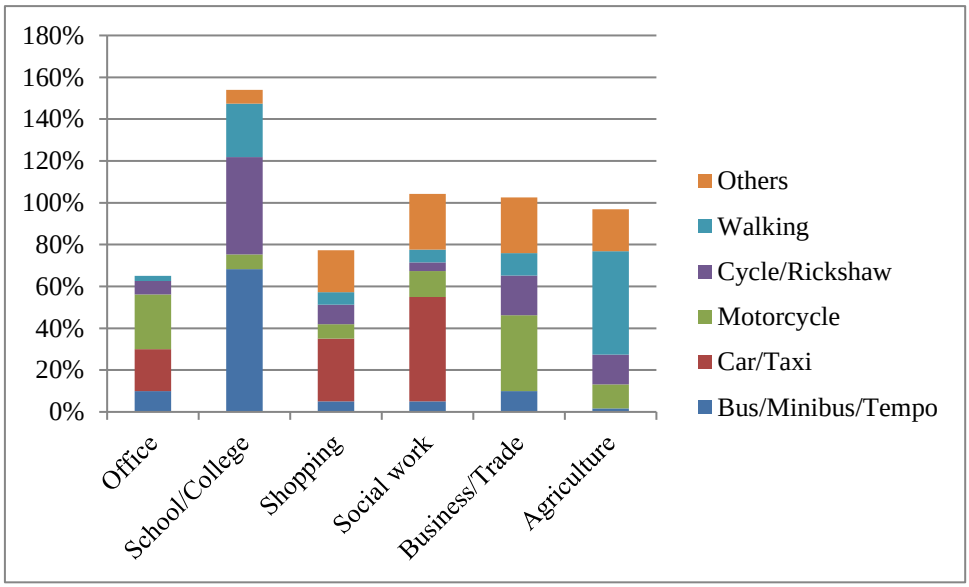


Figure 6: Use of Vehicles for different purposes

Walking is most used mode for trip in all wards. Public transportation mode doesn't lies within top three modes and thus it is necessary to take some step towards building proper and adequate public transport network. Agricultural trips are undertaken by walking and cycle/rickshaw, whereas education trips via public transport, walking and rickshaws. Bike carries a significant proportion for social and business trips. Walking and cycling/rickshaw is the predominant mode in shopping and recreational trips .

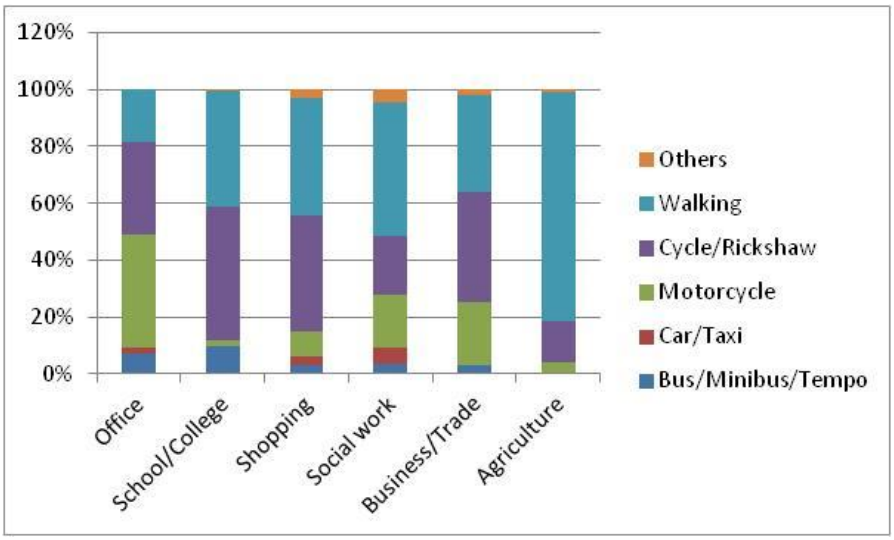


Figure 7 Mode share for different purposes

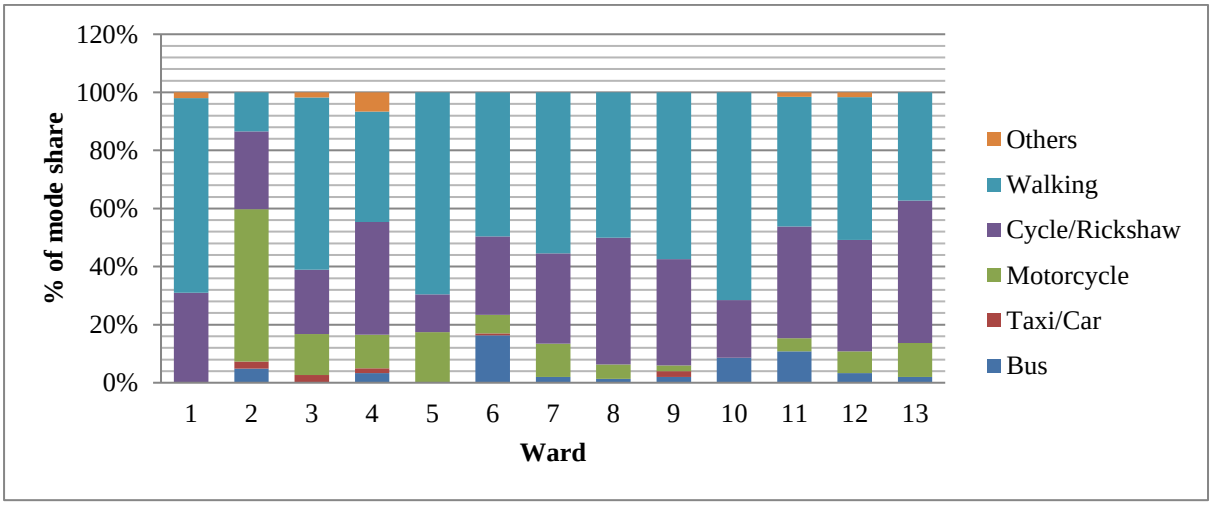


Figure 8 Mode share for different purposes wardwise

2.3 Origin and Destination Study:

Trip, simply called journey is the process of going from one place to another with some purpose. Thus, trip is characterized by origin (starting point) and destination (ending point). To be more precise, trips are characterized by trip production and trip attraction. Home end is

always trip production and the location which attract the produced trips for various causes (job, shopping, and entertainment) are attraction end of trips. Most of the trips are home based trips with different destination. Out of 1351 respondent surveyed 598 respondent 1276 make trips for some purpose. Trip chaining, going at various destination points in the form of chain in a single day, was rarely found in the study area. Household survey shows that nearly 40% trips were directed toward ward numbers 2, 3 and 5 that is the main service center.

2.4 Road inventory

Road inventory survey was done and details of all the roads and cross structures were collected. Total length of all the roads is 330.48 Km of which nearly 78.95 Km is earthen, 153.96km is gravelled and 97.57 Km is blacktopped including 30.36 km SRN.

At present the road density of about 3.52 Km per square Km for the municipality. Similarly the road density per thousand populations is nearly 5.5km.

Ward	Earthen	Gravelled	Metalled	Total
1	3.26	4.37	7.49	15.12
2	-	1.92	4.19	6.11
3	0.12	1.10	2.69	3.91
4	1.36	6.34	5.34	13.04
5	0.53	2.15	9.40	12.07
6	2.23	2.17	4.43	8.83
7	1.37	8.13	4.57	14.07
8	2.75	5.52	4.49	12.76
9	4.06	9.72	3.50	17.28
10	15.37	10.79	9.36	35.52
11	5.91	7.45	4.81	18.17
12	1.80	9.41	7.77	18.98
13	1.81	3.17	2.67	7.66
14	7.04	23.18	3.34	33.57
15	11.36	6.79	5.25	23.40
16	8.86	17.42	6.82	33.10
17	6.47	17.69	5.23	29.38
18	4.64	16.65	6.23	27.52
Total	78.95	153.96	97.57	330.48

ward	Included VDC/Municipality	Area(sq .km.)	Population	road length	RDensity	R_density(P)
Ward 1	Ramgram(1)	3.27	2214	15.12	4.62	6.83
Ward 2	Ramgram(2)	0.69	2904	6.11	8.85	2.10
Ward 3	Ramgram(3)	0.32	2550	3.91	12.22	1.53
Ward 4	Ramgram(4)	3.37	2084	13.04	3.87	6.26
Ward 5	Ramgram(5)	1.37	1917	12.07	8.81	6.30
Ward 6	Ramgram(6)	2.17	1866	8.83	4.07	4.73
Ward 7	Ramgram(7)	3.76	2713	14.07	3.74	5.19
Ward 8	Ramgram(8)	3.64	2125	12.76	3.51	6.01
Ward 9	Ramgram(9) Sanai(4,5)	7.04	2480	17.28	2.45	6.97
Ward 10	Ramgram(10) Sukrauli(7-9) Hakuyi(6)	10.44	4213	35.52	3.40	8.43
Ward 11	Ramgram(11)	4.77	3900	18.17	3.81	4.66
Ward 12	Ramgram(12)	4.2	2107	18.98	4.52	9.01
Ward 13	Ramgram(13)	1.73	1429	7.66	4.43	5.36
Ward 14	Amaraut(1-9)	10.79	4953	33.57	3.11	6.78

ward	Included VDC/Municipality	Area(sq .km.)	Population	road length	RDensity	R_density(P)
Ward 15	Sukrauli(1-5) Banjariya(3,4)	6.74	4715	23.40	3.47	4.96
Ward 16	Hakuyi(1-5,7-9) Sukrauli(6)	11.21	6627	33.10	2.95	4.99
Ward 17	Debgau(1-9)	9.2	5359	29.38	3.19	5.48
Ward 18	Banjariya(1,2,5-9)	9.2	5913	27.52	2.99	4.65
Total		**93.91**	**60069**	**330.48**	**3.52**	**5.50**

2.5 Road Safety

The combination of rapid urbanization and motorization has been a key cause of numerous transport problems in growing cities. Indeed, the rapid urbanization process, high vehicular population growth and that of the mobility, inadequate transportation facilities and policies, varied traffic mix with over concentration of non-motorized vehicles, absence of dependable public transport system and inadequate traffic management practices and parking facilities have created a significant worsening of traffic and safety problems in the major urban centers in Nepal and this municipality is also suffering from this. According to traffic police report, the most vulnerable group in the road are motorcyclist and pedestrians.

There is high risk of road crashes at the junction of municipal roads with SRN/DRCN because of high speed vehicles plying on these roads. For this the following remedial measures could be done:

- Conversion of junctions to roundabouts
- Redesigning of junctions
- Changes of the junction angle
- Staggering of junctions
- Reduction of gradients on approach
- Increase of sight triangles
- channelization

2.6 Active road users

Active transport (also called non-motorized transport, NMT and human powered transport) refers to walking, cycling, and variants such as wheelchair, scooter and handcart use.

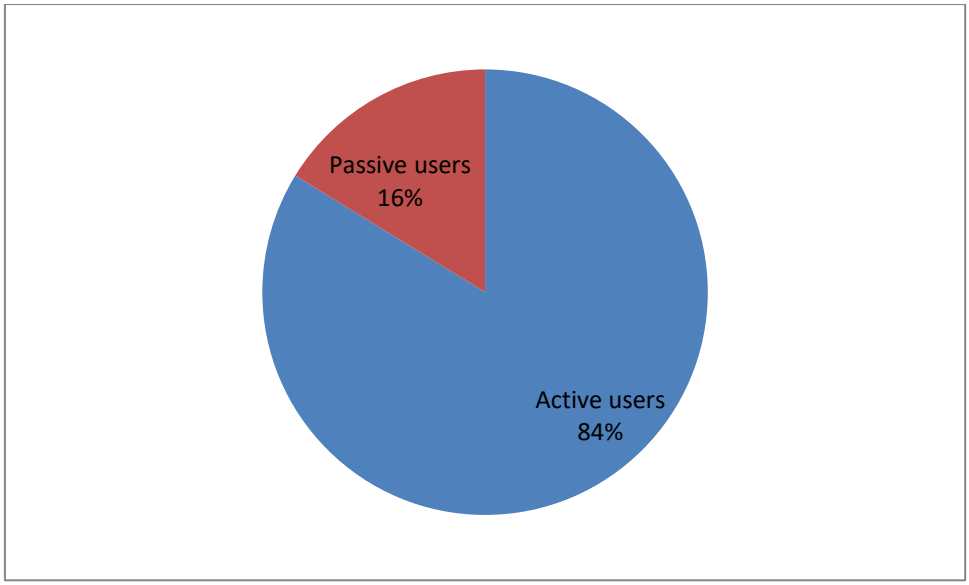


Figure 9: Road users

The sample household survey shows that nearly 84% of the daily trips are done via active mode of transport. Active mode of transport is beneficial in many aspects: this mode can be used by people of any age group irrespective of gender and economic status, it consumes human energy and does not depend on fossil fuel, and it is environment friendly and provides many health benefits to the user.

Motorcycle is used in nearly 10% of the trips and public vehicles in nearly 6.41% of the trips. 8 motorcycle and nearly 28 bicycles is owned by every 100 people. This leaves the remaining 64 people (every 100 people) without any vehicle. Without proper access to public vehicles, they are left out with no option but to walk.

2.7 Public transportation

The use of public transportation for daily trips is limited to the major highways. These include Bus/Tempo transportation from Buddha Chowk to Sunawal, Bhumahi, Butawal, Bhairahawa, and Mahespur. Similarly Rickshaw is available in the main city area .There is no public transport along other road sections of the municipality.

Mobility relies on the privately owned vehicles or walking. It is prime time to implement interventions to introduce proper public transport routes and services so that a sustainable proper public transportation can be established and increase in number of private vehicles can be controlled.

2.8 Mobility and accessibility

Ward 8 suffers the most in terms of accessibility to public vehicles i.e.53 minutes. The population of ward 11, 12,10,2 have more easy access to public transportation service. The access of public vehicle on those wards with more time to reach bus stop needs a

consideration. The mobility of more accessible wards for public vehicles needs consideration as well.

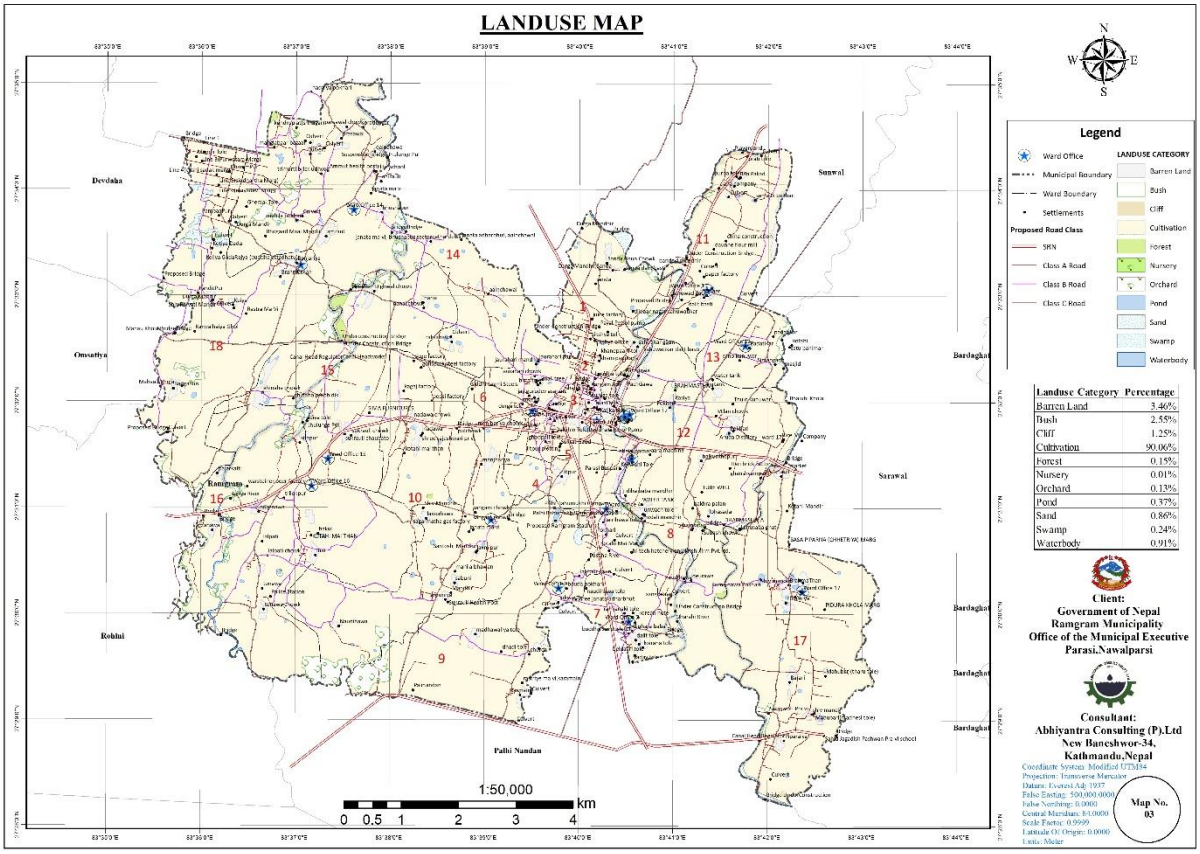
2.9 Land use

From the census 2068, the population density of Ramgram municipality was found to be 639 people per square kilometre and in case of some wards; it was upto 7,968 which indicates the rapid urbanization in the municipality. The land use distribution of Ramgram municipality shows that less than 2% of the land area is covered by forest and bush. About 91% of land is used for cultivation. Only 6% of the land is covered by built-up area. (Ref. figure 11). The detail about the Landuse is given in *Annex I.*

	Landuse Category											
	Barren Land	Bush	Cliff	Cultivation	Forest	Nursery	Orchard	Pond	Sand	Swamp	Waterbody	
Ward 1	0.10	0.18	0.05	2.71	0.01			0.01	0.16		0.06	3.26
Ward 2	0.15	0.00	0.01	0.49					0.03		0.01	0.69
Ward 3	0.14			0.18								0.32
Ward 4	0.18	0.02	0.04	3.03				0.01	0.03		0.06	3.37
Ward 5	0.28		0.02	1.03				0.01	0.01		0.01	1.37
Ward 6	0.11			2.05				0.01				2.17
Ward 7	0.14		0.17	3.31	0.01			0.01	0.02		0.09	3.76
Ward 8	0.12	0.08	0.06	3.27					0.05		0.06	3.64
Ward 9	0.17	0.32		6.47			0.02	0.04		0.03		7.04
Ward 10	0.24	0.27		9.88	0.01			0.04				10.44
Ward 11	0.15	0.01	0.10	4.36				0.03	0.05		0.06	4.76
Ward 12	0.17	0.06	0.03	3.74				0.02	0.13		0.05	4.20
Ward 13	0.02	0.05	0.01	1.62					0.01		0.01	1.73
Ward 14	0.29	0.35	0.10	9.67	0.02	0.01	0.05	0.05	0.17	0.00	0.09	10.79
Ward 15	0.25	0.05	0.15	6.04	0.09		0.00	0.03	0.04		0.08	6.74
Ward 16	0.24	0.56	0.14	9.99			0.04	0.02	0.05		0.17	11.21
Ward 17	0.29	0.06	0.27	8.38				0.06	0.05		0.09	9.20
Ward 18	0.20	0.38	0.03	8.34		0.00	0.01	0.02		0.19	0.01	9.20
Total	3.25	2.39	1.18	84.56	0.14	0.01	0.12	0.35	0.81	0.22	0.86	93.90

From the existing trend of settlement development near to roadways i.e. ribbon development within this municipality, this MTMP is done to develop planned settlement.

The manner in which land use interacts with transportation is indeed heavily context-dependent. Multiple path dependent factors such as economic conditions and local land use/transportation policy influence the complex inner-workings of the land use-transportation relationships. Therefore, it is necessary to further examine how the land use/transportation relationship is uniquely manifested within the confines of local geographic contexts to ensure that pertinent policy measures are effective. **(Ref: Geospatial Analysis and Modelling of Urban Structure and Dynamics edited by Bin Jiang, Xiaobai Yao)**



2.10 Visionary City development Plan

This is city related to Gautam Buddha and known as the place containing relics of the Lord. The vision of this municipality is **"नगरबासीको सरोकार, स्वच्छ, पारदर्शी, विकासमुखी स्थानीय सरकार"** meaning the mission of this municipality is to develop clean, transparent, development-oriented local government.

Chapter III: Indicative Development Potential Map

3.1 Summary of municipality profile

3.1.1 Physical Location and the Geographical characteristics

Study Area:

Ramgram municipality is the district headquarters of Nawalparasi (Bardaghat Susta Paschim) district. This is also known as its former name Parasi still now. It was established in the year of 2053 Chaitra 14, and restructured on 2073 Falgun 27 merging the previous Ramgram Municipality and 5 VDCs (Amraut, Sukrauli, Hakui, Banjariya and Devgaw) covering a total area of 93.91 sq.km. At the time of the 2011 Nepal census it had a population of 60069 in 11340 households with population density of 639.64 population per square kilometre. This municipality is about 9km south of Mahendra highway and surrounded by Sunwal N.P. in the north, Sarawal Municipality in the east, Palhinandan and Rohini Rural Municipality in the south and Rohini, Omsatiya and Devdaha in the west.

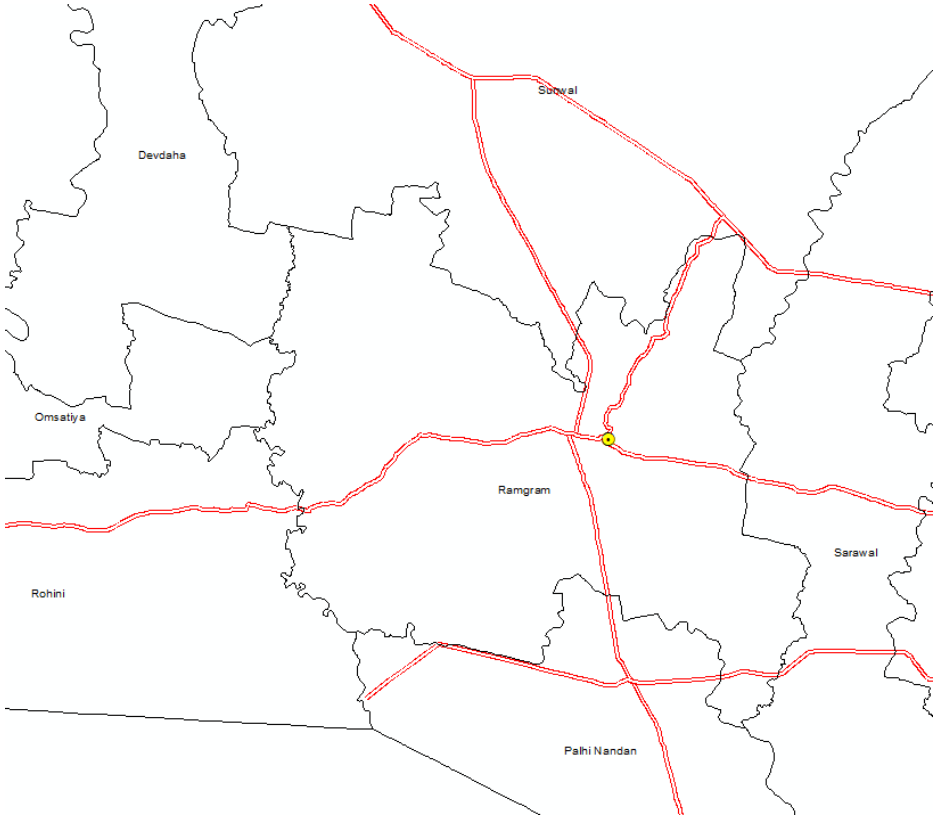


Figure 10: Neighbouring Municipalities and Municipality of Ramgram Municipality

3.1.2 Socio Economic Characteristics

a. Population

According to the national population census 2011, the total population of the municipality is 25990 with 12807 male and female 13183. There are 4972 households in the municipality with an average size of 5.23 and the population density per sq.km is estimated at 749.

The following data table shows the population census data of 2011.

Table 4 Population distribution Ward wise

Ward	Area(km^2)	Household	Male	Female	Population
1	3.27	414	1,092	1,122	2,214
2	0.69	493	1,154	1,150	2,304
3	0.32	611	1,238	1,312	2,550
4	3.37	361	1,026	1,058	2,084
5	1.37	418	955	962	1,917
6	2.17	335	942	924	1,866
7	3.76	469	1,344	1,369	2,713
8	3.64	384	1,009	1,116	2,125
9	7.04	418	1,244	1,236	2,480
10	10.44	696	1,918	1,985	3,903
11	4.77	294	759	827	1,586
12	4.2	405	1,036	1,071	2,107
13	1.73	260	695	734	1,429
14	10.79	1,979	4,039	4,723	8,762
15	6.74	799	2,333	2,382	4,715
16	11.21	1,096	3,185	3,442	6,627
17	9.2	927	2,626	2,733	5,359
18	9.2	981	2,922	2,991	5,913
Total	**93.91**	11,340	29,517	31,137	60,654

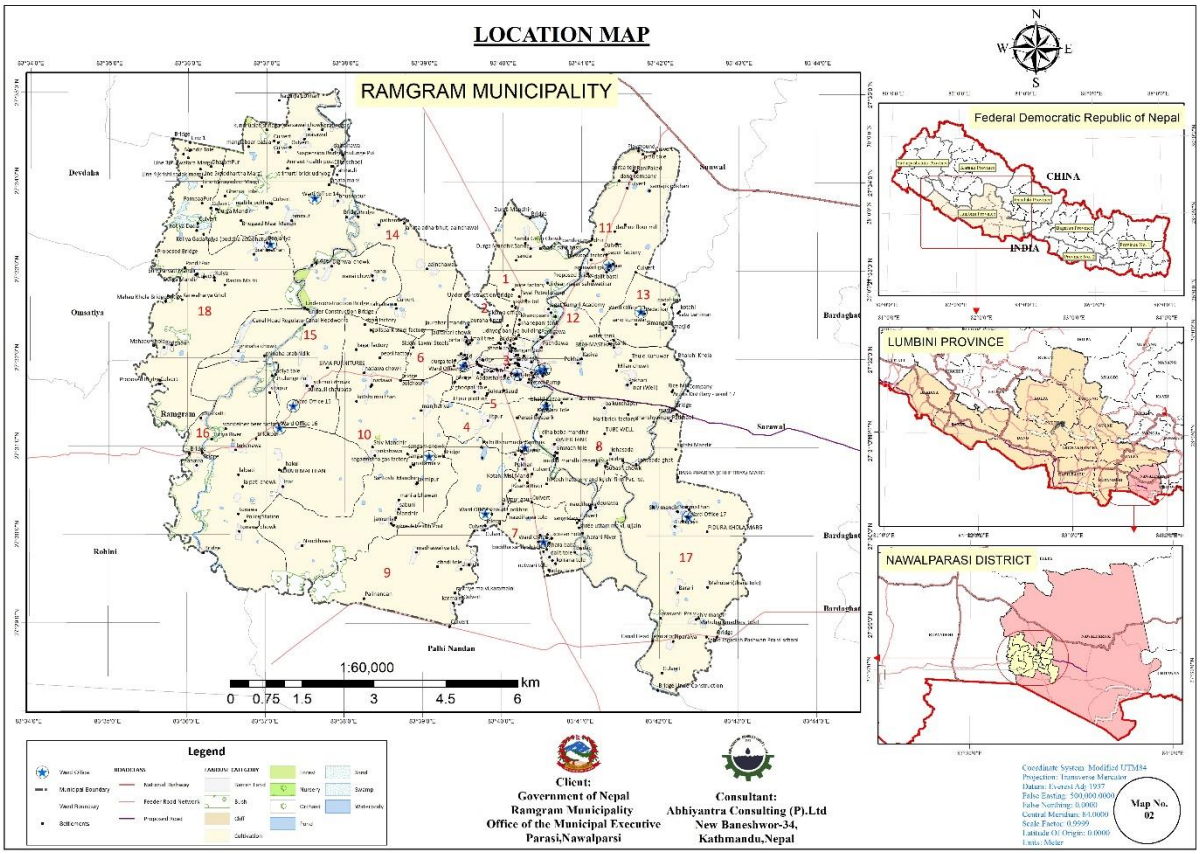


Figure 11: Location map of Ramgram municipality

b. Religion Festival and Caste

This municipality has cultural and ethnic diversity where Tharu, Chamar/Harijan/Ram,Musalman, Brahman, Chhetri, Yadav, and other indigenous community of Dalit, Janajati, and Madhesi have their settlement. Even though they are different from ethnic status they have very good relationship among themselves. All ethnic communities have cooperation and coordination among themselves in societal setting and cultural and religious festivals. The major festivals celebrated here are Maghi, Ida, Holi, Chhath Parva, etc.

Table 5: Distribution of population by caste/ethnicity

1	Tharu	4,958
2	Chamar/Harijan/Ram	2,277
3	Yadav	2,195
4	Brahman - Hill	2,027
5	Kewat	1,848
6	Musalman	1,456
7	Teli	1,349
8	Dhobi	1,003
9	Kathbaniyan	981

1	Tharu	4,958
10	Chhetree	778
11	Others	7,118
	Total	25,990

c. Educational and Occupational Status

The status of the municipality is governed to large extent by the educational and occupational status. Higher the educational level of the residents, high will be the level of development Majority of people have completed or are perusing school level education. Literate and Illiterate population also share significant proportion.

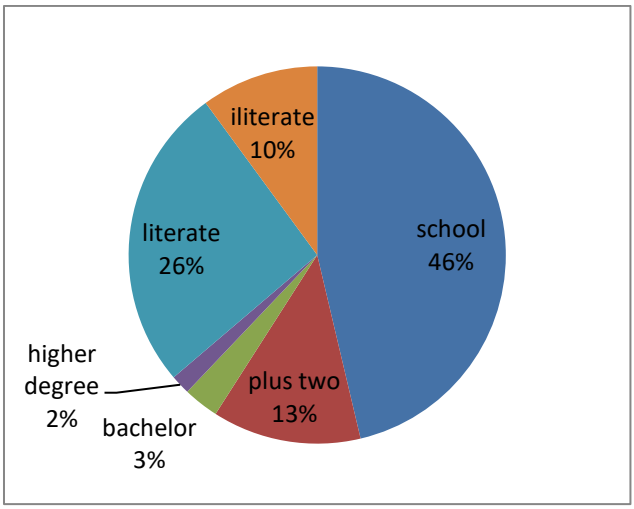


Figure 12: Education status of sample population

Similarly, figure above highlights that almost one third respondent were students, followed by people engaged in agriculture. Unemployed people also cover high proportion of people.

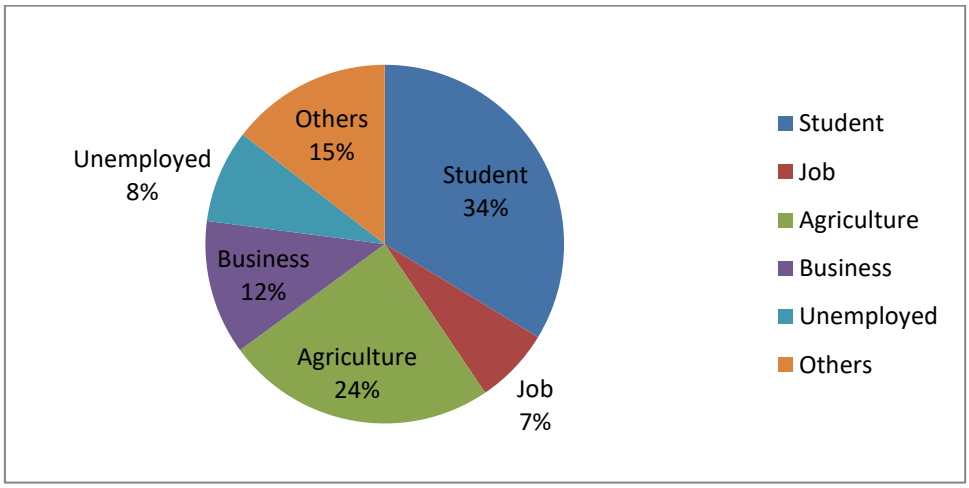


Figure 13 Occupational distribution

Based on the study, it was found that most of the service holder were educated one (school and higher education status), whereas just literate and illiterate people are mostly engaged in agriculture or are found to be unemployed.

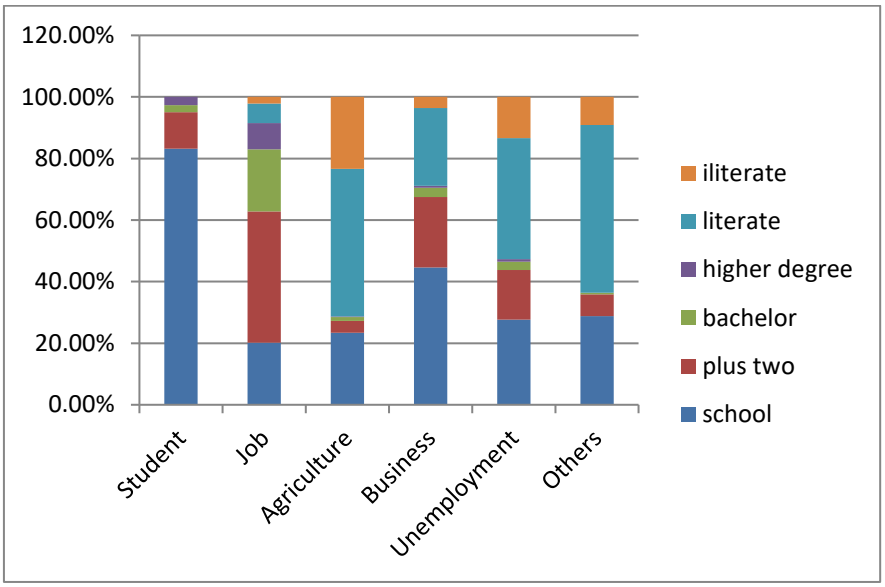


Figure 14: Education and Occupation Relationship

3.2 List of development potential areas

The lead potential of this municipality are:

- Agriculture
- Business
- Service centre

3.3 Briefs on development potential areas

- Agriculture: it is important because most of the land is used for agriculture. But the present agriculture system is just for livelihood and needs for modern productive system in agriculture. By this, city may become an example of agricultural city.
- Business: It is located near to Mahespur Custom office. With this there is higher potential of business because this custom office is connected to Butwal, Bhairahawa, and Mahendra highway and to hilly regions like Palpa through this municipality.
- Service centre: as this is also the district headquarters of Nawalparasi district; most of the governmental and non-governmental offices are here. So this city may develop as a service centre for the whole district.

3.4 Indicative development potential map(IDPM)

IDP is basically the indication of the existing and potential market center/service centers (key growth centers) and the areas having various development potentials such as agro-based industries, high value cash crops and tourism. Thus, IDP shows high value cash crops, tourism area, and area of service centers such as hospital, post office, telecommunication, school, campus, security offices and large settlements, important historic and religious places. Finally it prepares the ranking of the markets of the municipality as the basis of network planning.

For Ramgram municipality the following area have been proposed for the potential development area. For this the "Periodic plan of Ramgram municipality" has been used as a reference document. Indicative development potential map is shown in ***Annex I-A(2).***

S.N.	**Potential**	**Area**	**Ward**
1	Industrial	North-East of Jamuwar	11
2	Institutional	North of parasi bazaar. (West of link road)	12
3	Touristic	North of Ujjaini and East of District Road to Maheshpur. Ramgram Stupa	7
4	Agricultural area	All Land except covered by industrial and residential area. Jamuwar	11
		Paratikar and kanchanhawa area. Almost whole area is an agricultural area	13
		All Land of kunwar and kasiya except covered by low density residential area	12
		All land except covered by residential area at lohasada, chamkipur and baikunthapur	8
		All land except covered by low residential ujjaini	7
		All land except covered by residential area at lankahawa, laxmipur and manjhariya	10
		Thulopokhari, pokharapali area	6
		Jeetpur	4
5	Commercial area	Starting from Haat Bazar to Parasi Bazar. Approx. 600 m road length on both sides	5, 3
		South of Parasi Bazar along the district road upto 300 m on both sides of road.	5
		Buddha chowk to Angel chowk approx 500 m along the road on both sides of road	3, 2
		Agrobased Industry at pokharapali	6
6	High density residential area	West of ghodpali chowk	6
		Ghodpali chowk to Haat bazaar, on south of Highway	5
7	High density mixed residential area	Buddha chowk to Angel chowk. East of Highway	2, 3

S.N.	Potential	Area	Ward
8	Low density residential area	Kasiya-kunwar	12
		Kanchanhawa-Paratikar	13
		Jeetpur-Bairihawa	4
		Manjhariya-Lankawa	10
		Kerwani-Lohasada-Chamkipur-Baikunthapur-Ghanshyampur	8

Chapter IV: Forecast and planning

4.1 Projection Of Population

Municipality is an urban area or an urbanizing area and one of the characteristics of an urban area is higher population densities and corresponding higher demand for services and facilities all of which directly demands proper transport infrastructure. For sustainable supply of transport infrastructure, it is pertinent to forecast the population in the future so that the infrastructures can be planned and constructed accordingly.

A population forecast requires certain information on historic population counts, births, deaths, other rates which affect population change. Population forecasting is essentially a matter of judgment in selecting the kind of forecast to present, in determining the procedures for making it, and in appraising effects of the factors that induce population changes. The problem, of course, is much simpler for areas which have shown marked stability in the size of their populations for several decades, and for which no great change in the economic and social conditions of the locality seems likely. On the other hand it may be extremely difficult and complex for areas which have had sharp fluctuations in the direction or rate of population change in the past, and which may continue to have them.

The main factors affecting the population projection are birth rate, death rate and migration to the city/town concerned. Out of these factors, the migration is chief factor. The factors for migration may be the desire for better economic opportunities, desire for better living or housing conditions (this applies particularly to short distance migration within the same general locality), movement for reasons of health, education, or retirement etc. The level of national economic activity also affects the direction of migration. When employment is high or rising, the movement is generally from rural areas and small towns to the medium-size and larger cities, because of the relatively larger rate of wages and economic opportunities in urban areas.

Traffic condition of Ramgram Municipality

One day traffic count survey was conducted at Ramgram municipality at six locations/links known as Buddhachowk (3 directions), Bhumai road, Mahespur road and Hulaki sadak (Way to Biakundthapur). The details of traffic count data are presented in the Annex II-H. This data can be used as the baseline data for the future transportation planning and design.

Table 6: Traffic count stations/locations

SN	count station name	location	Remarks
1	Way to Bhumai	in front of lawyers office	Parasi-Bhumai Road
2	East of buddha chowk	Buddha chowk	Buddha Chowk
3	West of buddha chowk	Buddha chowk	Buddha Chowk
4	Maheshpur chowk	Bus Bisauni	Parasi-Maheshpur
5	Way to Sunwaul	Infront of SBI bank	Parasi-Sunwaul
6	Hulaki road	Infront of municipality office	Parasi-Baikunthapur

4.2 Formulation Of Road Hierarchy

Roadways serve a variety of functions, including but not limited to the provision of direct access to properties, pedestrian and bicycle paths, bus routes and catering for through traffic that is not related to immediate land uses. Many roads serve more than one function and to varying degrees, but it is clear that the mixing of incompatible functions can lead to problems. Thus it is important to distinguish road in different class or type based on various criteria. A road hierarchy is a means of defining each roadway in terms of its function such that appropriate objectives for that roadway can be set and appropriate design criteria can be implemented. It is an important tool of road network and land use planning to asset management.

Road hierarchy restricts or reduces direct connections between certain types of links, for example residential streets and arterial roads, and allows connections between similar order streets (e.g. arterial to arterial) or between street types that are separated by one level in the hierarchy (e.g. arterial to highway and collector to arterial.) These hierarchical distinctions of road types become clearer when considering the recommended design specifications for the number of through lanes, design speed, intersection spacing and driveway access.

A well formed road hierarchy will reduce overall impact of traffic by concentrating longer distance flow onto routes in less sensitive locations, ensuring land uses and activities that are incompatible with traffic flow are restricted from routes where traffic movement should predominate and preserving areas where through traffic is discouraged.

The road hierarchy principles will assist planning agencies via orderly planning and provision of public transport routes, pedestrian and bicycle routes. It also identifies the effects of development decisions in and on surrounding areas and roadways within the hierarchy and also facilitates urban design principles such as accessibility, connectivity, efficiency, amenity and safety. Further, it also identifies treatments such as barriers, buffers and landscaping to preserve amenity for adjacent land uses.

This study also formulates the road hierarchy for the various roads. After going through large number of literature, the study has proposed four level hierarchy roads namely Class A, B, C and D. Class C and D basically deals with access while Class A and B basically deals with mobility and accessibility to higher services.

Based on various literature, the recommended right of way of ToR doesn't seems to be justifiable one as there is necessity of arterial road within the municipality. Also, the road space needs to be distributed to all road users equally with provision of green belt, cycle track thus there need to be a provision for green belt cycle track and footpath. After proper study the RoW of 30, 20, 14 and 6m is recommended for class A, B, C and D road respectively.

Type of City	Criteria	ROW based on Road Hierarchy (m)				
		Expressway	Arterial	Sub arterial	Collector	Local
Sub city	10,000-40,000	-	-	30	20	10
City	40,000- 100,000	-	50	30	20	10
Sub Metro City	**100,000-300,000**	50	30	20	10	10
Ref: Planning Norms and Standard 2015, GoN, DUDBC						

ROW based on Road Hierarchy (m)				
Expressway	Arterial	Sub arterial	Collector	Local
-	50-60	30-40	20-30	10-20
Ref: Nepal Urban Road Standard 2068 (draft				

Standard	Cycle Track	Footpath (Minimum)	Median Strip
NURS 2068 draft	2 m on both side	2 m on both side	5 m
NRS 2070	2 m on both side	1.5 m on both side	5 m

Table 7: Comparison of Criterion of Road hierarchy

Criteria	**Class B**	**Class C**	**Class C**
Purpose	Mobility and control access	Access and mobility	Access
Function	Connection between Class A and C roads; and also Provide alternative connection routes between Class A	Connects higher order roads and mobility to local trips	Connect local trips to higher level roads
	Support through movement of traffic	Access to property	direct access to property
	Segregated NMT facilities and Bus lay-bys	Segregated NMT facilities	Local NMT movement
	High access to Public transport	Limited access to public transport	
Maintenance Responsibility	Municipality	Municipality & Community	Community
Design Speed (Kmph)	50	40	30
Radius (m)	110	40	20
Minimum Right of Way(m)	15	10	6*
Extra width at curve (m)	2.5	1.5	1

Criteria	Class B	Class C	Class C
Setback distance (m)	4	2	1.5
Access Control	Applicable	Not Applicable	Not Applicable
Public transport services	Mass Transit, Local Public transport	No public transportation	No public transportation

* The roads fulfilling the minimum width of road criteria set by the municipality

ward	A	B	C	SRN	Total
1	3.60	0.45	9.15	1.91	15.12
2		1.29	4.16	0.66	6.11
3		0.96	1.83	1.06	3.85
4	2.72	3.13	5.07	2.12	13.04
5	0.77	2.45	5.74	3.11	12.07
6	1.37	3.74	2.56	1.16	8.83
7	6.20	5.09	1.19	1.59	14.07
8	1.52	4.00	6.37	0.87	12.76
9	9.97	1.49	5.71		17.17
10	10.77	3.70	18.51	2.54	35.52
11	1.22	3.30	9.94	3.72	18.17
12	5.02	2.84	7.00	4.13	18.98
13	3.72	2.69	1.25		7.66
14	7.95	12.61	13.00		33.57
15	6.31	6.28	9.21	1.60	23.40
16	17.47	3.44	9.73	2.46	33.10
17	5.98	1.30	20.74	1.36	29.38
18	9.22	9.58	8.73		27.52
Total	93.81	68.34	139.89	28.28	330.32

Class A Roads

All major roads which connect one or more major Growth Centres (market, tourism Centre, industry, etc.) or several Wards with high network coverage, connected directly or through the National Strategic Road Network or district road falls on the road class A. The proposed right of way for this class of road is 15m which includes footpath, cycle track, greenery, and the carriageway as shown below in the cross section.

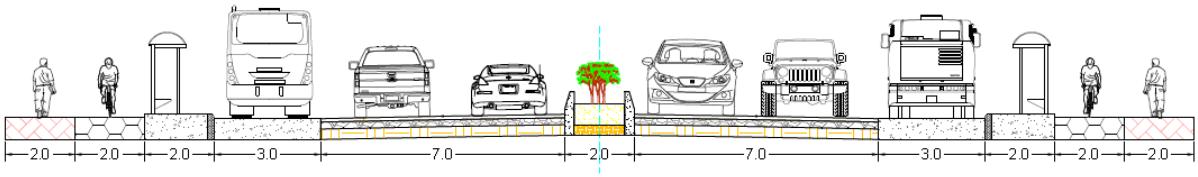


Figure 15 Typical cross section of Class A road

Code	Road Name	Metalled	Earthen	Gravelled	Total
A01	Basabashi-Manari(Hulaki)-Devgaun-Pipariya-Mahespur Road	4.36		1.62	5.98
A02	Ramjanaki Marg	0.93		4.29	5.22
A03	Harkatta (MRM)-Baikunthapur(Hulaki)-Deurawa-Ramgram Stupa Road	7.80	0.61	3.82	12.23
A04	Bikunthapur-Milanchowk to east Road	-		1.37	1.37
A05	Charandas Baba Marga	0.16	1.16	0.54	1.85
A06	Ramgram N.P-Sanda-Shantapur-Badera-Bargoriya Mandir Road	1.23		4.10	5.34
A07	Sunwal-Parasi Road-Durga Mandhir	-		1.06	1.06
A08	Buddha Marga	-		1.51	1.51
A09	Buddha Tole-Parasi Road Section	-		0.40	0.40
A10	Jitpur(Ramgram N.P)-Brahmpurwa-Bairawa-Bishnupura Road	3.35		2.16	5.51
A11	Jokwar Marga	0.74		0.49	1.22
A12	Shaid Jagdish Paswan Marg(Bairawa-Lalitpur-Lankahawa-Hakaui Road)	1.40	2.14	2.41	5.95
A13	Majariya-Jamuniya-Sanahi-Ragargunj Road	2.02		3.40	5.42
A14	Pul to santoshi mandir road	-		0.98	0.98
A15	Samaye Devi Marga	-		2.06	2.06
A16	Bijaya Path	0.57	1.34	1.54	3.45
A17	Nandan Marga	1.63	0.92		2.55
A18	Sunwal-Parsawal-Amraut-Banjaria-Ghina-Bakena-Lalpati-Tonwa Road	4.86		11.59	16.45
A19	Tonawa chowk to south road	-		1.57	1.57
A20	Kalika Path(Lalpati to Turiya khola)	-	1.09		1.09
A21	Lalpati-Turiya Khola Marga	-	0.49	0.74	1.23
A22	Shikshya Path	0.83		1.40	2.23
A23	Hulaki road (Naduwa)	-		0.36	0.36
A24	Factory Branch	0.53			0.53
A25	Purano Hulaki(Butwaliya Marga)	2.98	1.87	2.32	7.16
A26	Pokharapali(Ramgram N.P)-Banjariya-Dharampur-Bairagnath Road	4.66		2.32	6.98
A27	Aananda Marga	-	0.30	1.81	2.11
A28	Rastriye Ma Vi-Brahmathan Road	-		1.64	1.64

Class B road

All roads which connect to a major road network and other roads of similar hierarchy with a road connecting major Growth Centre of the same or neighbouring wards which provide access between Class A and class C road falls on the category of **class B.** The right of way of this class road is 10m.

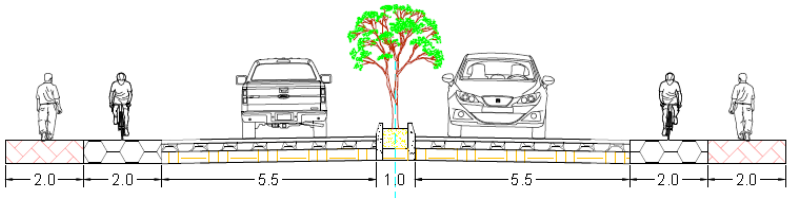


Figure 16: Typical cross section of Class B roads

Brief about the Class B roads:

Code	Road Name	Metalled	Earthen	Gravelled	Total
B01	DAHACHANDI CHOWK-CHANDRAGADHI-WARD 4 OFFICE ROAD	0.40		4.18	4.58
B02	Lohasada-Dharmashala-Bhaluhi Marg	0.84		1.29	2.12
B03	Buddhanagar tole-Ramjanaki-Dalit tole-Yadav tole road	-		1.19	1.19
B04	Ward 7 office-Ramjanaki tole road	-		0.40	0.40
B05	Buddha Sandesh tole road	-		0.34	0.34
B06	Dalit tole road	-		0.25	0.25
B07	Uttam ma. vi.- Sangralaye road section	-		0.73	0.73
B08	Janata AaBi-Naudihawa-Parasi Maheshpur road jodne marga	-	0.17	1.03	1.21
B09	Kalika Marga	0.23		0.39	0.62
B10	Krishi Marga(Ward 9)	-	0.87		0.87
B11	Unwach Marga	1.38			1.38
B12	Bagaicha Marga Road	0.12		0.37	0.49
B13	Milanchowk-Janata Pravi-Saratikar road	-	1.58	0.58	2.16
B14	Samayemai Marga	-	0.53		0.53
B15	Ram Marga	0.80			0.80
B16	Buddha Marga(Karagar to Janata Pra vi)	-		1.33	1.33
B17	Shiva Marg	0.60		0.16	0.75
B18	Padatikar Jholunge pul road	-		0.48	0.48
B19	santoshi marga(Ward 11)	-		3.09	3.09
B20	Udhyog Banijya Sangh Marga	0.45			0.45
B21	Durga Marga	0.73			0.73
B22	Haatbazar-Dursanchar-Sangam tole road	0.56			0.56
B23	Sena sadak(Om Shanti Marga)	0.58	0.12		0.70
B24	Ghantaghar to Balmandir tole Road	0.41			0.41
B25	Shanti Marga	0.20			0.20
B26	Aadarsha Marga	0.43			0.43

Code	Road Name	Metalled	Earthen	Gravelled	Total
B27	Ghodpali tole-Jitpur road	1.18			1.18
B28	Kalika Marga	0.37			0.37
B29	Ward 6 office-Pragati chowk-Jaurahari Road	0.90		0.59	1.49
B30	Shankar Marga	-	0.74		0.74
B31	Hakui-Naudihawa Road	-	0.71	1.49	2.20
B32	Sita Path	-		0.09	0.09
B33	Janaki Path	-		0.47	0.47
B34	Kothai Mai Marga	-		2.05	2.05
B35	Sukrauli Nahar Krishi Sadak	-	0.47		0.47
B36	Krishi marga	-	0.30		0.30
B37	Trilok Path-Nandan Marga jodne road	-		0.32	0.32
B38	Shiv path	-		0.42	0.42
B39	Krishi bato	-		1.33	1.33
B40	Turiya Marga(Sukrauli chowk to Digwal chowk)	1.50	1.44		2.94
B41	Furniture Tole Marga	-		0.98	0.98
B42	Naduwa chowk to north factory road	-		1.13	1.13
B43	Karwala Path	-	0.13	0.11	0.24
B44	Kali Marga	0.23		0.31	0.54
B45	Loktantrik Chowk-Omshanti chowk-Jaurahari chowk-Nanai road	0.98		2.65	3.63
B46	Nanai-Pathardewa-Bhusanpur Road	0.43		2.29	2.72
B47	Janata Aabi jane road	-		0.61	0.61
B48	Ahirauli Marga	-		0.36	0.36
B49	Mahila Pokhari-Janata AABI-Hadaiya Mai road	-		2.87	2.87
B50	Bramha marga	-		1.22	1.22
B51	Krishi Marga ward 14	-	0.70		0.70
B52	Shanti Dip Marga	-	1.02	0.49	1.51
B53	Bouddha Marg	2.48		1.17	3.65
B54	Chandragadhi Path	-		0.16	0.16
B55	Laxmi Marg(Kotiya dada)	0.32		0.37	0.70
B56	Siddhartha Marg	-		1.10	1.10
B57	Panditpur-Badagaun-Samay mai mandir road	0.60		2.13	2.73
B58	Hadaiya Mai Marga	-		0.77	0.77
B59	Hille Marga	-		1.17	1.17
B60	Shiva Marg	-		0.21	0.21
B61	Shanti Marga	-		0.15	0.15

Class C Roads

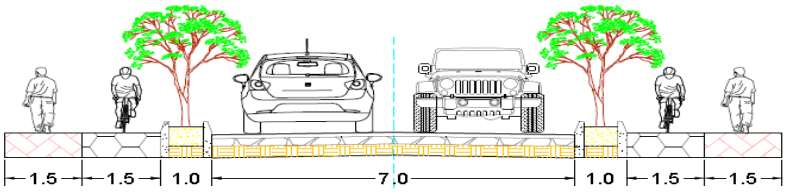


Figure 17 Typical cross section of Class C road

All roads which provide connection to higher order roads with all agricultural roads which connect a farm with a mini-market Centre or a agro-based production Centre and means for mobility of local trips are understood as road **class C.** For this the proposed right of way for class C roads is 6m.

Code	Road Name	Metalled	Earthen	Gravelled	Total
C001	Ganga Marga	-		0.34	0.34
C002	Market Marg	-		0.18	0.18
C003	Buddha Marga	-		0.04	0.04
C004	Sundar Marg	-		0.29	0.29
C005	Patkhauli Marga	-		0.07	0.07
C006	Durga Marg	-		0.09	0.09
C007	Parwati Marg	-		0.08	0.08
C008	Saraswati Marga	-	1.33	0.13	1.45
C009	Bhagwanpur Marga	-	1.22		1.22
C010	Lohasada Marga	-	0.31		0.31
C011	Kotahi Marg	-		0.12	0.12
C012	Namindranath Gosain Marg	-		1.16	1.16
C013	Kotahi Marg	0.23			0.23
C014	Chaudhary Marg	-		0.06	0.06
C015	Gosai Marg	0.07			0.07
C016	Parwati Marg	-		0.08	0.08
C017	Saraswati Marga	-		0.09	0.09
C018	Bhagwati Marga	-		0.52	0.52
C019	Durga Marg	-		0.07	0.07
C020	Aananda Marga	-		0.05	0.05
C021	Bhagawati Sthan Marga	-		0.03	0.03
C022	Buddha Marga	0.18			0.18
C023	Laxmi Marga	-		0.03	0.03
C024	Dahar Chandi Marga	-		0.28	0.28
C025	Pokhara Marga	-		0.10	0.10
C026	Parwati Marg	-		0.07	0.07
C027	Laxmi Marga	-		0.03	0.03
C028	Ganesh Marg	-		0.04	0.04
C029	Dev Marga	-		0.12	0.12

Code	Road Name	Metalled	Earthen	Gravelled	Total
C030	Gosai Marg	-		0.49	0.49
C031	Ward 17 office-Pidura Khola Marg	-		1.33	1.33
C032	Chaudhary Marga	-		0.47	0.47
C033	Buddha Marga	-	0.27		0.27
C034	Chaardaha Marga	-	0.45		0.45
C035	Kishan Marg	-	0.83		0.83
C037	Shiva Kuti Marga	-		1.24	1.24
C038	Adarsha Marga	-		0.99	0.99
C039	Mahubari Marga	-		2.30	2.30
C040	Dharma Marga	-	0.17		0.17
C041	Inaar Marga	-	0.22		0.22
C042	Mahubari Branch Road	-	0.13		0.13
C043	Pokhari Marg	-	0.18		0.18
C044	Krishi marga	-	0.35		0.35
C045	Samaya Marg	-		0.32	0.32
C046	Shanti Marg	-		0.22	0.22
C047	Shiv Mandir Marg	-		0.21	0.21
C048	Thakur Marga	-		0.03	0.03
C049	Madarsha Marg	-		0.03	0.03
C050	Saraswati Marga	-		0.27	0.27
C051	Krishi Samuha Marga	-	0.58		0.58
C052	Soiya Marga	-		0.10	0.10
C053	Kola Marga	-	0.23		0.23
C054	Krishi marga	-	0.20		0.20
C055	Diha Marga	-		0.30	0.30
C056	Shiva Marga	-		0.10	0.10
C057	Jagadamba marg	-		0.24	0.24
C058	Gayatri Marga	-		0.05	0.05
C059	Pragatishil Marga	-		0.48	0.48
C060	Chandragadhi Path	-		0.10	0.10
C061	Chandragadhi Path	-		0.83	0.83
C062	Chandi Marga	-	0.37		0.37
C063	Uttam Ma Vi-Jharahi Khola Road	-	0.23		0.23
C064	Beldaari tole road	-		0.21	0.21
C065	Koirana tole road	-		0.10	0.10
C066	Koirana branch road	-		0.05	0.05
C067	Dalit tole road	-		0.20	0.20
C068	Netwari tole road	-		0.03	0.03
C069	Khadye Udhyog Marga	-		0.10	0.10
C070	Prabhat Marga	-		0.17	0.17
C071	Prabhat Marga	-	0.19		0.19
C072	Kalika Marga	-		0.28	0.28
C073	Buddha Tole-Parasi-Jharahi River	-		0.26	0.26

Code	Road Name	Metalled	Earthen	Gravelled	Total
C074	Unwach Branch Road	-		0.07	0.07
C075	Unwach Road-Aara Machine Road	-		0.12	0.12
C076	Bagaicha Marga	0.07		0.18	0.24
C077	Unwach Marga-Buspark	-	0.25		0.25
C078	Unwach Gaun-Hulaki Marga	0.28	1.09	0.12	1.50
C079	Unwach Marga-Chandal Chauraha	0.13		0.05	0.18
C080	Kalika Marga	0.12		1.00	1.12
C081	Aadharbhut Bidhyalaye Marga	0.11			0.11
C082	Unwach Branch Road	0.04			0.04
C083	Unwach-Chandal Chauraha	0.07	0.12		0.19
C084	Bakhra Palan Road	-		0.70	0.70
C085	Tube Well-Brick Factory-Hulaki Road	-	1.03		1.03
C086	Shanti Marga Branch Road	-		0.05	0.05
C087	Shiv Marga	-		0.04	0.04
C088	Shanti Marga-House of Bhumaar Yadav	-		0.03	0.03
C089	Jay Kotahi Marga	-		0.05	0.05
C090	Kotahi Branch Road	-		0.03	0.03
C091	Gayetri Marga	0.09			0.09
C092	Inar Marga	-		0.06	0.06
C093	Pashupati Marga	-		0.06	0.06
C094	Ganga Marga	-		0.11	0.11
C095	Kalika Branch Road	0.05			0.05
C096	Hulaki-Brick factory Road	-	0.26		0.26
C097	Future Light School Road	0.60			0.60
C098	Sukrat Gaud Ring Road North	-		0.23	0.23
C099	Sukrat Gaud Ring Road South	-		0.32	0.32
C100	Samsad Marga	0.32			0.32
C101	Devsthal Marga	0.42			0.42
C102	Durga Branch Road	0.09			0.09
C103	Durga Branch Road	0.08			0.08
C104	Buspark Tole Road	-		0.12	0.12
C105	Santapur Marga	-		0.12	0.12
C106	Radha Krishna Path	-		0.12	0.12
C107	Krishna Path	-		0.55	0.55
C108	Bairihawa path	0.07			0.07
C109	Kotahi Mai Marga	-		0.30	0.30
C110	Krishi marga	-	0.70		0.70
C111	Kalika Marga	-	0.13		0.13
C112	Jokwar Marga	-		0.31	0.31
C113	Aananda Marga	0.11			0.11
C114	Shanti Marga	-	0.07		0.07
C115	Mayadevi Marga	0.14			0.14
C116	Krishi marga	-	0.80		0.80

Code	Road Name	Metalled	Earthen	Gravelled	Total
C117	Siddhartha Marga	0.17			0.17
C118	Ramnarayan Marga	0.16			0.16
C119	Gulab Marga	0.03			0.03
C120	Durga Marga	0.02			0.02
C121	Thakur Marga	0.04			0.04
C122	Ramawatar Marga	0.06			0.06
C123	Shankar Marga	0.04			0.04
C124	Shanti Marga	0.02			0.02
C125	Palinandan Marga	-		0.84	0.84
C126	Palinandan-Tonawa Krishi Sadak	-	0.72		0.72
C127	Naudihawa Krishi Sadak	-	1.86		1.86
C128	Kataihawa Path	-		0.70	0.70
C129	Kadar Mai Path	-		0.28	0.28
C130	Gauri Path	-	0.05		0.05
C131	Kuber Path	-		0.10	0.10
C132	Kali Path	-		0.25	0.25
C133	Lankahawa-Jamuniya Road Section	-	1.04		1.04
C134	Shiv Marga-House Ganesh Verma	-		0.08	0.08
C135	Shiv Marga-Shankar Mandhir	-		0.04	0.04
C136	Shiv Marga-House of Rajkumar Chaudhary	-		0.04	0.04
C137	Shiv Marga-House of Hari Narayan Chaudhary	-		0.05	0.05
C138	Shiv Marga-House of Shudama Yadav	-		0.05	0.05
C139	Ramkhanda Upashakha(bindeshsari das-ramgram 10 manjhariya)	-	1.63		1.63
C140	Pokhari Path	-	0.68		0.68
C141	Shantoshi Marga	-		0.17	0.17
C142	Shantoshi Branch Road	-		0.03	0.03
C143	Shantoshi Branch Road	-		0.03	0.03
C144	Jai Ma Kotahi Path	-		0.29	0.29
C145	Upasakha Kotahi Path	-	0.06		0.06
C146	Lankahawa Simana Jodne Baato	-	0.25		0.25
C147	Sakha Path	-	0.09		0.09
C148	Chandi Devi Marga	0.19		0.15	0.35
C149	Buddha Marga	-	0.04		0.04
C150	Krishi Sadak	-	0.57		0.57
C151	Krishi Sadak	-	0.60		0.60
C152	Manjhariya Krishi Baato	-	1.09		1.09
C153	Milan Marga Branch Road 1	-		0.10	0.10
C154	Milan Marga-House of Rishi Raj Chaudhary	-		0.02	0.02
C155	Milan Marga Branch Road 2	-		0.02	0.02
C156	Milan Marga Branch Road 3	-		0.10	0.10
C157	Shanti Path	-	0.07		0.07
C159	Manjhariya-Sangam Chowk Road	-	1.69		1.69

Code	Road Name	Metalled	Earthen	Gravelled	Total
C160	Parasi-Ghola Road Section	-	0.70		0.70
C161	Nadawa Road	0.60	0.98		1.59
C162	Nadawa Branch 1	0.04			0.04
C163	Nadawa Branch 2	0.08			0.08
C164	Nadawa Branch 3	0.05			0.05
C165	Nadawa Branch	0.02			0.02
C166	Nadawa Branch 4	0.05			0.05
C167	Nadawa Branch 5	0.07			0.07
C168	Nadawa Branch 6	0.04			0.04
C169	Nadawa Branch 7	0.03			0.03
C170	Nadawa Branch 8	0.06			0.06
C171	Nadawa Branch 9	0.03			0.03
C172	Nadawa Branch 10	0.04			0.04
C173	Nadawa Branch 11	0.03			0.03
C174	Nadawa-Kotahi Bhitri Marga	0.27			0.27
C175	Kotahi mai than road	-	0.32		0.32
C176	Nadawa Branch 12	0.06			0.06
C177	Hulaki-Kotahi mai than road	-	1.26		1.26
C178	Krishi marga	-	0.63		0.63
C179	Pokhari Marga	-	0.59		0.59
C180	Kuwarwarti Marga	0.69			0.69
C181	Ram Path	-		0.05	0.05
C182	Komariya Path	-		0.06	0.06
C183	Durga Path	-		0.06	0.06
C184	Durga Path	-	0.31		0.31
C185	Sharmeli Tole Marg	-		0.15	0.15
C186	Kosen Path	-		0.04	0.04
C187	Inar Path	-	0.07		0.07
C188	Khadka Path	-		0.05	0.05
C189	Inar Path 'Kha'	-	0.21		0.21
C190	Yadav Path	-		0.05	0.05
C191	Ram Path	-		0.07	0.07
C192	Nawa Durga Path	-	1.06		1.06
C193	Dhuniyani-Pokhari Path	-		0.16	0.16
C194	Gupta Path	-		0.07	0.07
C195	Ram Path	-		0.07	0.07
C196	Panth Path	0.31			0.31
C197	Ram Janaki Path	-		0.12	0.12
C198	Pokhari Path	-		0.08	0.08
C199	Jayantri Path	-		0.12	0.12
C200	Gayetri Path	-		0.06	0.06
C201	Ram Janaki Path	-		0.06	0.06
C202	Shiv Path-Trilok Path	-	0.22		0.22

Code	Road Name	Metalled	Earthen	Gravelled	Total
C203	Durga Path	-		0.14	0.14
C204	Lalpati-Turiya Khola-Parasi Road Section	-	0.58		0.58
C205	Mayadevi Path	-		1.64	1.64
C206	Buddha Path	-		0.38	0.38
C207	Pokhari Baato	-		1.60	1.60
C208	Ganga Path	0.33			0.33
C209	Kadar Mai Path	-	1.06	0.28	1.34
C210	Khan Path	-	0.07		0.07
C211	Kotahi Path	-		0.03	0.03
C212	Singh Path	-		0.05	0.05
C213	Baggha Path	-		0.07	0.07
C214	Mahaau Khola Marga	-		0.47	0.47
C215	Durga Path	-		0.04	0.04
C216	Mahaau Khola Marga	-	0.51		0.51
C217	Diuhaar Marga	-	0.04		0.04
C218	Shiv Mandir Marg	-		0.15	0.15
C219	Prem Path Marg	-		0.07	0.07
C220	Krishi marga	-	1.61		1.61
C221	Chautari Marg	-	0.27		0.27
C222	Kalika Marg	-	0.04		0.04
C223	Shanti Marga	-	0.05		0.05
C224	Shivaji Marga	-	0.04		0.04
C225	Krishi marga	-	0.13		0.13
C226	Krishi marga	-	0.62		0.62
C227	Krishi marga	-	1.13		1.13
C228	Ramjanaki Path	-		0.89	0.89
C229	Daharchandi Path	-	0.58		0.58
C230	Turiya Krishi Marga	-	0.55		0.55
C231	Furniture-Purano Hulaki Baato	-	1.30		1.30
C232	Furniture Factory Marga	-		0.29	0.29
C233	Sukrauli Tole Road	0.20			0.20
C234	Radha Krishna Path	-		0.19	0.19
C235	Shiva Parvati Marg	-		0.10	0.10
C236	Durga Marg	-		0.03	0.03
C237	ChakraPath Marg	-		0.21	0.21
C238	Amar Marg	-		0.04	0.04
C239	Shanti Marg	-		0.02	0.02
C240	Kuiya Tole Marga	-		0.05	0.05
C241	Koliya Marg	-		1.00	1.00
C242	Durga Marg	-		0.42	0.42
C243	Shanti Marg	-	0.62		0.62
C244	Durga Marg	-		0.51	0.51
C245	Deep marga	0.81		0.78	1.59

Code	Road Name	Metalled	Earthen	Gravelled	Total
C246	Shanti Marga	0.13			0.13
C247	Itta Bhatta Marga	-		0.54	0.54
C248	Nawa durga marga	-		0.67	0.67
C249	Buddha Marga	-		0.08	0.08
C250	Bhar Marga	-	0.27		0.27
C251	Shankar Marga	-		0.19	0.19
C252	Sichai Marga	-		0.26	0.26
C253	Jhulunge Pul Marga	-	0.12		0.12
C254	Utarayan Marga	-	0.65		0.65
C255	Krishna Marga	-		0.04	0.04
C256	Laxmi Marga	-	0.07		0.07
C257	Shanti Marga	-	0.14		0.14
C258	Mishrit Marga	-	0.07		0.07
C259	Pashu Bigyan Marga	-	0.24		0.24
C260	Pragati Marga	-		0.05	0.05
C261	Lok Marga	-	0.09		0.09
C262	Krishi marga	-	0.15		0.15
C263	Malang Baba Marga	-	0.44		0.44
C264	Banhu Marga	-	0.06		0.06
C265	Brahmathan Path	-		0.22	0.22
C266	Boudha Shakha	-		0.05	0.05
C267	Boudha Shaksha Road	-		0.15	0.15
C268	Dhun Tole Marga	-		0.05	0.05
C269	Amar Path	0.12			0.12
C270	Butwaliya road-Turiya Khola	-		0.64	0.64
C271	Pokhari Marga	-	0.10		0.10
C272	Madarsa Path	-		0.08	0.08
C273	Turiya Khola Marga	-	0.51		0.51
C274	Nanai Marga	-		0.19	0.19
C275	Siddhartha Marga	-		2.26	2.26
C276	Chautari Marga	-		0.08	0.08
C277	Chargharaiya Marga	-		0.05	0.05
C278	Inaar Marga	-		0.03	0.03
C279	Mandhir Marga	-	0.03		0.03
C280	Pashupati Marga	-		0.03	0.03
C281	Pragati Marga	-		0.46	0.46
C282	Kotahi Marga	-	0.25		0.25
C283	Naudihawa Marga	-		0.51	0.51
C284	Pragati Marga	-	0.21		0.21
C285	Samaye Mai Marga	-		0.84	0.84
C286	Kalika Marga	-		0.17	0.17
C287	Purano Hulaki-Parasi Krishi Baato	-	1.94		1.94
C288	Ganatrantrik Marga(Krishi Baato)	-	0.83		0.83

Code	Road Name	Metalled	Earthen	Gravelled	Total
C289	Ramjanaki Marga (proposed)	-	0.34		0.34
C290	Samabesi Marga	-		0.37	0.37
C291	To the house of Ramsewak	-		0.04	0.04
C292	Birta chowk-Satellite FM	-		0.25	0.25
C293	Birta Marga	-		0.13	0.13
C294	Pokharapali Road Section	-	0.33		0.33
C295	Samabesi Marga	0.29			0.29
C296	Chaudhary Marga	0.25			0.25
C297	Balmandhir Tole Road	0.28			0.28
C298	Madarsha Marga	0.24			0.24
C299	Aacharya Marga	0.07			0.07
C300	Aadarsha Marga-Godown Road	0.56			0.56
C301	Aadarsha Marga Branch Road	0.07			0.07
C302	Godown Road Branch Road	-		0.04	0.04
C303	Police Office-Santoshi Marga	0.24			0.24
C304	Balmandhir Branch Road	0.07			0.07
C305	Santoshi Marga Branch Road	0.03			0.03
C306	Balmandhir Branch Road	0.11			0.11
C307	Balmandhir Branch Road	0.09			0.09
C308	Dharmakata-Balmandhir Road	-		0.20	0.20
C309	Dharmakata-Balmandhir Branch Road	-		0.06	0.06
C310	Balmandhir-Parasi-Maheshpur Road	0.28			0.28
C311	Bypass-Driver Tole Taato	0.22			0.22
C312	Aadarsha School Road	-		0.24	0.24
C313	Sangharsa Path	0.20			0.20
C314	Kumari Mai Path	0.10			0.10
C315	Emali Marga	0.22			0.22
C316	Haatbazaar Marga	0.44			0.44
C317	Insurance Office-Little Plant English School Road	0.11			0.11
C318	Kalika Marga	0.18			0.18
C319	Ambe Marga	0.08			0.08
C320	Malpot Office Marga	0.34			0.34
C321	Ganesh Shankar Marga	0.24			0.24
C322	Laxmi Narayan Marga Branch Road	0.15			0.15
C323	Prabhu Bank Road	-		0.32	0.32
C324	Sena Branch Road	-		0.56	0.56
C325	Laxmi Narayan Marga	0.21			0.21
C326	Durga Marga Branch Road	0.02			0.02
C327	Shanti Path	0.19			0.19
C328	Sagarmatha Marga	0.13			0.13
C329	Durga Marga Branch Road	0.05			0.05
C330	Vaishnab Marga	0.22			0.22
C331	Dharma Path	0.27			0.27

Code	Road Name	Metalled	Earthen	Gravelled	Total
C332	Lumbini Development Bank Road Section	-		0.12	0.12
C333	Om Shanti Tole Marga	-		0.10	0.10
C334	Survey Office Marga	-		0.20	0.20
C335	Sangam Tole Marga	-		0.14	0.14
C336	Gharelu Marga	-		0.19	0.19
C337	Buddha Marga	0.20			0.20
C338	Buddha Marga Branch Road	0.06			0.06
C339	Surya Path	0.32			0.32
C340	Durga Marga Branch Road	0.08			0.08
C341	NEA marga	-		0.32	0.32
C342	NEA Branch Road	-		0.14	0.14
C343	Muslim Marga	-		0.28	0.28
C344	Muslim Marga	-		0.06	0.06
C345	Khanepaani Marga2	0.25			0.25
C346	Khanepaani Marga1	0.26			0.26
C347	Ganga Path	0.24			0.24
C348	Ganga Path	0.07			0.07
C349	Ganga Path	0.06			0.06
C350	Shanti Path-Ganga Path	0.12			0.12
C351	Shanti Path	0.29			0.29
C352	Jagatkumari Academic Marga2	0.66			0.66
C353	Sikshya Tole Marga	0.26		0.36	0.62
C354	Sikshya Tole Bhitri Marga	-		0.16	0.16
C355	Sikshya Tole Branch Road	-		0.08	0.08
C356	Sayapatri School Road	-		0.07	0.07
C357	Petrol Pump Rod	0.19			0.19
C358	Petrol Pump Branch Road	-		0.09	0.09
C359	Petrol Pump Branch Road	-		0.09	0.09
C360	Juice Factory Road	-		0.13	0.13
C361	Itta Bhatta Marga	-		1.27	1.27
C362	Pokhari Marga	-	0.37		0.37
C363	Dalit Marga	0.37			0.37
C364	Kotahi Marg	-		1.14	1.14
C365	Prati Tole-Playground	-	0.20		0.20
C366	Sharvan Marg	-		0.44	0.44
C367	Shravan Sakhaa Marg	-		0.06	0.06
C368	Kotahi Sakhaa Marg	-		0.09	0.09
C369	Parasi Road-Dana Company	-		0.26	0.26
C370	Krishi Road	-	0.83		0.83
C371	Krishi marga	-	0.57		0.57
C372	Santoshi Branch Road 1	-		0.31	0.31
C373	Krishi Road	-	0.17		0.17
C374	Santoshi Branch Road 2	-		0.31	0.31

Code	Road Name	Metalled	Earthen	Gravelled	Total
C375	Krishi Road	-	0.73		0.73
C376	Plotting Road	-	0.85		0.85
C377	Plotting Road	-	0.22		0.22
C378	Pharauli Krishi Road	-	1.06		1.06
C379	Krish i Road Pharauli	-	0.28		0.28
C380	Santoshi Brach Road 3	-		0.13	0.13
C381	Ranipakad-Ghyudala road	-	0.27		0.27
C382	Mandhir Marga	-		0.16	0.16
C383	Bandevi Mandhir Marga	-	0.59		0.59
C384	Kankali Mandhir Baato	-	0.23	0.27	0.50
C385	Kankai Marg	-		0.19	0.19
C386	Landfill site baato	-		1.09	1.09
C387	Shiv Marg	0.62			0.62
C388	Inaar Marga	-		0.04	0.04
C389	Jagatkumari Academic Marga1	-	0.91		0.91
C390	Bhagawati Marga North	0.10	0.16	0.26	0.52
C391	Jagat Kumari Marga	0.08			0.08
C392	Bhagawati Marga East	0.20			0.20
C393	Bhagawati Marga North-East	0.17			0.17
C394	Om Shanti Marga	0.68			0.68
C395	Om Shanti Marga-House of Bhola Harijan	-	0.06		0.06
C396	To House of Chetan Harijan	-	0.07		0.07
C397	Om Shanti Road Branch Road2	-	0.05		0.05
C398	Om Shanti Branch Road1	-	0.07		0.07
C399	Om Shanti Branch Road3	-	0.08		0.08
C400	Om Shanti Branch Road1	-	0.20		0.20
C401	Om Shanti Marga-House of Ramji Tiwari	-	0.06		0.06
C402	Om Shanti Branch Road	-		0.22	0.22
C403	Om Shanti Branch Road	-		0.06	0.06
C404	Om Shanti Branch Road	-		0.03	0.03
C405	Kotahi Marg	-		1.12	1.12
C406	Parasi Road-Kotahi Marga	-		0.11	0.11
C407	Karagar Road	-		0.17	0.17
C408	Kotahi Marg 2	-		0.75	0.75
C409	Kotahi Shakha Marga	-		0.15	0.15
C410	Kotahi Shakha Marga-1	-		0.10	0.10
C411	Kotahi Shakha Marga-2	-	0.10		0.10
C412	Masjid Marga	0.36			0.36
C413	Kasiya Marga	1.14			1.14
C414	Shanti Marg	0.37			0.37
C415	Nagarpalika Road Section	-		0.06	0.06
C416	Kotahi Marg	-		0.04	0.04
C417	Ramjanaki Marga-Mahamaya Marga	-		0.13	0.13

Code	Road Name	Metalled	Earthen	Gravelled	Total
C418	Kailashpati Road Section	-		0.28	0.28
C419	Dalit Marg	-		0.13	0.13
C420	Shiva Marg	0.12	0.04		0.16
C421	Shiva Marga Branch Road 1	-		0.06	0.06
C422	Shiva Marga Branch Road 2	-		0.01	0.01
C423	Shiva Marga Branch Road 3	-		0.03	0.03
C424	Bhaluhi Marga	-	1.48		1.48
C425	Shree Janata Marg	-		0.19	0.19
C426	Chaudhary Marg	-		0.07	0.07
C427	Gayatri Marg	-		0.46	0.46
C428	Gayatri Shakha Marga	-		0.11	0.11
C429	Gayatri Shakha Marga	-		0.12	0.12
C430	Dalit Marga	-		0.22	0.22
C431	Hariyali Marga	-		0.56	0.56
C432	Padatikar Tole Road	-		0.12	0.12
C433	Gayatri Marg-1	-		0.15	0.15
C434	Krishi Marg	-	0.10		0.10
C435	Padatikar Krisha Marga	-	0.32		0.32
C436	Pokhari Path	-	0.19		0.19
C437	Masjid Marga	0.03			0.03
C438	Kuwa Marga	-		0.03	0.03
C439	Gupta Marga	0.03			0.03
C440	Om Shanti Marga	-		0.02	0.02
C441	LINE -6(MAYADEVI MARGA)	-	0.42		0.42
C442	LINE 5(SIDDHARTHA MARGA)	-	1.12		1.12
C443	LINE 4(KRISHI SADAK MARGA)	-	0.97		0.97
C444	LINE 3(PURWATARA MARGA)	-	1.23		1.23
C445	LINE -2(HOLICHILD MARGA)	-	1.43		1.43
C446	kOLIYA MARGA-2	-	0.33		0.33

4.3 Accessibility And Mobility Scenario

As this municipality is located about 5 km south of Mahendra highway and it is about 35km east of Bhairahawa Sub-metropolitan city accessibility scenario of this municipality is good as compared to other cities.

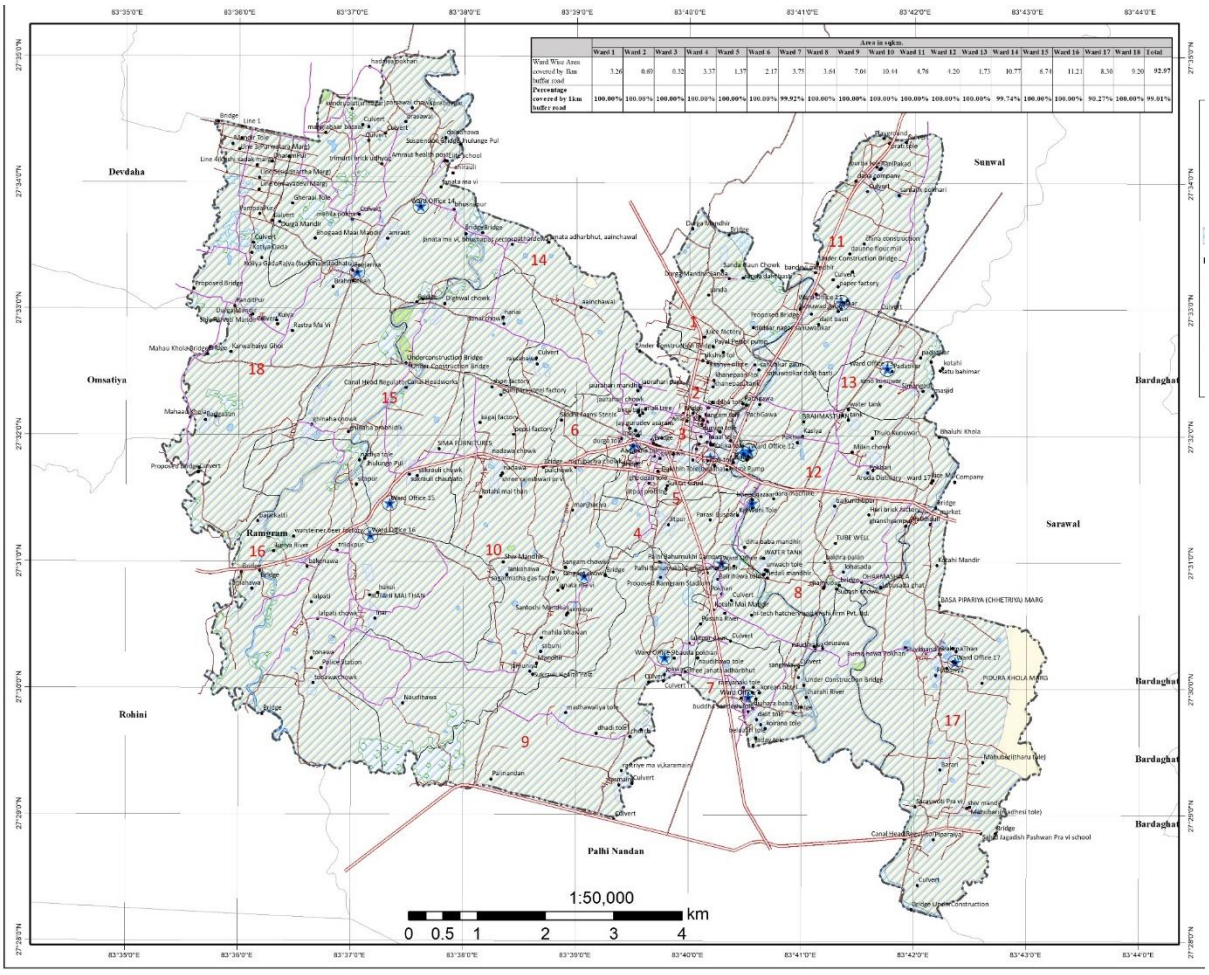
Present scenario of Ramgram municipality reflects the access to bus stop on an average about 20 minutes, Class “C” roads that are planned for public vehicle to ply would reduce this time to within 10 minutes. People will have access to either Class “B” or Class “A” roads designed for more mobility within 10 minutes or 20 minutes on an average walking distance that are

designed for greater mobility. Planning work has focused on reducing access directly to highways, subsequent developments are recommended for national authority to develop required infrastructures.

ward	Area(sq.km.)	Population	road length	R_Density	R_density(P)
Ward 1	3.27	2214	15.12	4.62	6.83
Ward 2	0.69	2904	6.11	8.85	2.10
Ward 3	0.32	2550	3.91	12.22	1.53
Ward 4	3.37	2084	13.04	3.87	6.26
Ward 5	1.37	1917	12.07	8.81	6.30
Ward 6	2.17	1866	8.83	4.07	4.73
Ward 7	3.76	2713	14.07	3.74	5.19
Ward 8	3.64	2125	12.76	3.51	6.01
Ward 9	7.04	2480	17.28	2.45	6.97
Ward 10	10.44	4213	35.52	3.40	8.43
Ward 11	4.77	3900	18.17	3.81	4.66
Ward 12	4.2	2107	18.98	4.52	9.01
Ward 13	1.73	1429	7.66	4.43	5.36
Ward 14	10.79	4953	33.57	3.11	6.78
Ward 15	6.74	4715	23.40	3.47	4.96
Ward 16	11.21	6627	33.10	2.95	4.99
Ward 17	9.2	5359	29.38	3.19	5.48
Ward 18	9.2	5913	27.52	2.99	4.65
Total	93.91	60069	330.48	3.52	5.50

Ward	A	B	C	SRN	Total	Area covered by road	total area in sq km	% of road
1	3.60	0.45	9.15	1.91	15.12	0.17	3.27	5.22
2		1.29	4.16	0.66	6.11	0.06	0.69	8.35
3		0.96	1.83	1.06	3.91	0.05	0.32	16.38
4	2.72	3.13	5.07	2.12	13.04	0.17	3.37	4.93
5	0.77	2.45	5.74	3.11	12.07	0.16	1.37	11.96
6	1.37	3.74	2.56	1.16	8.83	0.11	2.17	4.98
7	6.20	5.09	1.19	1.59	14.07	0.20	3.76	5.29
8	1.52	4.00	6.37	0.87	12.76	0.13	3.64	3.49
9	9.97	1.49	5.71		17.28	0.20	7.04	2.82
10	10.77	3.70	18.51	2.54	35.52	0.39	10.44	3.70

Ward	A	B	C	SRN	Total	Area covered by road	total area in sq km	% of road
11	1.22	3.30	9.94	3.72	18.17	0.22	4.77	4.66
12	5.02	2.84	7.00	4.13	18.98	0.27	4.2	6.41
13	3.72	2.69	1.25		7.66	0.09	1.73	5.21
14	7.95	12.61	13.00		33.57	0.32	10.79	3.00
15	6.31	6.28	9.21	1.60	23.40	0.26	6.74	3.87
16	17.47	3.44	9.73	2.46	33.10	0.43	11.21	3.82
17	5.98	1.30	20.74	1.36	29.38	0.27	9.2	2.91
18	9.22	9.58	8.73		27.52	0.29	9.2	3.11
Total	93.81	68.34	139.89	28.28	330.48	3.78	93.91	4.02



4.4 Transport Infrastructure Planning

Land use and transport, developed road hierarchy, accessibility and mobility scenario are the policy level guidelines for development and planning of transport infrastructures.
Most of the households own bicycle. Nearly 2.37% of household do not own any type of vehicle, whereas 73.91% of people own bicycle. Thus from the perspective of sustainable transport also, we need to protect the peoples' utilization of bicycle in planning works.
From data of vehicle ownership with 73.91% of household owning at least a bicycle and mode share of 46% of cycle and rickshaw, the planning works has incorporated this scenario by facilitating dedicated cycle lanes in class A and class B roads.

While 25% of the trips made as of today is on foot, the planning works has incorporated footpaths for pedestrians segregated from carriage-way width.

With projection of population at present growth rate by geometrical increment method, population would rise above 36,738 in 20 years which will certainly grow in economic size and have better income scenario. People will aspire to have private vehicles of their own to increase mobility, requiring greater road space width which will be provisioned by class A and class B roads but the aim of sustainable transport and accessibility policy will be to check private ownership of vehicles under control

Class A and Class B Road would have provision of bus-bay to facilitate public transit riders. Green belts would be developed for aesthetic purpose and noise reduction purpose as well as segregation of pedestrians from road traffic. Road side furniture would be installed as deemed necessary.

4.5 Short Term Municipality Transport Master Plan

The short term municipality transport master plan has been developed to guide the municipal investments on road infrastructure through 2078/79. This short-term plan will mainly focus on the demand by the people and for the accessibility of the people in the first step. The plan will advance the municipality towards the medium- and long-term plan as outlined in the later topics.

Short term planning elements generally known as transportation system management (TSM) are basically meant for efficient use of existing and proposed infrastructure (Verma & Ramanayya, 2015). Short term MTMP refers to maintenance and upgrading of the existing road networks to the proposed standards to support the present and future (5 years) transport demand paving the demand for the implementation of medium term and long-term plan. It also includes construction of new road linkages which are necessary to support the current road network and the envisaged road network for the future. The interventions are applied to the road sections based on their priorities (based on the developed scoring criteria) and the annual

budget. The transport infrastructure envisaged at the end of five years plan is for the development and maintenance of access road linkages and collector roads that maintains a road hierarchy (as formulated above) and justifies the construction and development of higher hierarchy roads in the medium and long term (in short term if justified).

As such, short term plan focuses on the accessibility of all the settlements, moving towards mobility to increase the access to wider services, thus paving the way for development of proper sustainable public transport services within and around the municipality. The strategy and investment plans for short term municipality transport master plan is elaborated in the next section.

- For the case Ramgram municipality, it is planned to construct Class A, B and C roads 2-lane, 2-lane and intermediate lane respectively within this period.
- In the short-term planning, it is planned to open the new track and gravel them within this period.
- For the case of Class A road which also forms a Ring road is planned to complete its 2-lane track within this period.
- Similarly, for the case of Class B and C roads, it is planned to open track and gravel as far as possible within this period.

4.6 Medium Term Municipality Transport Master Plan

- The development of the road network in medium term plan includes opening of the track and clearing the right of way (ROW) along the Class B roads. The period of short term plan controls the encroachment and urban sprawl growth along the ROW of the Class B roads.
- All Class "A" and "B" roads are desired to be constructed in this time period. The second MTMP should be compatible with the present MTMP and medium term plan.
- Utilities management is also one of the challenges in long run. The area of **green belt, cycle track, and footpath** can be used for utilities management. It is recommended not to provide water pipe, sewer in the road, rather, the sewer is recommended to construct below the footpath in the form of cover drain. Similarly, water supply pipe and telephone line can be lain off below the green belt (at medium strip or about separator of carriageway and cycle track or footpath) for effectiveness of roadway.
- Also, if possible the construction of cross drainage structure, like bridges which need to be increased, should be constructed within this period.
- Similarly, parking facility for the vehicles within the municipality should be planned within this period.

4.7 Long Term Municipality Transport Master Plan

The development of Class A roads is necessary in the long run of the municipality for the structured development of the road network hierarchy and thus the proper development of the trips and the municipality as a whole. The period of short term and medium term plan controls the encroachment and urban sprawl growth along the ROW of the Class "A" roads.

Long term municipality transport master plan envisages the development of the roads of all hierarchy within the municipality as depicted by the perspective plan whose demand is set out by the indicative potential development of the municipality.

Short term period (first five years) identifies the higher hierarchy roads necessary for the municipality in the long run and set necessary bylaws. It also implements those higher hierarchy roads in the policy level by controlling the development of other structures within the proposed ROW and shifting of the existing structure away. It will facilitate clearing of the ROW and track opening during the medium term time period (five to ten years). During medium term plan, these roads will be developed to certain level as per the existing demand.

During this time period all the roads of this MTMP should be completed in full phase with full interventions. There should **be 4 lanes in Class A**, **2 lanes in Class B**, and **single lane in Class C**. There should be **footpath, cycle track** and **green belts** in Class A, B and C roads.

Chapter V: Five years municipal transport master plan

5.1 Perspective plan of municipal road network

Perspective plan of municipal road network includes the maintenance of the access and collector roads and development of higher hierarchy road corridors supporting mobility of the roads. First five years should focus on development of existing access roads and their maintenance. It also incorporates construction of new road linkages to provide basic access to the settlements. Roads of Class "C" will also be widened to its functional width providing proper cycle tracks and pedestrian ways where permitted by the available road space. During this period formulated road hierarchy will be implemented in terms of policy and enforcement of bylaws. Within 2 years other complementary plans of land use and city development will be developed. In the third year, the MTMP and its perspective plan should be revised in coordination with the other plans formulated and changes captured during this period.

Year five to ten will then implement the higher hierarchy roads in stages of clearing of the required ROW road space and construction of necessary infrastructure. Proper development stages of roads should be planned (construction of Class "A" roads to the standards of Class "C", then gradually upgrading to Class "B" and then to Class "A"). Other implementation strategies should also be developed and finalized at the end of this period. The road network developed during this period shall complete construction of Class "C" roads. This will demand higher class roads to support the local road networks. Gradual upgrading of the higher hierarchy road networks during year ten to twenty will be justified by the traffic generated and level of mobility demanded to support the emerging economy.

Financial institution and capital investment plan

To determine how much of the proposed work can be carried out in the 5-year MTMP period, it is necessary to estimate the budget available in this period. This is done by estimating the amount of money available from different sources based on the actual amounts of the current or last financial year, assuming certain growth rates for each funding source.

It is recommended that the planning section of municipality should incorporate funding source from different line agencies as well as NGOs, INGOs, people's contribution fund for proper management, infrastructure development and maintenance of road within the municipality.

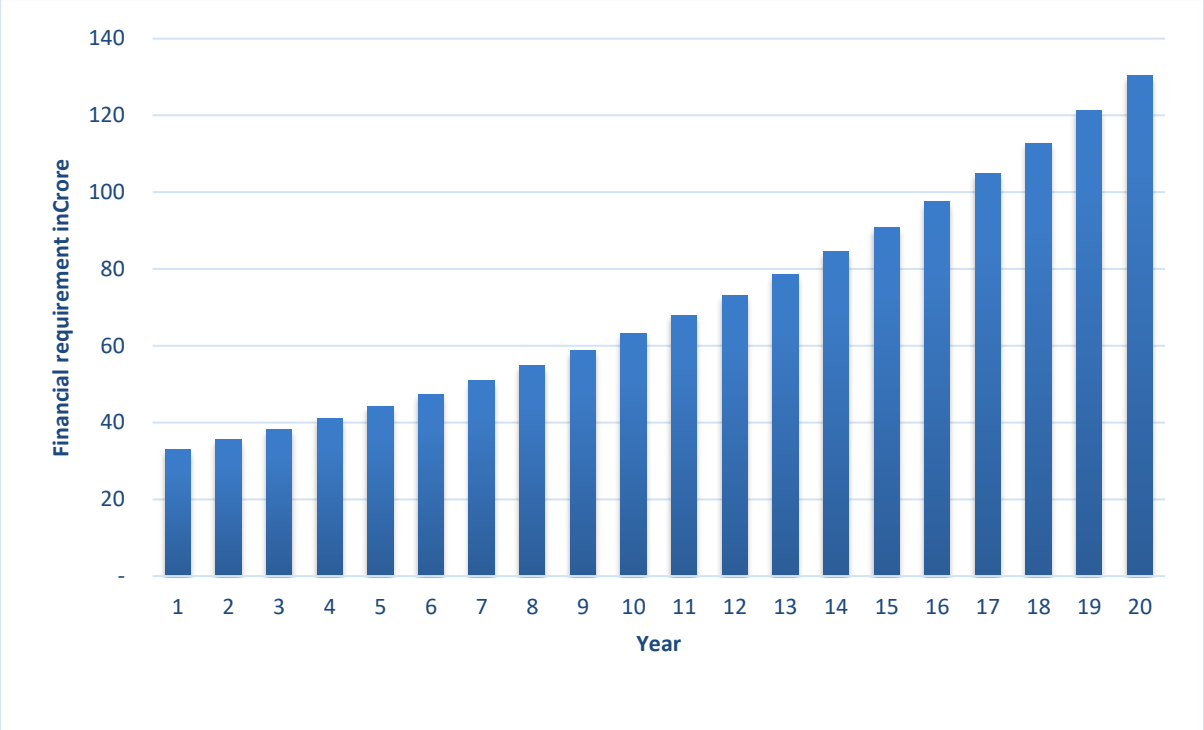


Figure 18: Twenty Years budget forecast

5.2 Scoring criteria and score

As there are limited resources for the construction and maintenance of road infrastructure for the municipality, roads should be ranked based on some standard rule. For this purpose, the scoring purpose given by the ToR is used with some suggestion from the local people and concerned bodies. The scoring criterion used in this MTMP is described in detail in volume II of this report. The final ranking of the municipal roads are as follows:

Table 8: Score of each municipal road

Code	Road Name	Rank	Rank in Class
A01	Basabashi-Manari(Hulaki)-Devgaun-Pipariya-Mahespur Road	2	2
A02	Ramjanaki Marg	12	7
A03	Harkatta (MRM)-Baikunthapur(Hulaki)-Deurawa-Ramgram Stupa Road	1	1
A04	Bikunthapur-Milanchowk to east Road	84	13
A05	Charandas Baba Marga	16	9
A06	Ramgram N.P-Sanda-Shantapur-Badera-Bargoriya Mandir Road	170	25
A07	Sunwal-Parasi Road-Durga Mandhir	163	23
A08	Buddha Marga	169	24
A09	Buddha Tole-Parasi Road Section	175	26
A10	Jitpur(Ramgram N.P)-Brahmpurwa-Bairawa-Bishnupura Road	14	8
A11	Jokwar Marga	131	22
A12	Shaid Jagdish Paswan Marg(Bairawa-Lalitpur-Lankahawa-Hakaui Road)	8	6

Code	Road Name	Rank	Rank in Class
A13	Majariya-Jamuniya-Sanahi-Ragargunj Road	17	10
A14	Pul to santoshi mandir road	89	14
A15	Samaye Devi Marga	83	12
A16	Bijaya Path	81	11
A17	Nandan Marga	96	17
A18	Sunwal-Parsawal-Amraut-Banjaria-Ghina-Bakena-Lalpati-Tonwa Road	5	4
A19	Tonawa chowk to south road	98	18
A20	Kalika Path(Lalpati to Turiya khola)	100	19
A21	Lalpati-Turiya Khola Marga	95	16
A22	Shikshya Path	127	21
A23	Hulaki road (Naduwa)	188	28
A24	Factory Branch	187	27
A25	Purano Hulaki(Butwaliya Marga)	7	5
A26	Pokharapali(Ramgram N.P)-Banjariya-Dharampur-Bairagnath Road	4	3
A27	Aananda Marga	119	20
A28	Rastriye Ma Vi-Brahmathan Road	91	15
B01	DAHACHANDI CHOWK-CHANDRAGADHI-WARD 4 OFFICE ROAD	6	2
B02	Lohasada-Dharmashala-Bhaluhi Marg	25	9
B03	Buddhanagar tole-Ramjanaki-Dalit tole-Yadav tole road	110	28
B04	Ward 7 office-Ramjanaki tole road	108	27
B05	Buddha Sandesh tole road	106	26
B06	Dalit tole road	114	31
B07	Uttam ma. vi.- Sangralaye road section	111	29
B08	Janata AaBi-Naudihawa-Parasi Maheshpur road jodne marga	112	30
B09	Kalika Marga	156	46
B10	Krishi Marga(Ward 9)	157	47
B11	Unwach Marga	3	1
B12	Bagaicha Marga Road	142	44
B13	Milanchowk-Janata Pravi-Saratikar road	82	12
B14	Samayemai Marga	173	54
B15	Ram Marga	158	48
B16	Buddha Marga(Karagar to Janata Pra vi)	15	6
B17	Shiva Marg	189	60
B18	Padatikar Jholunge pul road	189	60
B19	santoshi marga(Ward 11)	86	14
B20	Udhyog Banijya Sangh Marga	88	16
B21	Durga Marga	26	10
B22	Haatbazar-Dursanchar-Sangam tole road	162	51
B23	Sena sadak(Om Shanti Marga)	87	15
B24	Ghantaghar to Balmandir tole Road	176	56
B25	Shanti Marga	174	55
B26	Aadarsha Marga	27	11
B27	Ghodpali tole-Jitpur road	85	13
B28	Kalika Marga	164	52
B29	Ward 6 office-Pragati chowk-Jaurahari Road	168	53
B30	Shankar Marga	161	50
B31	Hakui-Naudihawa Road	186	59
B32	Sita Path	103	25
B33	Janaki Path	97	21

Code	Road Name	Rank	Rank in Class
B34	Kothai Mai Marga	99	22
B35	Sukrauli Nahar Krishi Sadak	128	41
B36	Krishi marga	130	43
B37	Trilok Path-Nandan Marga jodne road	101	23
B38	Shiv path	102	24
B39	Krishi bato	94	20
B40	Turiya Marga(Sukrauli chowk to Digwal chowk)	24	8
B41	Furniture Tole Marga	155	45
B42	Naduwa chowk to north factory road	185	58
B43	Karwala Path	129	42
B44	Kali Marga	125	39
B45	Loktantrik Chowk-Omshanti chowk-Jaurahari chowk-Nanai road	13	5
B46	Nanai-Pathardewa-Bhusanpur Road	23	7
B47	Janata Aabi jane road	126	40
B48	Ahirauli Marga	120	34
B49	Mahila Pokhari-Janata AABI-Hadaiya Mai road	123	37
B50	Bramha marga	118	33
B51	Krishi Marga ward 14	122	36
B52	Shanti Dip Marga	124	38
B53	Bouddha Marg	9	3
B54	Chandragadhi Path	160	49
B55	Laxmi Marg(Kotiya dada)	93	19
B56	Siddhartha Marg	92	18
B57	Panditpur-Badagaun-Samay mai mandir road	10	4
B58	Hadaiya Mai Marga	117	32
B59	Hille Marga	121	35
B60	Shiva Marg	180	57
B61	Shanti Marga	90	17
C001	Ganga Marga	60	39
C002	Market Marg	48	27
C003	Buddha Marga	30	9
C004	Sundar Marg	61	40
C005	Patkhauli Marga	32	11
C006	Durga Marg	35	14
C007	Parwati Marg	74	53
C008	Saraswati Marga	56	35
C009	Bhagwanpur Marga	59	38
C010	Lohasada Marga	18	2
C011	Kotahi Marg	20	4
C012	Namindranath Gosain Marg	58	37
C013	Kotahi Marg	71	50
C014	Chaudhary Marg	36	15
C015	Gosai Marg	75	54
C016	Parwati Marg	38	17
C017	Saraswati Marga	34	13
C018	Bhagwati Marga	64	43
C019	Durga Marg	66	45
C020	Aananda Marga	49	28
C021	Bhagawati Sthan Marga	79	58
C022	Buddha Marga	53	32

Code	Road Name	Rank	Rank in Class
C023	Laxmi Marga	78	57
C024	Dahar Chandi Marga	43	22
C025	Pokhara Marga	46	25
C026	Parwati Marg	76	55
C027	Laxmi Marga	77	56
C028	Ganesh Marg	29	8
C029	Dev Marga	70	49
C030	Gosai Marg	65	44
C031	Ward 17 office-Pidura Khola Marg	21	5
C032	Chaudhary Marga	52	31
C033	Buddha Marga	42	21
C034	Chaardaha Marga	63	42
C035	Kishan Marg	55	34
C037	Shiva Kuti Marga	50	29
C038	Adarsha Marga	57	36
C039	Mahubari Marga	11	1
C040	Dharma Marga	54	33
C041	Inaar Marga	67	46
C042	Mahubari Branch Road	62	41
C043	Pokhari Marg	47	26
C044	Krishi marga	68	47
C045	Samaya Marg	51	30
C046	Shanti Marg	41	20
C047	Shiv Mandir Marg	39	18
C048	Thakur Marga	31	10
C049	Madarsha Marg	28	7
C050	Saraswati Marga	22	6
C051	Krishi Samuha Marga	19	3
C052	Soiya Marga	37	16
C053	Kola Marga	72	51
C054	Krishi marga	73	52
C055	Diha Marga	45	24
C056	Shiva Marga	33	12
C057	Jagadamba marg	44	23
C058	Gayatri Marga	40	19
C059	Pragatishil Marga	69	48
C060	Chandragadhi Path	159	89
C061	Chandragadhi Path	171	93
C062	Chandi Marga	107	62
C063	Uttam Ma Vi-Jharahi Khola Road	109	63
C064	Beldaari tole road	115	65
C065	Koirana tole road	104	60
C066	Koirana branch road	105	61
C067	Dalit tole road	113	64
C068	Netwari tole road	116	66
C069	Khadye Udhyog Marga	181	98
C070	Prabhat Marga	172	94
C071	Prabhat Marga	183	100
C072	Kalika Marga	165	90
C073	Buddha Tole-Parasi-Jharahi River	179	97

Code	Road Name	Rank	Rank in Class
C074	Unwach Branch Road	146	80
C075	Unwach Road-Aara Machine Road	147	81
C076	Bagaicha Marga	137	72
C077	Unwach Marga-Buspark	141	76
C078	Unwach Gaun-Hulaki Marga	139	74
C079	Unwach Marga-Chandal Chauraha	144	78
C080	Kalika Marga	80	59
C081	Aadharbhut Bidhyalaye Marga	145	79
C082	Unwach Branch Road	143	77
C083	Unwach-Chandal Chauraha	148	82
C084	Bakhra Palan Road	140	75
C085	Tube Well-Brick Factory-Hulaki Road	138	73
C086	Shanti Marga Branch Road	154	88
C087	Shiv Marga	151	85
C088	Shanti Marga-House of Bhumaar Yadav	153	87
C089	Jay Kotahi Marga	133	68
C090	Kotahi Branch Road	132	67
C091	Gayetri Marga	152	86
C092	Inar Marga	135	70
C093	Pashupati Marga	134	69
C094	Ganga Marga	149	83
C095	Kalika Branch Road	150	84
C096	Hulaki-Brick factory Road	136	71
C097	Future Light School Road	166	91
C098	Sukrat Gaud Ring Road North	182	99
C099	Sukrat Gaud Ring Road South	167	92
C100	Samsad Marga	178	96
C101	Devsthal Marga	177	95
C102	Durga Branch Road	184	101

5.3 Five-year budget expenditure

One of the final outcomes of this study is to provide annual budget expenditure for proposed intervention (new construction, upgrading, maintenance and rehabilitation).

- For the allocation of yearly budget, the total cost required for twenty years is first calculated and this amount is distributed to twenty year assuming that budget spending capacity of municipality is expected to grow at the rate of 7.5% per year.
- The estimate of budget required for the five years is prepared based on the assumption that the Class A road is to be made two lane, and Class B and C road is to be made single lane and lane considered are assumed to be track opened and gravelled or single level of intervention.

- Due to limitation of budget, the roads are assumed to have simple cross drainage structures within this period whereas cross drainage structures such as Bridges are not included in this budget and expected to be completed within this time period by external sources.
- For approximate costing, the construction rate of road appurtenances is assumed to be equal to that of gravelling cost and for short term the minimum width of 2m is assumed if existing road width doesn't exists.
- Interventions on those roads need to be incorporated in annual budget plan. Intervention that need can't be completed in predetermined year should be the next priority in coming year. If a certain road, which was targeted to complete in first year could not be finished in first year, need to be given first priority in next year expenditure plan.
- If there is deficit in annual expenditure, municipality need to incorporate that particular heading in next year at any cost. They can look for grant, assistance from district or even central level or they can incorporate them by shifting budget from less importance item/heading.

Total budget is first broken down to 70% for road construction and 30% for maintenance as per the Terms of Reference. Of the total budget available for construction of roads, 50% are allocated for construction of class A roads,30% for class B and 20% are allocated for Class C roads.

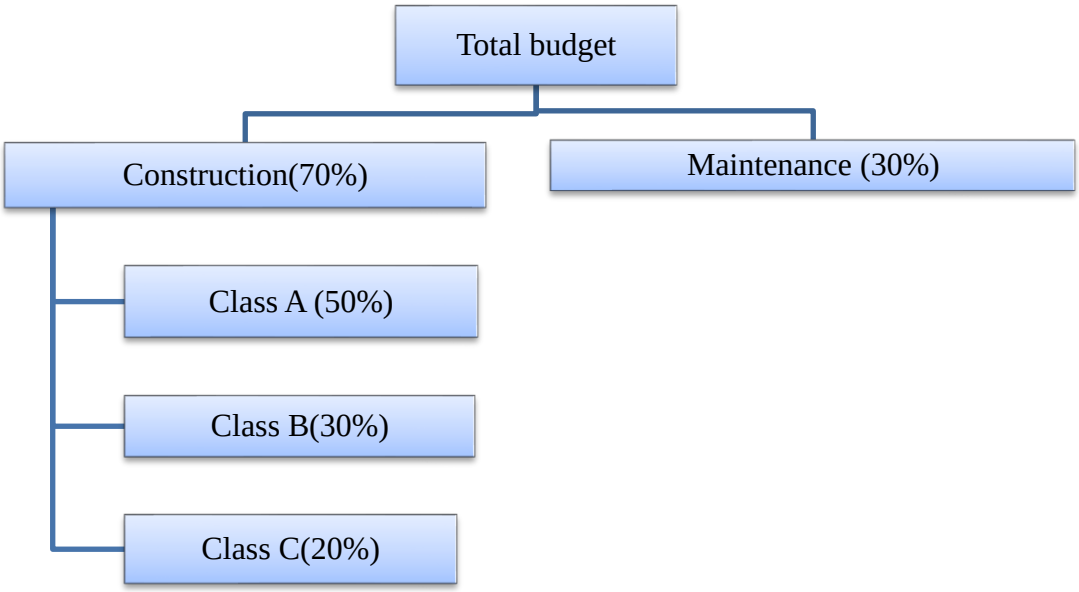


Figure 19: Budget Allocation

From the study about 3.8 billion rupees is estimated to be required for the 20 years long term implementation plan of this municipality. By dividing this amount for the continuous 20 years, about 392 million rupees is estimated for this five-year term. This budget is further divided into the following subheading:

Table 9: Budget allocation for different interventions year wise

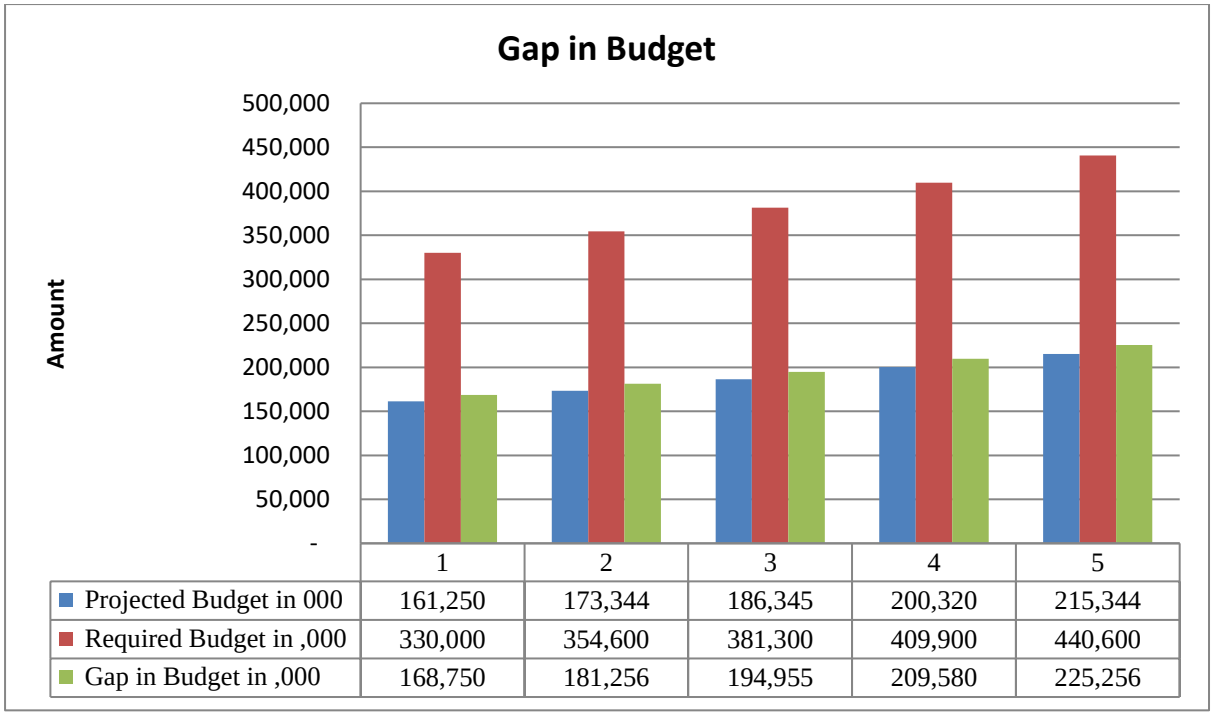
Year	Maintenance	Class A	Class B	Class C	Total
Year 1	99,000,000.0	115,500,000.0	69,300,000.0	46,200,000.0	330,000,000.0
Year 2	106,400,000.0	124,100,000.0	74,460,000.0	49,640,000.0	354,600,000.0
Year 3	114,400,000.0	133,450,000.0	80,070,000.0	53,380,000.0	381,300,000.0
Year 4	123,000,000.0	143,450,000.0	86,070,000.0	57,380,000.0	409,900,000.0
Year 5	132,200,000.0	154,200,000.0	92,520,000.0	61,680,000.0	440,600,000.0
	575,000,000.0	670,700,000.0	402,420,000.0	268,280,000.0	1,916,400,000.0

	Year 1	Year 2	Year 3	Year 4	Year 5
Class A	115,500,000.00	124,100,000.00	133,400,000.00	143,400,000.00	154,200,000.00
Class B	69,300,000	74,500,000	80,100,000	86,100,000	92,500,000
Class C	46,200,000	49,600,000	53,400,000	57,400,000	61,700,000
Construction	231,000,000	248,200,000	266,900,000	286,900,000	308,400,000
Maintenance	99,000,000	106,400,000	114,400,000	123,000,000	132,200,000
Total	330,000,000	354,600,000	381,300,000	409,900,000	440,600,000

Figure 20: Yearly Budget for the MTMP

5.4 Gap in Budget

It was found that in the year of 77/78 the total budget of this municipality was about 68.76 million and that was estimated to be 69.84 million for the fiscal year 72/73. Based on these facts, the projected budget for road sector for the year 73/74 will be approximately 10.5 million which is far less than the budget required to meet the planned goals for road sector development within the municipality. This gap can be projected as shown below in the figure:



	1	2	3	4	5
Projected Budget in 000	161,250	173,344	186,345	200,320	215,344
Required Budget in ,000	330,000	354,600	381,300	409,900	440,600
Gap in Budget in ,000	168,750	181,256	194,955	209,580	225,256

Figure 21 Projected and required budget for the five year

Table 10:Class wise Implementation plan for first five year construction (Amount)

	Class A		Class B			Class C		Total
	Blacktop (80%)	Gravel(20%)	Blacktop(60%)	Gravel(40%)	New Track(0%)	Blacktop(50%)	Gravel (50%)	
Year 1	92,400,000	23,100,000	34,650,000	34,650,000	-	23,100,000	23,100,000	231,000,000
Year 2	99,280,000	24,820,000	37,250,000	37,250,000	-	24,800,000	24,800,000	248,200,000
Year 3	106,720,000	26,680,000	40,050,000	40,050,000	-	26,700,000	26,700,000	266,900,000
Year 4	114,720,000	28,680,000	43,050,000	43,050,000	-	28,700,000	28,700,000	286,900,000
Year 5	123,360,000	30,840,000	46,250,000	46,250,000	-	30,850,000	30,850,000	308,400,000

Table 11:Class wise Implementation plan for first five-year construction (Road Length)

	Class A		Class B			Class C		Total
	Blacktop (80%)	Gravel(20%)	Blacktop(60%)	Gravel(40%)	New Track(0%)	Blacktop(50%)	Gravel (50%)	
Year 1	9.24	4.62	4.62	9.90	-	3.08	6.60	38.1
Year 2	9.93	4.96	4.97	10.64	-	3.31	7.09	40.9
Year 3	10.67	5.34	5.34	11.44	-	3.56	7.63	44.0
Year 4	11.47	5.74	5.74	12.30	-	3.83	8.20	47.3
Year 5	12.34	6.17	6.17	13.21	-	4.11	8.81	50.8
	53.65	**26.82**	**26.83**	**57.50**	**-**	**17.89**	**38.33**	**221.02**

5.5 Staging Implementation

Mid period review

In light of present context without proper land use and city development plans of the municipality, the formulated municipal transport plan for five years and long term perspective plan cannot be complete. Comprehensive drainage plan and layout also guides the placement of cross drainage structures along the roads. Therefore, a mid period review is necessary. This review follows the formulation of comprehensive city development plan and land use plan. These plans will bolster the transport master plan and also suggest necessary deviations and revisions. The surveys conducted to prepare this MTMP are baseline survey for future planning. In reference to these surveys, the mid period review will track the changes and its effect on the formulated five year plan and long term perspective plan. Based on the recommendations of land use and city development plan, and the changes during the first two years in the road infrastructure and road traffic the mid period review will guide MTMP in the later stages.

The next MTMP will be prepared in the sixth year which will create a void in continuity of transport infrastructure development during the sixth year. The mid period year shall also formulate implementation and investment plan for that period which will be carried over the next MTMP.

Yearly maintenance plan

According to the yearly progress of transport infrastructure development and construction, yearly maintenance plan should be prepared. This maintenance plan addresses the recurrent maintenance, specific maintenance and emergency maintenance requirements of the municipal roads.

Stages of development of roads

Visualization of stages of development of roads is very important aspect of long term municipality transport master plan (perspective plan). Current land use and road side development may not allow immediate implementation of wider roads. These restrictions should be addressed in various stages. The stages can be visualized in reference to various variables.

The prime stage is the formulation of policy and plans. This stage formulates the hierarchy and their geometric and physical characteristics, purpose and functions along with necessary ROW. With the formulation of road hierarchy, road bylaws will be enforced. It should be followed by formulation of proper implementation strategies for/and use of various tools for land acquisition and compensation, method and stages of construction of roads and road side infrastructures and enforcement of road discipline and right of users. Development of such policies will support continuous development of the roads. The next stage is to clear the total right of way so that other infrastructures integrated with road can be developed. Until the end of clearing of proper right of way, the policies should be strong and well-informed. This will mark the entry to the next stage which is construction of full phase of all hierarchy roads.

Construction of higher hierarchy roads should be done in stages according to the necessity as guided by the developed lower hierarchy roads and corresponding demand of higher hierarchy roads they generate. The first stage should connect the pedestrian path and cycle tracks along with double lane carriageway for all higher hierarchy roads. The development of Class “A” roads should follow construction of road space to the standard of Class “C” then gradually expanding to Class “B” and finally to Class “A”. Class “B” roads should also follow the same development stages. Construction of well-connected pedestrian way, cycle tracks and green belt along the edges of the ROW restricts any possible encroachment of the road space.

Chapter VI: Conclusion and Recommendations

Municipality Transport Master Plan has been prepared for Ramgram Municipality. A series surveys for data collection, series of different level interaction with the locals and various authorities was conducted. The study has identified all the roads of the municipality, their status and interventions required. The map of IDPM, MIM, MTPP and other maps are prepared. Detail implementation strategy and budged expenditure plans have been prepared. The inventory shows that majority of roads are narrow and needs maintenance and upgrading. This is in line with the demand by the wards. The accessibility of roads has addressed most of the settlements but their mobility is very low. Access to facilities is hindered due to lack of reliable and safe public transport services within the municipality. Introduction of proper city buses and public transport is pertinent to fuel the development process at earliest.

The study has formulated hierarchy of roads which is necessary for long term rapid development of the municipality area. The report presents the necessary functions of the roads and their characteristics. Possible cross sections are also recommended. The study has shown high proportion of active road users which have been addressed thorough provision of pedestrian facilities and bicycle tracks in all roads except access roads. This is necessary to be implemented as the developed cities are having trouble to address the demand of active mode user friendly urban road infrastructures, Ramgram Municipality has the opportunity to sustain the road users and create a sustainable and well-planned urban road network and infrastructure. As the implementation strategy suggests, the municipality needs to develop proper framework and policies for the implementation of the perspective plans, built the capacity of the municipality and the local organizations and committees and proper stages of development of the roads.

This study, being first of its type for the municipality, should be revised and integrated with other plans that will be developed in coming years. Periodic review and update of the plans is necessary according to the change in land use and traffic that occurs in the future. A mid period review in the third year and five yearly MTMP should be prepared every five years. Comments and suggestions suggested during the draft report presentation had been incorporated in the final report.

Glossary

Active transport user	Active transport (also called non-motorized transport, NMT and human powered transport) refers to walking, cycling, and variants such as wheelchair, scooter and handcart use. It includes both utilitarian and recreational travel activity, plus stationary uses of pedestrian environments such as standing on sidewalks and sitting at bus stops
Capacity	The maximum number of vehicles that can pass over a given section of a lane or roadway in one direction (or in both directions for a two-lane or three-lane highway) during conditions.
Collector road	Collector roads provide both access and movement within residential, commercial and industrial areas. They are typically discontinuous between residential areas, so as to avoid traffic infiltration through neighbourhoods. Lower density developments and community land uses such as schools and convenience retail are often located on collector streets.
Emergency maintenance	Maintenance works that are to be carried out due to unexpected and sudden blockage of roads that stop vehiclular movement due to natural disaster
Forecasting	The process of determining the future values of land use,socioeconomic, and trip making variables within the study area.
Local road	Local roads provide direct property access in residential, industrial, commercial and downtown areas. With local streets connecting primarily to collector roads, travel distances are short, speeds are relatively low and volumes are modest, as their primary function of accommodating traffic from adjacent lands.
Maintenance	The process of preserving the original condition or function of an asset
MTMP	The MTMP is a strategic planning document designed to identify and address the municipality's needs to the year 2020 and beyond. The MTMP is the documents that identify, classify and prioritize the municipal roads; identify possible sources of funds and materials for the construction of the prioritized roads according to their respective standards and scientific mobilization of the available resource.

Network	Set of nodes and connecting links that represent transportation facilities in an area.
New construction	The work of building
Origin	The location of the beginning of a trip or the zone in which a trip begins.
Periodic maintenance	Maintenance works to be carried out in intervals of years and of large-scale
Recurrent maintenance	Small maintenance works not falling under routine maintenance that are carried out a few times a year in all roads to repair minor damage resulting from traffic and rainfall
Routine maintenance	Small maintenance works that are to be carried out in all the seasons on all roads on a regular basis
Specific maintenance	Spot treatments and repairs that do not occur every year or in every road, and which are very specific in nature and location.
Trip	A one-direction movement which begins at the origin at the start time, ends at the destination at the arrival time, and is conducted for a specific purpose.
Upgrading	The process of addition or change that makes something better than it was before

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Periodic plan of Ramgram Municipality

Road Inventory:

Proposed Road Class with length wardwise

Code	Road Name	Length in km Ward Number wise																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total
	A	3.60			2.72	0.77	1.37	6.20	1.52	9.97	10.77	1.22	5.02	3.72	7.95	6.31	17.47	5.98	9.22	93.81
A01	Basabashi-Manari(Hulaki)-Devgaun-Pipariya-Mahespur Road																	5.98		5.98
A02	Ramjanaki Marg											1.22	1.78	2.23						5.22
A03	Harkatta (MRM)-Baikunthapur(Hulaki)-Deurawa-Ramgram Stupa Road							5.47	1.52				1.33	1.49						9.81
A04	Bikunthapur-Milanchowk to east Road												1.37							1.37
A05	Charandas Baba Marga	1.31											0.54							1.85
A06	Ramgram N.P-Sanda-Shantapur-Badera-Bargoriya Mandir Road	1.23																		1.23
A07	Sunwal-Parasi Road-Durga Mandhir	1.06																		1.06
A08	Buddha Marga				1.14	0.37														1.51
A09	Buddha Tole-Parasi Road Section					0.40														0.40
A10	Jitpur(Ramgram N.P)-Brahmpurwa-Bairawa-Bishnupura Road				1.07					4.44										5.51
A11	Jokwar Marga							0.74		0.49										1.22
A12	Shaid Jagdish Paswan Marg(Bairawa-Lalitpur-Lankahawa-Hakaui Road)				0.51					1.44	1.86						2.14			5.95
A13	Majariya-Jamuniya-Sanahi-Ragargunj Road									1.53	3.89									5.42
A14	Pul to santoshi mandir road										0.98									0.98
A15	Samaye Devi Marga									2.06										2.06
A16	Bijaya Path										1.54						1.91			3.45
A17	Nandan Marga																2.55			2.55
A18	Sunwal-Parsawal-Amraut-Banjaria-Ghina-Bakena-Lalpati-Tonwa Road														4.65	1.13	5.89		1.65	13.33
A19	Tonawa chowk to south road																1.57			1.57
A20	Kalika Path(Lalpati to Turiya khola)																1.09			1.09

Length in km Ward Number wise

Code	Road Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total
A		3.60			2.72	0.77	1.37	6.20	1.52	9.97	10.77	1.22	5.02	3.72	7.95	6.31	17.47	5.98	9.22	93.81
A21	Lalpati-Turiya Khola Marga																1.23			1.23
A22	Shikshya Path															1.13	1.10			2.23
A23	Hulaki road (Naduwa)										0.36									0.36
A24	Factory Branch										0.53									0.53
A25	Purano Hulaki(Butwaliya Marga)						1.37				1.60					2.10			2.09	7.16
A26	Pokharapali(Ramgram N.P)-Banjariya-Dharampur-Bairagnath Road														1.19	1.95			3.84	6.98
A27	Aananda Marga														2.11					2.11
A28	Rastriye Ma Vi-Brahmathan Road																		1.64	1.64
B01	DAHACHANDI CHOWK-CHANDRAGADHI-WARD 4 OFFICE ROAD				2.30			0.98										1.30		4.58
B02	Lohasada-Dharmashala-Bhaluhi Marg								2.12											2.12
B03	Buddhanagar tole-Ramjanaki-Dalit tole-Yadav tole road							1.19												1.19
B04	Ward 7 office-Ramjanaki tole road							0.40												0.40
B05	Buddha Sandesh tole road							0.34												0.34
B06	Dalit tole road							0.25												0.25
B07	Uttam ma. vi.- Sangralaye road section							0.73												0.73
B08	Janata AaBi-Naudihawa-Parasi Maheshpur road jodne marga							1.21												1.21
B09	Kalika Marga									0.62										0.62
B10	Krishi Marga(Ward 9)									0.87										0.87
B11	Unwach Marga								1.38											1.38
B12	Bagaicha Marga Road								0.49											0.49
B13	Milanchowk-Janata Pravi-Saratikar road												0.70	1.46						2.16
B14	Samayemai Marga					0.53														0.53
B15	Ram Marga												0.80							0.80
B16	Buddha Marga(Karagar to Janata Pra vi)												1.33							1.33
B17	Shiva Marg													0.75						0.75
B18	Padatikar Jholunge pul road													0.48						0.48
B19	santoshi marga(Ward 11)											3.09								3.09
B20	Udhyog Banijya Sangh Marga	0.45																		0.45

Length in km Ward Number wise

Code	Road Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total
A		3.60			2.72	0.77	1.37	6.20	1.52	9.97	10.77	1.22	5.02	3.72	7.95	6.31	17.47	5.98	9.22	93.81
B21	Durga Marga		0.73																	0.73
B22	Haatbazar-Dursanchar-Sangam tole road		0.56																	0.56
B23	Sena sadak(Om Shanti Marga)			0.70																0.70
B24	Ghantaghar to Balmandir tole Road					0.41														0.41
B25	Shanti Marga					0.20														0.20
B26	Aadarsha Marga					0.43														0.43
B27	Ghodpali tole-Jitpur road				0.67	0.51														1.18
B28	Kalika Marga					0.37														0.37
B29	Ward 6 office-Pragati chowk-Jaurahari Road						1.49													1.49
B30	Shankar Marga						0.74													0.74
B31	Hakui-Naudihawa Road										2.20									2.20
B32	Sita Path																0.09			0.09
B33	Janaki Path																0.47			0.47
B34	Kothai Mai Marga																2.05			2.05
B35	Sukrauli Nahar Krishi Sadak															0.47				0.47
B36	Krishi marga															0.30				0.30
B37	Trilok Path-Nandan Marga jodne road																0.32			0.32
B38	Shiv path																0.42			0.42
B39	Krishi bato																0.07		1.26	1.33
B40	Turiya Marga(Sukrauli chowk to Digwal chowk)															2.94				2.94
B41	Furniture Tole Marga										0.37					0.61				0.98
B42	Naduwa chowk to north factory road										1.13									1.13
B43	Karwala Path															0.24				0.24
B44	Kali Marga														0.54					0.54
B45	Loktantrik Chowk-Omshanti chowk-Jaurahari chowk-Nanai road			0.26			1.51								0.95	0.92				3.63
B46	Nanai-Pathardewa-Bhusanpur Road														1.92	0.80				2.72
B47	Janata Aabi jane road														0.61					0.61
B48	Ahirauli Marga														0.36					0.36

Length in km Ward Number wise

Code	Road Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total
A		3.60			2.72	0.77	1.37	6.20	1.52	9.97	10.77	1.22	5.02	3.72	7.95	6.31	17.47	5.98	9.22	93.81
B49	Mahila Pokhari-Janata AABI-Hadaiya Mai road														2.87					2.87
B50	Bramha marga														1.22					1.22
B51	Krishi Marga ward 14														0.70					0.70
B52	Shanti Dip Marga														1.51					1.51
B53	Bouddha Marg																		3.65	3.65
B54	Chandragadhi Path				0.16															0.16
B55	Laxmi Marg(Kotiya dada)																		0.70	0.70
B56	Siddhartha Marg																		1.10	1.10
B57	Panditpur-Badagaun-Samay mai mandir road																		2.73	2.73
B58	Hadaiya Mai Marga														0.77					0.77
B59	Hille Marga														1.17					1.17
B60	Shiva Marg											0.21								0.21
B61	Shanti Marga																		0.15	0.15
C001	Ganga Marga																	0.34		0.34
C002	Market Marg																	0.18		0.18
C003	Buddha Marga																	0.04		0.04
C004	Sundar Marg																	0.29		0.29
C005	Patkhauli Marga																	0.07		0.07
C006	Durga Marg																	0.09		0.09
C007	Parwati Marg																	0.08		0.08
C008	Saraswati Marga																	1.45		1.45
C009	Bhagwanpur Marga																	1.22		1.22
C010	Lohasada Marga																	0.31		0.31
C011	Kotahi Marg																	0.12		0.12
C012	Namindranath Gosain Marg																	1.16		1.16
C013	Kotahi Marg																	0.23		0.23
C014	Chaudhary Marg																	0.06		0.06
C015	Gosai Marg																	0.07		0.07
C016	Parwati Marg																	0.08		0.08
C017	Saraswati Marga																	0.09		0.09
C018	Bhagwati Marga																	0.52		0.52
C019	Durga Marg																	0.07		0.07
C020	Aananda Marga																	0.05		0.05
C021	Bhagawati Sthan Marga																	0.03		0.03
C022	Buddha Marga																	0.18		0.18

Length in km Ward Number wise

Code	Road Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total
	A	3.60			2.72	0.77	1.37	6.20	1.52	9.97	10.77	1.22	5.02	3.72	7.95	6.31	17.47	5.98	9.22	93.81
C023	Laxmi Marga																	0.03		0.03
C024	Dahar Chandi Marga																	0.28		0.28
C025	Pokhara Marga																	0.10		0.10
C026	Parwati Marg																	0.07		0.07
C027	Laxmi Marga																	0.03		0.03
C028	Ganesh Marg																	0.04		0.04
C029	Dev Marga																	0.12		0.12
C030	Gosai Marg																	0.49		0.49
C031	Ward 17 office-Pidura Khola Marg																	1.33		1.33
C032	Chaudhary Marga																	0.47		0.47
C033	Buddha Marga																	0.27		0.27
C034	Chaardaha Marga																	0.45		0.45
C035	Kishan Marg																	0.83		0.83
C037	Shiva Kuti Marga																	1.24		1.24
C038	Adarsha Marga																	0.99		0.99
C039	Mahubari Marga																	2.30		2.30
C040	Dharma Marga																	0.17		0.17
C041	Inaar Marga																	0.22		0.22
C042	Mahubari Branch Road																	0.13		0.13
C043	Pokhari Marg																	0.18		0.18
C044	Krishi marga																	0.35		0.35
C045	Samaya Marg																	0.32		0.32
C046	Shanti Marg																	0.22		0.22
C047	Shiv Mandir Marg																	0.21		0.21
C048	Thakur Marga																	0.03		0.03
C049	Madarsha Marg																	0.03		0.03
C050	Saraswati Marga																	0.27		0.27
C051	Krishi Samuha Marga																	0.58		0.58
C052	Soiya Marga																	0.10		0.10
C053	Kola Marga																	0.23		0.23
C054	Krishi marga																	0.20		0.20
C055	Diha Marga																	0.30		0.30
C056	Shiva Marga																	0.10		0.10
C057	Jagadamba marg																	0.24		0.24
C058	Gayatri Marga																	0.05		0.05
C059	Pragatishil Marga																	0.48		0.48
C060	Chandragadhi Path				0.10															0.10

Length in km Ward Number wise

Code	Road Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total
	A	3.60			2.72	0.77	1.37	6.20	1.52	9.97	10.77	1.22	5.02	3.72	7.95	6.31	17.47	5.98	9.22	93.81
C061	Chandragadhi Path				0.83															0.83
C062	Chandi Marga							0.37												0.37
C063	Uttam Ma Vi-Jharahi Khola Road							0.23												0.23
C064	Beldaari tole road							0.21												0.21
C065	Koirana tole road							0.10												0.10
C066	Koirana branch road							0.05												0.05
C067	Dalit tole road							0.20												0.20
C068	Netwari tole road							0.03												0.03
C069	Khadye Udhyog Marga				0.10															0.10
C070	Prabhat Marga				0.17															0.17
C071	Prabhat Marga				0.19															0.19
C072	Kalika Marga				0.28															0.28
C073	Buddha Tole-Parasi-Jharahi River					0.26														0.26
C074	Unwach Branch Road								0.07											0.07
C075	Unwach Road-Aara Machine Road								0.12											0.12
C076	Bagaicha Marga								0.24											0.24
C077	Unwach Marga-Buspark								0.25											0.25
C078	Unwach Gaun-Hulaki Marga								1.50											1.50
C079	Unwach Marga-Chandal Chauraha								0.18											0.18
C080	Kalika Marga								1.12											1.12
C081	Aadharbhut Bidhyalaye Marga								0.11											0.11
C082	Unwach Branch Road								0.04											0.04
C083	Unwach-Chandal Chauraha								0.19											0.19
C084	Bakhra Palan Road								0.70											0.70
C085	Tube Well-Brick Factory-Hulaki Road								1.03											1.03
C086	Shanti Marga Branch Road								0.05											0.05
C087	Shiv Marga								0.04											0.04
C088	Shanti Marga-House of Bhumaar Yadav								0.03											0.03
C089	Jay Kotahi Marga								0.05											0.05
C090	Kotahi Branch Road								0.03											0.03
C091	Gayetri Marga								0.09											0.09
C092	Inar Marga								0.06											0.06
C093	Pashupati Marga								0.06											0.06
C094	Ganga Marga								0.11											0.11
C095	Kalika Branch Road								0.05											0.05

Length in km Ward Number wise

Code	Road Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total
	A	3.60			2.72	0.77	1.37	6.20	1.52	9.97	10.77	1.22	5.02	3.72	7.95	6.31	17.47	5.98	9.22	93.81
C096	Hulaki-Brick factory Road								0.26											0.26
C097	Future Light School Road				0.28	0.32														0.60
C098	Sukrat Gaud Ring Road North					0.23														0.23
C099	Sukrat Gaud Ring Road South					0.32														0.32
C100	Samsad Marga				0.32															0.32
C101	Devsthal Marga				0.42															0.42
C102	Durga Branch Road				0.09															0.09
C103	Durga Branch Road				0.08															0.08
C104	Buspark Tole Road				0.12															0.12
C105	Santapur Marga									0.12										0.12
C106	Radha Krishna Path									0.12										0.12
C107	Krishna Path				0.55															0.55
C108	Bairihawa path				0.07															0.07
C109	Kotahi Mai Marga				0.30															0.30
C110	Krishi marga									0.70										0.70
C111	Kalika Marga									0.13										0.13
C112	Jokwar Marga									0.31										0.31
C113	Aananda Marga									0.11										0.11
C114	Shanti Marga									0.07										0.07
C115	Mayadevi Marga									0.14										0.14
C116	Krishi marga									0.80										0.80
C117	Siddhartha Marga									0.17										0.17
C118	Ramnarayan Marga									0.16										0.16
C119	Gulab Marga									0.03										0.03
C120	Durga Marga									0.02										0.02
C121	Thakur Marga									0.04										0.04
C122	Ramawatar Marga									0.06										0.06
C123	Shankar Marga									0.04										0.04
C124	Shanti Marga									0.02										0.02
C125	Palinandan Marga									0.84										0.84
C126	Palinandan-Tonawa Krishi Sadak									0.72										0.72
C127	Naudihawa Krishi Sadak									0.74	1.12									1.86
C128	Kataihawa Path										0.70									0.70
C129	Kadar Mai Path										0.28									0.28
C130	Gauri Path										0.05									0.05
C131	Kuber Path										0.10									0.10
C132	Kali Path										0.25									0.25

Length in km Ward Number wise

Code	Road Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total
A		3.60			2.72	0.77	1.37	6.20	1.52	9.97	10.77	1.22	5.02	3.72	7.95	6.31	17.47	5.98	9.22	93.81
C133	Lankahawa-Jamuniya Road Section										1.04									1.04
C134	Shiv Marga-House Ganesh Verma										0.08									0.08
C135	Shiv Marga-Shankar Mandhir										0.04									0.04
C136	Shiv Marga-House of Rajkumar Chaudhary										0.04									0.04
C137	Shiv Marga-House of Hari Narayan Chaudhary										0.05									0.05
C138	Shiv Marga-House of Shudama Yadav										0.05									0.05
C139	Ramkhanda Upashakha(bindeshsari das-ramgram 10 manjhariya)										1.63									1.63
C140	Pokhari Path										0.68									0.68
C141	Shantoshi Marga										0.17									0.17
C142	Shantoshi Branch Road										0.03									0.03
C143	Shantoshi Branch Road										0.03									0.03
C144	Jai Ma Kotahi Path										0.29									0.29
C145	Upasakha Kotahi Path										0.06									0.06
C146	Lankahawa Simana Jodne Baato										0.25									0.25
C147	Sakha Path										0.09									0.09
C148	Chandi Devi Marga									0.35										0.35
C149	Buddha Marga									0.04										0.04
C150	Krishi Sadak				0.57															0.57
C151	Krishi Sadak				0.60															0.60
C152	Manjhariya Krishi Baato										1.09									1.09
C153	Milan Marga Branch Road 1										0.10									0.10
C154	Milan Marga-House of Rishi Raj Chaudhary										0.02									0.02
C155	Milan Marga Branch Road 2										0.02									0.02
C156	Milan Marga Branch Road 3										0.10									0.10
C157	Shanti Path																0.07			0.07
C159	Manjhariya-Sangam Chowk Road										1.69									1.69
C160	Parasi-Ghola Road Section										0.70									0.70
C161	Nadawa Road										1.59									1.59
C162	Nadawa Branch 1										0.04									0.04
C163	Nadawa Branch 2										0.08									0.08
C164	Nadawa Branch 3										0.05									0.05

Length in km Ward Number wise

Code	Road Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total
	A	3.60			2.72	0.77	1.37	6.20	1.52	9.97	10.77	1.22	5.02	3.72	7.95	6.31	17.47	5.98	9.22	93.81
C165	Nadawa Branch										0.02									0.02
C166	Nadawa Branch 4										0.05									0.05
C167	Nadawa Branch 5										0.07									0.07
C168	Nadawa Branch 6										0.04									0.04
C169	Nadawa Branch 7										0.03									0.03
C170	Nadawa Branch 8										0.06									0.06
C171	Nadawa Branch 9										0.03									0.03
C172	Nadawa Branch 10										0.04									0.04
C173	Nadawa Branch 11										0.03									0.03
C174	Nadawa-Kotahi Bhitri Marga										0.27									0.27
C175	Kotahi mai than road										0.32									0.32
C176	Nadawa Branch 12										0.06									0.06
C177	Hulaki-Kotahi mai than road										1.26									1.26
C178	Krishi marga															0.63				0.63
C179	Pokhari Marga															0.59				0.59
C180	Kuwarwarti Marga																0.69			0.69
C181	Ram Path																0.05			0.05
C182	Komariya Path																0.06			0.06
C183	Durga Path																0.06			0.06
C184	Durga Path																0.31			0.31
C185	Sharmeli Tole Marg																0.15			0.15
C186	Kosen Path																0.04			0.04
C187	Inar Path																0.07			0.07
C188	Khadka Path																0.05			0.05
C189	Inar Path 'Kha'																0.21			0.21
C190	Yadav Path																0.05			0.05
C191	Ram Path																0.07			0.07
C192	Nawa Durga Path										0.77						0.29			1.06
C193	Dhuniyani-Pokhari Path																0.16			0.16
C194	Gupta Path																0.07			0.07
C195	Ram Path																0.07			0.07
C196	Panth Path																0.31			0.31
C197	Ram Janaki Path																0.12			0.12
C198	Pokhari Path																0.08			0.08
C199	Jayantri Path																0.12			0.12
C200	Gayetri Path																0.06			0.06
C201	Ram Janaki Path																0.06			0.06

Length in km Ward Number wise

Code	Road Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total
	A	3.60			2.72	0.77	1.37	6.20	1.52	9.97	10.77	1.22	5.02	3.72	7.95	6.31	17.47	5.98	9.22	93.81
C202	Shiv Path-Trilok Path																0.22			0.22
C203	Durga Path																0.14			0.14
C204	Lalpati-Turiya Khola-Parasi Road Section																0.58			0.58
C205	Mayadevi Path																1.64			1.64
C206	Buddha Path																0.38			0.38
C207	Pokhari Baato																1.60			1.60
C208	Ganga Path																0.33			0.33
C209	Kadar Mai Path																1.34			1.34
C210	Khan Path																0.07			0.07
C211	Kotahi Path																0.03			0.03
C212	Singh Path																0.05			0.05
C213	Baggha Path																0.07			0.07
C214	Mahaau Khola Marga																		0.47	0.47
C215	Durga Path																0.04			0.04
C216	Mahaau Khola Marga																		0.51	0.51
C217	Diuhaar Marga																		0.04	0.04
C218	Shiv Mandir Marg																		0.15	0.15
C219	Prem Path Marg																		0.07	0.07
C220	Krishi marga															1.61				1.61
C221	Chautari Marg															0.27				0.27
C222	Kalika Marg															0.04				0.04
C223	Shanti Marga															0.05				0.05
C224	Shivaji Marga															0.04				0.04
C225	Krishi marga															0.13				0.13
C226	Krishi marga															0.62				0.62
C227	Krishi marga															1.13				1.13
C228	Ramjanaki Path															0.89				0.89
C229	Daharchandi Path															0.58				0.58
C230	Turiya Krishi Marga															0.55				0.55
C231	Furniture-Purano Hulaki Baato										0.80					0.50				1.30
C232	Furniture Factory Marga															0.29				0.29
C233	Sukrauli Tole Road															0.20				0.20
C234	Radha Krishna Path															0.19				0.19
C235	Shiva Parvati Marg																		0.10	0.10
C236	Durga Marg																		0.03	0.03
C237	ChakraPath Marg																		0.21	0.21

Length in km Ward Number wise

Code	Road Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total
	A	3.60			2.72	0.77	1.37	6.20	1.52	9.97	10.77	1.22	5.02	3.72	7.95	6.31	17.47	5.98	9.22	93.81
C238	Amar Marg																		0.04	0.04
C239	Shanti Marg																		0.02	0.02
C240	Kuiya Tole Marga																		0.05	0.05
C241	Koliya Marg																		1.00	1.00
C242	Durga Marg																		0.42	0.42
C243	Shanti Marg														0.62					0.62
C244	Durga Marg																		0.51	0.51
C245	Deep marga														1.59					1.59
C246	Shanti Marga														0.13					0.13
C247	Itta Bhatta Marga														0.54					0.54
C248	Nawa durga marga														0.67					0.67
C249	Buddha Marga														0.08					0.08
C250	Bhar Marga														0.27					0.27
C251	Shankar Marga														0.19					0.19
C252	Sichai Marga														0.26					0.26
C253	Jhulunge Pul Marga														0.12					0.12
C254	Utarayan Marga														0.65					0.65
C255	Krishna Marga														0.04					0.04
C256	Laxmi Marga														0.07					0.07
C257	Shanti Marga														0.14					0.14
C258	Mishrit Marga														0.07					0.07
C259	Pashu Bigyan Marga														0.24					0.24
C260	Pragati Marga														0.05					0.05
C261	Lok Marga														0.09					0.09
C262	Krishi marga														0.15					0.15
C263	Malang Baba Marga														0.44					0.44
C264	Banhu Marga														0.06					0.06
C265	Brahmathan Path																		0.22	0.22
C266	Boudha Shakha																		0.05	0.05
C267	Boudha Shaksha Road																		0.15	0.15
C268	Dhun Tole Marga																		0.05	0.05
C269	Amar Path																		0.12	0.12
C270	Butwaliya road-Turiya Khola																		0.64	0.64
C271	Pokhari Marga															0.10				0.10
C272	Madarsa Path															0.08				0.08
C273	Turiya Khola Marga															0.51				0.51
C274	Nanai Marga															0.19				0.19

Length in km Ward Number wise

Code	Road Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total
	A	3.60			2.72	0.77	1.37	6.20	1.52	9.97	10.77	1.22	5.02	3.72	7.95	6.31	17.47	5.98	9.22	93.81
C275	Siddhartha Marga														2.26					2.26
C276	Chautari Marga														0.08					0.08
C277	Chargharaiya Marga														0.05					0.05
C278	Inaar Marga														0.03					0.03
C279	Mandhir Marga														0.03					0.03
C280	Pashupati Marga														0.03					0.03
C281	Pragati Marga														0.46					0.46
C282	Kotahi Marga														0.25					0.25
C283	Naudihawa Marga														0.51					0.51
C284	Pragati Marga														0.21					0.21
C285	Samaye Mai Marga														0.84					0.84
C286	Kalika Marga														0.17					0.17
C287	Purano Hulaki-Parasi Krishi Baato										1.94									1.94
C288	Ganatrantrik Marga(Krishi Baato)						0.83													0.83
C289	Ramjanaki Marga (proposed)						0.34													0.34
C290	Samabesi Marga						0.37													0.37
C291	To the house of Ramsewak						0.04													0.04
C292	Birta chowk-Satellite FM						0.25													0.25
C293	Birta Marga						0.13													0.13
C294	Pokharapali Road Section						0.33													0.33
C295	Samabesi Marga						0.29													0.29
C296	Chaudhary Marga					0.25														0.25
C297	Balmandhir Tole Road					0.28														0.28
C298	Madarsha Marga					0.24														0.24
C299	Aacharya Marga					0.07														0.07
C300	Aadarsha Marga-Godown Road					0.56														0.56
C301	Aadarsha Marga Branch Road					0.07														0.07
C302	Godown Road Branch Road					0.04														0.04
C303	Police Office-Santoshi Marga					0.24														0.24
C304	Balmandhir Branch Road					0.07														0.07
C305	Santoshi Marga Branch Road					0.03														0.03
C306	Balmandhir Branch Road					0.11														0.11
C307	Balmandhir Branch Road					0.09														0.09
C308	Dharmakata-Balmandhir Road					0.20														0.20
C309	Dharmakata-Balmandhir Branch Road					0.06														0.06

Length in km Ward Number wise

Code	Road Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total
A		3.60			2.72	0.77	1.37	6.20	1.52	9.97	10.77	1.22	5.02	3.72	7.95	6.31	17.47	5.98	9.22	93.81
C310	Balmandhir-Parasi-Maheshpur Road					0.28														0.28
C311	Bypass-Driver Tole Taato					0.22														0.22
C312	Aadarsha School Road					0.24														0.24
C313	Sangharsa Path					0.20														0.20
C314	Kumari Mai Path					0.10														0.10
C315	Emali Marga					0.22														0.22
C316	Haatbazaar Marga					0.44														0.44
C317	Insurance Office-Little Plant English School Road					0.11														0.11
C318	Kalika Marga					0.18														0.18
C319	Ambe Marga					0.08														0.08
C320	Malpot Office Marga		0.20			0.14														0.34
C321	Ganesh Shankar Marga			0.24																0.24
C322	Laxmi Narayan Marga Branch Road			0.15																0.15
C323	Prabhu Bank Road			0.32																0.32
C324	Sena Branch Road			0.56																0.56
C325	Laxmi Narayan Marga			0.21																0.21
C326	Durga Marga Branch Road		0.02																	0.02
C327	Shanti Path		0.19																	0.19
C328	Sagarmatha Marga			0.13																0.13
C329	Durga Marga Branch Road		0.05																	0.05
C330	Vaishnab Marga		0.22																	0.22
C331	Dharma Path		0.27																	0.27
C332	Lumbini Development Bank Road Section			0.12																0.12
C333	Om Shanti Tole Marga			0.10																0.10
C334	Survey Office Marga		0.20																	0.20
C335	Sangam Tole Marga		0.14																	0.14
C336	Gharelu Marga		0.19																	0.19
C337	Buddha Marga		0.20																	0.20
C338	Buddha Marga Branch Road		0.06																	0.06
C339	Surya Path		0.32																	0.32
C340	Durga Marga Branch Road		0.08																	0.08
C341	NEA marga		0.32																	0.32
C342	NEA Branch Road		0.14																	0.14
C343	Muslim Marga		0.28																	0.28

Length in km Ward Number wise

Code	Road Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total
	A	3.60			2.72	0.77	1.37	6.20	1.52	9.97	10.77	1.22	5.02	3.72	7.95	6.31	17.47	5.98	9.22	93.81
C344	Muslim Marga		0.06																	0.06
C345	Khanepaani Marga2	0.25																		0.25
C346	Khanepaani Marga1	0.26																		0.26
C347	Ganga Path	0.24																		0.24
C348	Ganga Path	0.07																		0.07
C349	Ganga Path	0.06																		0.06
C350	Shanti Path-Ganga Path	0.12																		0.12
C351	Shanti Path	0.29																		0.29
C352	Jagatkumari Academic Marga2	0.66																		0.66
C353	Sikshya Tole Marga		0.62																	0.62
C354	Sikshya Tole Bhitri Marga		0.16																	0.16
C355	Sikshya Tole Branch Road		0.08																	0.08
C356	Sayapatri School Road	0.07																		0.07
C357	Petrol Pump Rod	0.19																		0.19
C358	Petrol Pump Branch Road	0.09																		0.09
C359	Petrol Pump Branch Road	0.09																		0.09
C360	Juice Factory Road	0.13																		0.13
C361	Itta Bhatta Marga	1.27																		1.27
C362	Pokhari Marga	0.37																		0.37
C363	Dalit Marga	0.37																		0.37
C364	Kotahi Marg											1.14								1.14
C365	Prati Tole-Playground											0.20								0.20
C366	Sharvan Marg											0.44								0.44
C367	Shravan Sakhaa Marg											0.06								0.06
C368	Kotahi Sakhaa Marg											0.09								0.09
C369	Parasi Road-Dana Company											0.26								0.26
C370	Krishi Road											0.83								0.83
C371	Krishi marga											0.57								0.57
C372	Santoshi Branch Road 1											0.31								0.31
C373	Krishi Road											0.17								0.17
C374	Santoshi Branch Road 2											0.31								0.31
C375	Krishi Road											0.73								0.73
C376	Plotting Road											0.85								0.85
C377	Plotting Road											0.22								0.22
C378	Pharauli Krishi Road											1.06								1.06
C379	Krish i Road Pharauli											0.28								0.28
C380	Santoshi Brach Road 3											0.13								0.13

Length in km Ward Number wise

Code	Road Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total
A		3.60			2.72	0.77	1.37	6.20	1.52	9.97	10.77	1.22	5.02	3.72	7.95	6.31	17.47	5.98	9.22	93.81
C381	Ranipakad-Ghyudala road											0.27								0.27
C382	Mandhir Marga											0.16								0.16
C383	Bandevi Mandhir Marga											0.59								0.59
C384	Kankali Mandhir Baato	0.08										0.43								0.50
C385	Kankai Marg											0.19								0.19
C386	Landfill site baato	1.09																		1.09
C387	Shiv Marg											0.62								0.62
C388	Inaar Marga											0.04								0.04
C389	Jagatkumari Academic Marga1	0.91																		0.91
C390	Bhagawati Marga North	0.52																		0.52
C391	Jagat Kumari Marga	0.08																		0.08
C392	Bhagawati Marga East	0.20																		0.20
C393	Bhagawati Marga North-East	0.17																		0.17
C394	Om Shanti Marga	0.68																		0.68
C395	Om Shanti Marga-House of Bhola Harijan	0.06																		0.06
C396	To House of Chetan Harijan	0.07																		0.07
C397	Om Shanti Road Branch Road2	0.05																		0.05
C398	Om Shanti Branch Road1	0.07																		0.07
C399	Om Shanti Branch Road3	0.08																		0.08
C400	Om Shanti Branch Road1	0.20																		0.20
C401	Om Shanti Marga-House of Ramji Tiwari	0.06																		0.06
C402	Om Shanti Branch Road	0.22																		0.22
C403	Om Shanti Branch Road	0.06																		0.06
C404	Om Shanti Branch Road	0.03																		0.03
C405	Kotahi Marg												1.12							1.12
C406	Parasi Road-Kotahi Marga												0.11							0.11
C407	Karagar Road												0.17							0.17
C408	Kotahi Marg 2												0.75							0.75
C409	Kotahi Shakha Marga												0.15							0.15
C410	Kotahi Shakha Marga-1												0.10							0.10
C411	Kotahi Shakha Marga-2												0.10							0.10
C412	Masjid Marga		0.36																	0.36
C413	Kasiya Marga												1.14							1.14
C414	Shanti Marg												0.37							0.37
C415	Nagarpalika Road Section												0.06							0.06

Length in km Ward Number wise

Code	Road Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total
	A	3.60			2.72	0.77	1.37	6.20	1.52	9.97	10.77	1.22	5.02	3.72	7.95	6.31	17.47	5.98	9.22	93.81
C416	Kotahi Marg												0.04							0.04
C417	Ramjanaki Marga-Mahamaya Marga													0.13						0.13
C418	Kailashpati Road Section													0.28						0.28
C419	Dalit Marg													0.13						0.13
C420	Shiva Marg													0.16						0.16
C421	Shiva Marga Branch Road 1													0.06						0.06
C422	Shiva Marga Branch Road 2													0.01						0.01
C423	Shiva Marga Branch Road 3													0.03						0.03
C424	Bhaluhi Marga												1.48							1.48
C425	Shree Janata Marg												0.19							0.19
C426	Chaudhary Marg												0.07							0.07
C427	Gayatri Marg												0.46							0.46
C428	Gayatri Shakha Marga												0.11							0.11
C429	Gayatri Shakha Marga												0.12							0.12
C430	Dalit Marga												0.22							0.22
C431	Hariyali Marga																	0.56		0.56
C432	Padatikar Tole Road													0.12						0.12
C433	Gayatri Marg-1												0.15							0.15
C434	Krishi Marg												0.10							0.10
C435	Padatikar Krisha Marga													0.32						0.32
C436	Pokhari Path										0.19									0.19
C437	Masjid Marga					0.03														0.03
C438	Kuwa Marga					0.03														0.03
C439	Gupta Marga					0.03														0.03
C440	Om Shanti Marga														0.02					0.02
C441	LINE -6(MAYADEVI MARGA)																		0.42	0.42
C442	LINE 5(SIDDHARTHA MARGA)														0.27				0.85	1.12
C443	LINE 4(KRISHI SADAK MARGA)														0.38				0.59	0.97
C444	LINE 3(PURWATARA MARGA)														0.39				0.84	1.23
C445	LINE -2(HOLICHILD MARGA)														0.59				0.84	1.43
C446	kOLIYA MARGA-2																		0.33	0.33
	SRN	1.91	0.66	1.06	2.12	3.11	1.16	1.59	0.87		2.54	3.72	4.13			1.60	2.46	1.36		28.28
F009	Sunwal-Parasi-Maheshpur Road	1.91	0.66	0.48	2.12	0.77		1.59												7.53
F130	Bhumahi - Parasi - Bhairahawa					1.79					2.54	3.72	1.81			1.60	2.46			13.91

Length in km Ward Number wise

Code	Road Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total
	A	3.60			2.72	0.77	1.37	6.20	1.52	9.97	10.77	1.22	5.02	3.72	7.95	6.31	17.47	5.98	9.22	93.81
F208	Triveni-Sanahi-Gandak Nahar Sadak-Nawalparasi																	1.36		1.36
H1722	Hulaki Road			0.57		0.55	1.16		0.87				2.32							5.48
	Grand Total	15.12	6.11	3.85	13.04	12.07	8.83	14.07	12.76	17.17	35.52	18.17	18.98	7.66	33.57	23.40	33.10	29.38	27.52	330.32

Road Code	Ward/Road Name	Road Surface					
		Blacktop	Brick_Pave	Earthen	Gravelled	RCC	Total
	Ward:-1	7.49		3.26	4.37		15.12
A05	Charandas Baba Marga	0.16		1.16			1.31
A06	Ramgram N.P-Sanda-Shantapur-Badera-Bargoriya Mandir Road	1.23					1.23
A07	Sunwal-Parasi Road-Durga Mandhir				1.06		1.06
B20	Udhyog Banijya Sangh Marga	0.45					0.45
C345	Khanepaani Marga2	0.25					0.25
C346	Khanepaani Marga1	0.26					0.26
C347	Ganga Path	0.24					0.24
C348	Ganga Path	0.07					0.07
C349	Ganga Path	0.06					0.06
C350	Shanti Path-Ganga Path	0.12					0.12
C351	Shanti Path	0.29					0.29
C352	Jagatkumari Academic Marga2	0.66					0.66
C356	Sayapatri School Road				0.07		0.07
C357	Petrol Pump Rod	0.19					0.19
C358	Petrol Pump Branch Road				0.09		0.09
C359	Petrol Pump Branch Road				0.09		0.09
C360	Juice Factory Road				0.13		0.13
C361	Itta Bhatta Marga				1.27		1.27
C362	Pokhari Marga			0.37			0.37
C363	Dalit Marga	0.37					0.37
C384	Kankali Mandhir Baato			0.08			0.08
C386	Landfill site baato				1.09		1.09
C389	Jagatkumari Academic Marga1			0.91			0.91
C390	Bhagawati Marga North	0.10		0.16	0.26		0.52
C391	Jagat Kumari Marga	0.08					0.08
C392	Bhagawati Marga East	0.20					0.20
C393	Bhagawati Marga North-East	0.17					0.17
C394	Om Shanti Marga	0.68					0.68
C395	Om Shanti Marga-House of Bhola Harijan			0.06			0.06
C396	To House of Chetan Harijan			0.07			0.07
C397	Om Shanti Road Branch Road2			0.05			0.05
C398	Om Shanti Branch Road1			0.07			0.07
C399	Om Shanti Branch Road3			0.08			0.08

Road Code	Ward/Road Name	Road Surface					
		Blacktop	Brick_Pave	Earthen	Gravelled	RCC	Total
C400	Om Shanti Branch Road1			0.20			0.20
C401	Om Shanti Marga-House of Ramji Tiwari			0.06			0.06
C402	Om Shanti Branch Road				0.22		0.22
C403	Om Shanti Branch Road				0.06		0.06
C404	Om Shanti Branch Road				0.03		0.03
F009	Sunwal-Parasi-Maheshpur Road	1.91					1.91
	Ward:-2	4.19			1.92		6.11
B21	Durga Marga	0.73					0.73
B22	Haatbazar-Dursanchar-Sangam tole road	0.56					0.56
C320	Malpot Office Marga	0.20					0.20
C326	Durga Marga Branch Road	0.02					0.02
C327	Shanti Path	0.19					0.19
C329	Durga Marga Branch Road	0.05					0.05
C330	Vaishnab Marga	0.22					0.22
C331	Dharma Path	0.27					0.27
C334	Survey Office Marga				0.20		0.20
C335	Sangam Tole Marga				0.14		0.14
C336	Gharelu Marga				0.19		0.19
C337	Buddha Marga	0.20					0.20
C338	Buddha Marga Branch Road	0.06					0.06
C339	Surya Path	0.32					0.32
C340	Durga Marga Branch Road	0.08					0.08
C341	NEA marga				0.32		0.32
C342	NEA Branch Road				0.14		0.14
C343	Muslim Marga				0.28		0.28
C344	Muslim Marga				0.06		0.06
C353	Sikshya Tole Marga	0.26			0.36		0.62
C354	Sikshya Tole Bhitri Marga				0.16		0.16
C355	Sikshya Tole Branch Road				0.08		0.08
C412	Masjid Marga	0.36					0.36
F009	Sunwal-Parasi-Maheshpur Road	0.66					0.66
	Ward:-3	2.63		0.12	1.10		3.85
B23	Sena sadak(Om Shanti Marga)	0.58		0.12			0.70
B45	Loktantrik Chowk-Omshanti chowk-	0.26					0.26

Road Code	Ward/Road Name	Road Surface					
		Blacktop	Brick_Pave	Earthen	Gravelled	RCC	Total
	Jaurahari chowk-Nanai road						
C321	Ganesh Shankar Marga	0.24					0.24
C322	Laxmi Narayan Marga Branch Road	0.15					0.15
C323	Prabhu Bank Road				0.32		0.32
C324	Sena Branch Road				0.56		0.56
C325	Laxmi Narayan Marga	0.21					0.21
C328	Sagarmatha Marga	0.13					0.13
C332	Lumbini Development Bank Road Section				0.12		0.12
C333	Om Shanti Tole Marga				0.10		0.10
F009	Sunwal-Parasi-Maheshpur Road	0.48					0.48
H1722	Hulaki Road	0.57					0.57
	Ward:-4	5.34		1.36	6.34		13.04
A08	Buddha Marga				1.14		1.14
A10	Jitpur(Ramgram N.P)-Brahmpurwa-Bairawa-Bishnupura Road	1.07					1.07
A12	Shaid Jagdish Paswan Marg(Bairawa-Lalitpur-Lankahawa-Hakaui Road)	0.22			0.29		0.51
B01	DAHACHANDI CHOWK-CHANDRAGADHI-WARD 4 OFFICE ROAD				2.30		2.30
B27	Ghodpali tole-Jitpur road	0.67					0.67
B54	Chandragadhi Path				0.16		0.16
C060	Chandragadhi Path				0.10		0.10
C061	Chandragadhi Path				0.83		0.83
C069	Khadye Udhyog Marga				0.10		0.10
C070	Prabhat Marga				0.17		0.17
C071	Prabhat Marga			0.19			0.19
C072	Kalika Marga				0.28		0.28
C097	Future Light School Road	0.28					0.28
C100	Samsad Marga	0.32					0.32
C101	Devsthal Marga	0.42					0.42
C102	Durga Branch Road	0.09					0.09
C103	Durga Branch Road	0.08					0.08
C104	Buspark Tole Road				0.12		0.12
C107	Krishna Path				0.55		0.55
C108	Bairihawa path	0.07					0.07
C109	Kotahi Mai Marga				0.30		0.30
C150	Krishi Sadak			0.57			0.57
C151	Krishi Sadak			0.60			0.60

Road Code	Ward/Road Name	Road Surface					
		Blacktop	Brick_Pave	Earthen	Gravelled	RCC	Total
F009	Sunwal-Parasi-Maheshpur Road	2.12					2.12
	Ward:-5	9.40		0.53	2.15		12.07
A08	Buddha Marga				0.37		0.37
A09	Buddha Tole-Parasi Road Section				0.40		0.40
B14	Samayemai Marga			0.53			0.53
B24	Ghantaghar to Balmandir tole Road	0.41					0.41
B25	Shanti Marga	0.20					0.20
B26	Aadarsha Marga	0.43					0.43
B27	Ghodpali tole-Jitpur road	0.51					0.51
B28	Kalika Marga	0.37					0.37
C073	Buddha Tole-Parasi-Jharahi River				0.26		0.26
C097	Future Light School Road	0.32					0.32
C098	Sukrat Gaud Ring Road North				0.23		0.23
C099	Sukrat Gaud Ring Road South				0.32		0.32
C296	Chaudhary Marga	0.25					0.25
C297	Balmandhir Tole Road	0.28					0.28
C298	Madarsha Marga	0.24					0.24
C299	Aacharya Marga	0.07					0.07
C300	Aadarsha Marga-Godown Road	0.56					0.56
C301	Aadarsha Marga Branch Road	0.07					0.07
C302	Godown Road Branch Road				0.04		0.04
C303	Police Office-Santoshi Marga	0.24					0.24
C304	Balmandhir Branch Road	0.07					0.07
C305	Santoshi Marga Branch Road	0.03					0.03
C306	Balmandhir Branch Road	0.11					0.11
C307	Balmandhir Branch Road	0.09					0.09
C308	Dharmakata-Balmandhir Road				0.20		0.20
C309	Dharmakata-Balmandhir Branch Road				0.06		0.06

Road Code	Ward/Road Name	Road Surface					
		Blacktop	Brick_Pave	Earthen	Gravelled	RCC	Total
C310	Balmandhir-Parasi-Maheshpur Road	0.28					0.28
C311	Bypass-Driver Tole Taato	0.22					0.22
C312	Aadarsha School Road				0.24		0.24
C313	Sangharsa Path	0.20					0.20
C314	Kumari Mai Path	0.10					0.10
C315	Emali Marga	0.22					0.22
C316	Haatbazaar Marga	0.44					0.44
C317	Insurance Office-Little Plant English School Road	0.11					0.11
C318	Kalika Marga	0.18					0.18
C319	Ambe Marga	0.08					0.08
C320	Malpot Office Marga	0.14					0.14
C437	Masjid Marga	0.03					0.03
C438	Kuwa Marga				0.03		0.03
C439	Gupta Marga	0.03					0.03
F009	Sunwal-Parasi-Maheshpur Road	0.77					0.77
F130	Bhumahi - Parasi - Bhairahawa	1.79					1.79
H1722	Hulaki Road	0.55					0.55
	Ward:-6	4.43		2.23	2.17		8.83
A25	Purano Hulaki(Butwaliya Marga)	1.37					1.37
B29	Ward 6 office-Pragati chowk-Jaurahari Road	0.90			0.59		1.49
B30	Shankar Marga			0.74			0.74
B45	Loktantrik Chowk-Omshanti chowk-Jaurahari chowk-Nanai road	0.71			0.79		1.51
C288	Ganatrantrik Marga(Krishi Baato)			0.83			0.83
C289	Ramjanaki Marga (proposed)			0.34			0.34
C290	Samabesi Marga				0.37		0.37
C291	To the house of Ramsewak				0.04		0.04
C292	Birta chowk-Satellite FM				0.25		0.25
C293	Birta Marga				0.13		0.13
C294	Pokharapali Road Section			0.33			0.33
C295	Samabesi Marga	0.29					0.29
H1722	Hulaki Road	1.16					1.16

Road Code	Ward/Road Name	Road Surface					
		Blacktop	Brick_Pave	Earthen	Gravelled	RCC	Total
	Ward:-7	4.57		1.37	8.13		14.07
A03	Harkatta (MRM)-Baikunthapur(Hulaki)-Deurawa-Ramgram Stupa Road	2.24		0.61	2.62		5.47
A11	Jokwar Marga	0.74					0.74
B01	DAHACHANDI CHOWK-CHANDRAGADHI-WARD 4 OFFICE ROAD				0.98		0.98
B03	Buddhanagar tole-Ramjanaki-Dalit tole-Yadav tole road				1.19		1.19
B04	Ward 7 office-Ramjanaki tole road				0.40		0.40
B05	Buddha Sandesh tole road				0.34		0.34
B06	Dalit tole road				0.25		0.25
B07	Uttam ma. vi.-Sangralaye road section				0.73		0.73
B08	Janata AaBi-Naudihawa-Parasi Maheshpur road jodne marga			0.17	1.03		1.21
C062	Chandi Marga			0.37			0.37
C063	Uttam Ma Vi-Jharahi Khola Road			0.23			0.23
C064	Beldaari tole road				0.21		0.21
C065	Koirana tole road				0.10		0.10
C066	Koirana branch road				0.05		0.05
C067	Dalit tole road				0.20		0.20
C068	Netwari tole road				0.03		0.03
F009	Sunwal-Parasi-Maheshpur Road	1.59					1.59
	Ward:-8	2.71	0.11	2.75	5.52	1.67	12.76
A03	Harkatta (MRM)-Baikunthapur(Hulaki)-Deurawa-Ramgram Stupa Road	0.32			1.20		1.52
B02	Lohasada-Dharmashala-Bhaluhi Marg				1.29	0.84	2.12
B11	Unwach Marga	1.35				0.03	1.38
B12	Bagaicha Marga Road	0.12			0.37		0.49
C074	Unwach Branch Road				0.07		0.07
C075	Unwach Road-Aara Machine Road				0.12		0.12
C076	Bagaicha Marga				0.18	0.07	0.24
C077	Unwach Marga-Buspark			0.25			0.25
C078	Unwach Gaun-Hulaki Marga			1.09	0.12	0.28	1.50

Road Code	Ward/Road Name	Road Surface					
		Blacktop	Brick_Pave	Earthen	Gravelled	RCC	Total
C079	Unwach Marga-Chandal Chauraha				0.05	0.13	0.18
C080	Kalika Marga				1.00	0.12	1.12
C081	Aadharbhut Bidhyalaye Marga		0.11				0.11
C082	Unwach Branch Road					0.04	0.04
C083	Unwach-Chandal Chauraha			0.12		0.07	0.19
C084	Bakhra Palan Road				0.70		0.70
C085	Tube Well-Brick Factory-Hulaki Road			1.03			1.03
C086	Shanti Marga Branch Road				0.05		0.05
C087	Shiv Marga				0.04		0.04
C088	Shanti Marga-House of Bhumaar Yadav				0.03		0.03
C089	Jay Kotahi Marga				0.05		0.05
C090	Kotahi Branch Road				0.03		0.03
C091	Gayetri Marga					0.09	0.09
C092	Inar Marga				0.06		0.06
C093	Pashupati Marga				0.06		0.06
C094	Ganga Marga				0.11		0.11
C095	Kalika Branch Road	0.05					0.05
C096	Hulaki-Brick factory Road			0.26			0.26
H1722	Hulaki Road	0.87					0.87
	Ward:-9	1.79	1.29	4.06	9.62	0.42	17.17
A10	Jitpur(Ramgram N.P)-Brahmpurwa-Bairawa-Bishnupura Road	1.79	0.49		2.16		4.44
A11	Jokwar Marga				0.49		0.49
A12	Shaid Jagdish Paswan Marg(Bairawa-Lalitpur-Lankahawa-Hakaui Road)				1.44		1.44
A13	Majariya-Jamuniya-Sanahi-Ragargunj Road				1.53		1.53
A15	Samaye Devi Marga				2.06		2.06
B09	Kalika Marga		0.23		0.39		0.62
B10	Krishi Marga(Ward 9)			0.87			0.87
C105	Santapur Marga				0.12		0.12
C106	Radha Krishna Path				0.12		0.12
C110	Krishi marga			0.70			0.70
C111	Kalika Marga			0.13			0.13
C112	Jokwar Marga				0.31		0.31
C113	Aananda Marga					0.11	0.11
C114	Shanti Marga			0.07			0.07
C115	Mayadevi Marga		0.14				0.14
C116	Krishi marga			0.80			0.80
C117	Siddhartha Marga		0.17				0.17

Road Code	Ward/Road Name	Road Surface					
		Blacktop	Brick_Pave	Earthen	Gravelled	RCC	Total
C118	Ramnarayan Marga		0.16				0.16
C119	Gulab Marga		0.03				0.03
C120	Durga Marga		0.02				0.02
C121	Thakur Marga		0.04				0.04
C122	Ramawatar Marga					0.06	0.06
C123	Shankar Marga					0.04	0.04
C124	Shanti Marga					0.02	0.02
C125	Palinandan Marga				0.84		0.84
C126	Palinandan-Tonawa Krishi Sadak			0.72			0.72
C127	Naudihawa Krishi Sadak			0.74			0.74
C148	Chandi Devi Marga				0.15	0.19	0.35
C149	Buddha Marga			0.04			0.04
	Ward:-10	9.36		15.37	10.79		35.52
A12	Shaid Jagdish Paswan Marg(Bairawa-Lalitpur-Lankahawa-Hakaui Road)	1.18			0.68		1.86
A13	Majariya-Jamuniya-Sanahi-Ragargunj Road	2.02			1.87		3.89
A14	Pul to santoshi mandir road				0.98		0.98
A16	Bijaya Path				1.54		1.54
A23	Hulaki road (Naduwa)				0.36		0.36
A24	Factory Branch	0.53					0.53
A25	Purano Hulaki(Butwaliya Marga)	1.60					1.60
B31	Hakui-Naudihawa Road			0.71	1.49		2.20
B41	Furniture Tole Marga				0.37		0.37
B42	Naduwa chowk to north factory road				1.13		1.13
C127	Naudihawa Krishi Sadak			1.12			1.12
C128	Kataihawa Path				0.70		0.70
C129	Kadar Mai Path				0.28		0.28
C130	Gauri Path			0.05			0.05
C131	Kuber Path				0.10		0.10
C132	Kali Path				0.25		0.25
C133	Lankahawa-Jamuniya Road Section			1.04			1.04
C134	Shiv Marga-House Ganesh Verma				0.08		0.08
C135	Shiv Marga-Shankar Mandhir				0.04		0.04
C136	Shiv Marga-House of Rajkumar Chaudhary				0.04		0.04

Road Code	Ward/Road Name	Road Surface					
		Blacktop	Brick_Pave	Earthen	Gravelled	RCC	Total
C137	Shiv Marga-House of Hari Narayan Chaudhary				0.05		0.05
C138	Shiv Marga-House of Shudama Yadav				0.05		0.05
C139	Ramkhanda Upashakha(bindeshsari das-ramgram 10 manjhariya)			1.63			1.63
C140	Pokhari Path			0.68			0.68
C141	Shantoshi Marga				0.17		0.17
C142	Shantoshi Branch Road				0.03		0.03
C143	Shantoshi Branch Road				0.03		0.03
C144	Jai Ma Kotahi Path				0.29		0.29
C145	Upasakha Kotahi Path			0.06			0.06
C146	Lankahawa Simana Jodne Baato			0.25			0.25
C147	Sakha Path			0.09			0.09
C152	Manjhariya Krishi Baato			1.09			1.09
C153	Milan Marga Branch Road 1				0.10		0.10
C154	Milan Marga-House of Rishi Raj Chaudhary				0.02		0.02
C155	Milan Marga Branch Road 2				0.02		0.02
C156	Milan Marga Branch Road 3				0.10		0.10
C159	Manjhariya-Sangam Chowk Road			1.69			1.69
C160	Parasi-Ghola Road Section			0.70			0.70
C161	Nadawa Road	0.60		0.98			1.59
C162	Nadawa Branch 1	0.04					0.04
C163	Nadawa Branch 2	0.08					0.08
C164	Nadawa Branch 3	0.05					0.05
C165	Nadawa Branch	0.02					0.02
C166	Nadawa Branch 4	0.05					0.05
C167	Nadawa Branch 5	0.07					0.07
C168	Nadawa Branch 6	0.04					0.04
C169	Nadawa Branch 7	0.03					0.03
C170	Nadawa Branch 8	0.06					0.06
C171	Nadawa Branch 9	0.03					0.03
C172	Nadawa Branch 10	0.04					0.04
C173	Nadawa Branch 11	0.03					0.03
C174	Nadawa-Kotahi Bhitri Marga	0.27					0.27
C175	Kotahi mai than road			0.32			0.32
C176	Nadawa Branch 12	0.06					0.06

Road Code	Ward/Road Name	Road Surface					
		Blacktop	Brick_Pave	Earthen	Gravelled	RCC	Total
C177	Hulaki-Kotahi mai than road			1.26			1.26
C192	Nawa Durga Path			0.77			0.77
C231	Furniture-Purano Hulaki Baato			0.80			0.80
C287	Purano Hulaki-Parasi Krishi Baato			1.94			1.94
C436	Pokhari Path			0.19			0.19
F130	Bhumahi - Parasi - Bhairahawa	2.54					2.54
	Ward:-11	4.81		5.91	7.45		18.17
A02	Ramjanaki Marg	0.47			0.75		1.22
B19	santoshi marga(Ward 11)				3.09		3.09
B60	Shiva Marg				0.21		0.21
C364	Kotahi Marg				1.14		1.14
C365	Prati Tole-Playground			0.20			0.20
C366	Sharvan Marg				0.44		0.44
C367	Shravan Sakhaa Marg				0.06		0.06
C368	Kotahi Sakhaa Marg				0.09		0.09
C369	Parasi Road-Dana Company				0.26		0.26
C370	Krishi Road			0.83			0.83
C371	Krishi marga			0.57			0.57
C372	Santoshi Branch Road 1				0.31		0.31
C373	Krishi Road			0.17			0.17
C374	Santoshi Branch Road 2				0.31		0.31
C375	Krishi Road			0.73			0.73
C376	Plotting Road			0.85			0.85
C377	Plotting Road			0.22			0.22
C378	Pharauli Krishi Road			1.06			1.06
C379	Krish i Road Pharauli			0.28			0.28
C380	Santoshi Brach Road 3				0.13		0.13
C381	Ranipakad-Ghyudala road			0.27			0.27
C382	Mandhir Marga				0.16		0.16
C383	Bandevi Mandhir Marga			0.59			0.59
C384	Kankali Mandhir Baato			0.15	0.27		0.43
C385	Kankai Marg				0.19		0.19
C387	Shiv Marg	0.62					0.62
C388	Inaar Marga				0.04		0.04
F130	Bhumahi - Parasi - Bhairahawa	3.72					3.72
	Ward:-12	7.77		1.80	9.41		18.98
A02	Ramjanaki Marg				1.78		1.78
A03	Harkatta (MRM)-Baikunthapur(Hulaki)-	1.33					1.33

Road Code	Ward/Road Name	Road Surface					
		Blacktop	Brick_Pave	Earthen	Gravelled	RCC	Total
	Deurawa-Ramgram Stupa Road						
A04	Bikunthapur-Milanchowk to east Road				1.37		1.37
A05	Charandas Baba Marga				0.54		0.54
B13	Milanchowk-Janata Pravi-Saratikar road			0.12	0.58		0.70
B15	Ram Marga	0.80					0.80
B16	Buddha Marga(Karagar to Janata Pra vi)				1.33		1.33
C405	Kotahi Marg				1.12		1.12
C406	Parasi Road-Kotahi Marga				0.11		0.11
C407	Karagar Road				0.17		0.17
C408	Kotahi Marg 2				0.75		0.75
C409	Kotahi Shakha Marga				0.15		0.15
C410	Kotahi Shakha Marga-1				0.10		0.10
C411	Kotahi Shakha Marga-2			0.10			0.10
C413	Kasiya Marga	1.14					1.14
C414	Shanti Marg	0.37					0.37
C415	Nagarpalika Road Section				0.06		0.06
C416	Kotahi Marg				0.04		0.04
C424	Bhaluhi Marga			1.48			1.48
C425	Shree Janata Marg				0.19		0.19
C426	Chaudhary Marg				0.07		0.07
C427	Gayatri Marg				0.46		0.46
C428	Gayatri Shakha Marga				0.11		0.11
C429	Gayatri Shakha Marga				0.12		0.12
C430	Dalit Marga				0.22		0.22
C433	Gayatri Marg-1				0.15		0.15
C434	Krishi Marg			0.10			0.10
F130	Bhumahi - Parasi - Bhairahawa	1.81					1.81
H1722	Hulaki Road	2.32					2.32
	Ward:-13	2.67		1.81	3.17		7.66
A02	Ramjanaki Marg	0.46			1.77		2.23
A03	Harkatta (MRM)-Baikunthapur(Hulaki)-Deurawa-Ramgram Stupa Road	1.49					1.49
B13	Milanchowk-Janata Pravi-Saratikar road			1.46			1.46
B17	Shiva Marg	0.60			0.16		0.75
B18	Padatikar Jholunge pul road				0.48		0.48

Road Code	Ward/Road Name	Road Surface					
		Blacktop	Brick_Pave	Earthen	Gravelled	RCC	Total
C417	Ramjanaki Marga-Mahamaya Marga				0.13		0.13
C418	Kailashpati Road Section				0.28		0.28
C419	Dalit Marg				0.13		0.13
C420	Shiva Marg	0.12		0.04			0.16
C421	Shiva Marga Branch Road 1				0.06		0.06
C422	Shiva Marga Branch Road 2				0.01		0.01
C423	Shiva Marga Branch Road 3				0.03		0.03
C432	Padatikar Tole Road				0.12		0.12
C435	Padatikar Krisha Marga			0.32			0.32
	Ward:-14	2.68		7.04	23.18	0.66	33.57
A18	Sunwal-Parsawal-Amraut-Banjaria-Ghina-Bakena-Lalpati-Tonwa Road	1.74			2.92		4.65
A26	Pokharapali(Ramgram N.P)-Banjariya-Dharampur-Bairagnath Road				1.19		1.19
A27	Aananda Marga			0.30	1.81		2.11
B44	Kali Marga				0.31	0.23	0.54
B45	Loktantrik Chowk-Omshanti chowk-Jaurahari chowk-Nanai road				0.95		0.95
B46	Nanai-Pathardewa-Bhusanpur Road				1.48	0.43	1.92
B47	Janata Aabi jane road				0.61		0.61
B48	Ahirauli Marga				0.36		0.36
B49	Mahila Pokhari-Janata AABI-Hadaiya Mai road				2.87		2.87
B50	Bramha marga				1.22		1.22
B51	Krishi Marga ward 14			0.70			0.70
B52	Shanti Dip Marga			1.02	0.49		1.51
B58	Hadaiya Mai Marga				0.77		0.77
B59	Hille Marga				1.17		1.17
C243	Shanti Marg			0.62			0.62
C245	Deep marga	0.81			0.78		1.59
C246	Shanti Marga	0.13					0.13
C247	Itta Bhatta Marga				0.54		0.54
C248	Nawa durga marga				0.67		0.67
C249	Buddha Marga				0.08		0.08
C250	Bhar Marga			0.27			0.27
C251	Shankar Marga				0.19		0.19
C252	Sichai Marga				0.26		0.26
C253	Jhulunge Pul Marga			0.12			0.12

Road Code	Ward/Road Name	Road Surface					
		Blacktop	Brick_Pave	Earthen	Gravelled	RCC	Total
C254	Utarayan Marga			0.65			0.65
C255	Krishna Marga				0.04		0.04
C256	Laxmi Marga			0.07			0.07
C257	Shanti Marga			0.14			0.14
C258	Mishrit Marga			0.07			0.07
C259	Pashu Bigyan Marga			0.24			0.24
C260	Pragati Marga				0.05		0.05
C261	Lok Marga			0.09			0.09
C262	Krishi marga			0.15			0.15
C263	Malang Baba Marga			0.44			0.44
C264	Banhu Marga			0.06			0.06
C275	Siddhartha Marga				2.26		2.26
C276	Chautari Marga				0.08		0.08
C277	Chargharaiya Marga				0.05		0.05
C278	Inaar Marga				0.03		0.03
C279	Mandhir Marga			0.03			0.03
C280	Pashupati Marga				0.03		0.03
C281	Pragati Marga				0.46		0.46
C282	Kotahi Marga			0.25			0.25
C283	Naudihawa Marga				0.51		0.51
C284	Pragati Marga			0.21			0.21
C285	Samaye Mai Marga				0.84		0.84
C286	Kalika Marga				0.17		0.17
C440	Om Shanti Marga				0.02		0.02
C442	LINE 5(SIDDHARTHA MARGA)			0.27			0.27
C443	LINE 4(KRISHI SADAK MARGA)			0.38			0.38
C444	LINE 3(PURWATARA MARGA)			0.39			0.39
C445	LINE -2(HOLICHILD MARGA)			0.59			0.59
	Ward:-15	5.25		11.36	6.79		23.40
A18	Sunwal-Parsawal-Amraut-Banjaria-Ghina-Bakena-Lalpati-Tonwa Road				1.13		1.13
A22	Shikshya Path				1.13		1.13
A25	Purano Hulaki(Butwaliya Marga)			1.65	0.45		2.10
A26	Pokharapali(Ramgram N.P)-Banjariya-Dharampur-Bairagnath Road	1.95					1.95
B35	Sukrauli Nahar Krishi Sadak			0.47			0.47
B36	Krishi marga			0.30			0.30
B40	Turiya Marga(Sukrauli chowk to Digwal chowk)	1.50		1.44			2.94
B41	Furniture Tole Marga				0.61		0.61

Road Code	Ward/Road Name	Road Surface					
		Blacktop	Brick_Pave	Earthen	Gravelled	RCC	Total
B43	Karwala Path			0.13	0.11		0.24
B45	Loktantrik Chowk-Omshanti chowk-Jaurahari chowk-Nanai road				0.92		0.92
B46	Nanai-Pathardewa-Bhusanpur Road				0.80		0.80
C178	Krishi marga			0.63			0.63
C179	Pokhari Marga			0.59			0.59
C220	Krishi marga			1.61			1.61
C221	Chautari Marg			0.27			0.27
C222	Kalika Marg			0.04			0.04
C223	Shanti Marga			0.05			0.05
C224	Shivaji Marga			0.04			0.04
C225	Krishi marga			0.13			0.13
C226	Krishi marga			0.62			0.62
C227	Krishi marga			1.13			1.13
C228	Ramjanaki Path				0.89		0.89
C229	Daharchandi Path			0.58			0.58
C230	Turiya Krishi Marga			0.55			0.55
C231	Furniture-Purano Hulaki Baato			0.50			0.50
C232	Furniture Factory Marga				0.29		0.29
C233	Sukrauli Tole Road	0.20					0.20
C234	Radha Krishna Path				0.19		0.19
C271	Pokhari Marga			0.10			0.10
C272	Madarsa Path				0.08		0.08
C273	Turiya Khola Marga			0.51			0.51
C274	Nanai Marga				0.19		0.19
F130	Bhumahi - Parasi - Bhairahawa	1.60					1.60
	Ward:-16	6.82		8.86	17.42		33.10
A12	Shaid Jagdish Paswan Marg(Bairawa-Lalitpur-Lankahawa-Hakaui Road)			2.14			2.14
A16	Bijaya Path	0.57		1.34			1.91
A17	Nandan Marga	1.63		0.92			2.55
A18	Sunwal-Parsawal-Amraut-Banjaria-Ghina-Bakena-Lalpati-Tonwa Road				5.89		5.89
A19	Tonawa chowk to south road				1.57		1.57
A20	Kalika Path(Lalpati to Turiya khola)			1.09			1.09
A21	Lalpati-Turiya Khola Marga			0.49	0.74		1.23
A22	Shikshya Path	0.83			0.27		1.10

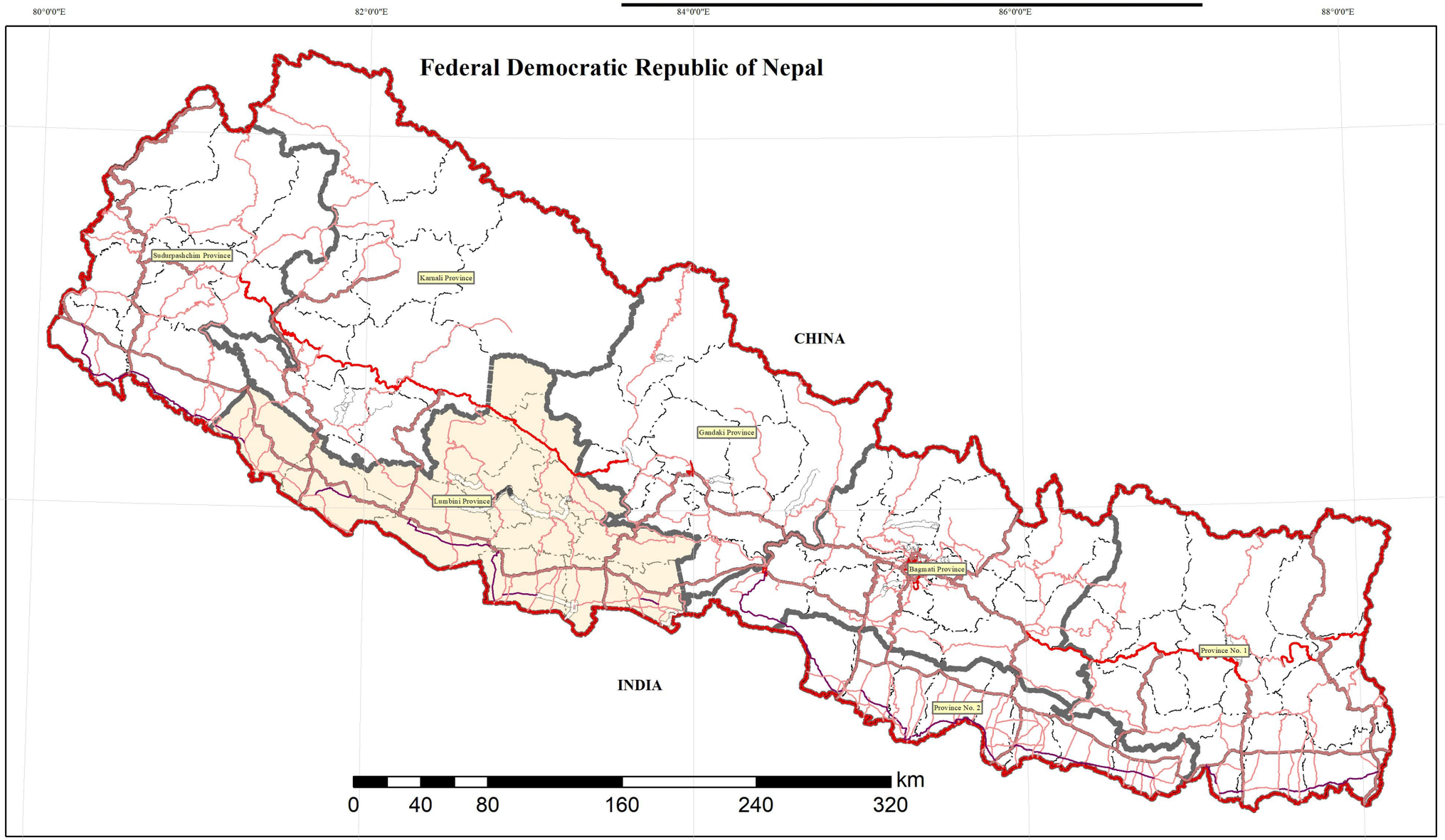
Road Code	Ward/Road Name	Road Surface					
		Blacktop	Brick_Pave	Earthen	Gravelled	RCC	Total
B32	Sita Path				0.09		0.09
B33	Janaki Path				0.47		0.47
B34	Kothai Mai Marga				2.05		2.05
B37	Trilok Path-Nandan Marga jodne road				0.32		0.32
B38	Shiv path				0.42		0.42
B39	Krishi bato				0.07		0.07
C157	Shanti Path			0.07			0.07
C180	Kuwarwarti Marga	0.69					0.69
C181	Ram Path				0.05		0.05
C182	Komariya Path				0.06		0.06
C183	Durga Path				0.06		0.06
C184	Durga Path			0.31			0.31
C185	Sharmeli Tole Marg				0.15		0.15
C186	Kosen Path				0.04		0.04
C187	Inar Path			0.07			0.07
C188	Khadka Path				0.05		0.05
C189	Inar Path 'Kha'			0.21			0.21
C190	Yadav Path				0.05		0.05
C191	Ram Path				0.07		0.07
C192	Nawa Durga Path			0.29			0.29
C193	Dhuniyani-Pokhari Path				0.16		0.16
C194	Gupta Path				0.07		0.07
C195	Ram Path				0.07		0.07
C196	Panth Path	0.31					0.31
C197	Ram Janaki Path				0.12		0.12
C198	Pokhari Path				0.08		0.08
C199	Jayantri Path				0.12		0.12
C200	Gayetri Path				0.06		0.06
C201	Ram Janaki Path				0.06		0.06
C202	Shiv Path-Trilok Path			0.22			0.22
C203	Durga Path				0.14		0.14
C204	Lalpati-Turiya Khola-Parasi Road Section			0.58			0.58
C205	Mayadevi Path				1.64		1.64
C206	Buddha Path				0.38		0.38
C207	Pokhari Baato				1.60		1.60
C208	Ganga Path	0.33					0.33
C209	Kadar Mai Path			1.06	0.28		1.34
C210	Khan Path			0.07			0.07
C211	Kotahi Path				0.03		0.03
C212	Singh Path				0.05		0.05
C213	Baggha Path				0.07		0.07
C215	Durga Path				0.04		0.04
F130	Bhumahi - Parasi - Bhairahawa	2.46					2.46
	Ward:-17	5.23		6.47	17.69		29.38

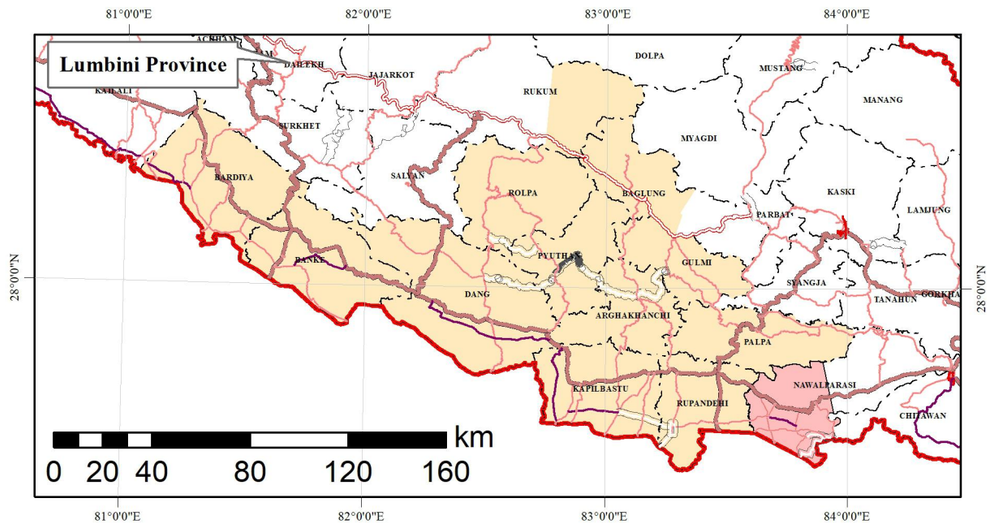
Road Code	Ward/Road Name	Road Surface					
		Blacktop	Brick_Pave	Earthen	Gravelled	RCC	Total
A01	Basabashi-Manari(Hulaki)-Devgaun-Pipariya-Mahespur Road	4.36			1.62		5.98
B01	DAHACHANDI CHOWK-CHANDRAGADHI-WARD 4 OFFICE ROAD	0.40			0.90		1.30
C001	Ganga Marga				0.34		0.34
C002	Market Marg				0.18		0.18
C003	Buddha Marga				0.04		0.04
C004	Sundar Marg				0.29		0.29
C005	Patkhauli Marga				0.07		0.07
C006	Durga Marg				0.09		0.09
C007	Parwati Marg				0.08		0.08
C008	Saraswati Marga			1.33	0.13		1.45
C009	Bhagwanpur Marga			1.22			1.22
C010	Lohasada Marga			0.31			0.31
C011	Kotahi Marg				0.12		0.12
C012	Namindranath Gosain Marg				1.16		1.16
C013	Kotahi Marg	0.23					0.23
C014	Chaudhary Marg				0.06		0.06
C015	Gosai Marg	0.07					0.07
C016	Parwati Marg				0.08		0.08
C017	Saraswati Marga				0.09		0.09
C018	Bhagwati Marga				0.52		0.52
C019	Durga Marg				0.07		0.07
C020	Aananda Marga				0.05		0.05
C021	Bhagawati Sthan Marga				0.03		0.03
C022	Buddha Marga	0.18					0.18
C023	Laxmi Marga				0.03		0.03
C024	Dahar Chandi Marga				0.28		0.28
C025	Pokhara Marga				0.10		0.10
C026	Parwati Marg				0.07		0.07
C027	Laxmi Marga				0.03		0.03
C028	Ganesh Marg				0.04		0.04
C029	Dev Marga				0.12		0.12
C030	Gosai Marg				0.49		0.49
C031	Ward 17 office-Pidura Khola Marg				1.33		1.33
C032	Chaudhary Marga				0.47		0.47
C033	Buddha Marga			0.27			0.27
C034	Chaardaha Marga			0.45			0.45
C035	Kishan Marg			0.83			0.83
C037	Shiva Kuti Marga				1.24		1.24
C038	Adarsha Marga				0.99		0.99
C039	Mahubari Marga				2.30		2.30
C040	Dharma Marga			0.17			0.17
C041	Inaar Marga			0.22			0.22

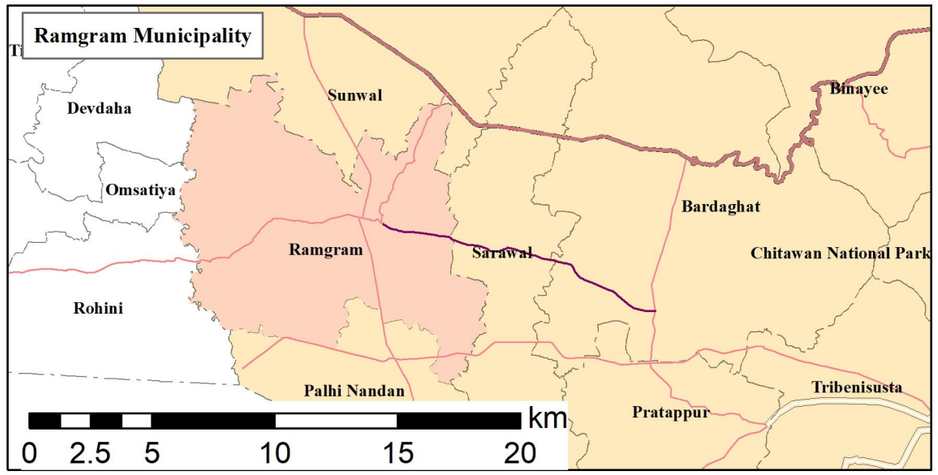
Road Code	Ward/Road Name	Road Surface					
		Blacktop	Brick_Pave	Earthen	Gravelled	RCC	Total
C042	Mahubari Branch Road			0.13			0.13
C043	Pokhari Marg			0.18			0.18
C044	Krishi marga			0.35			0.35
C045	Samaya Marg				0.32		0.32
C046	Shanti Marg				0.22		0.22
C047	Shiv Mandir Marg				0.21		0.21
C048	Thakur Marga				0.03		0.03
C049	Madarsha Marg				0.03		0.03
C050	Saraswati Marga				0.27		0.27
C051	Krishi Samuha Marga			0.58			0.58
C052	Soiya Marga				0.10		0.10
C053	Kola Marga			0.23			0.23
C054	Krishi marga			0.20			0.20
C055	Diha Marga				0.30		0.30
C056	Shiva Marga				0.10		0.10
C057	Jagadamba marg				0.24		0.24
C058	Gayatri Marga				0.05		0.05
C059	Pragatishil Marga				0.48		0.48
C431	Hariyali Marga				0.56		0.56
F208	Triveni-Sanahi-Gandak Nahar Sadak-Nawalparasi				1.36		1.36
	Ward:-18	6.23		4.64	16.65		27.52
A18	Sunwal-Parsawal-Amraut-Banjaria-Ghina-Bakena-Lalpati-Tonwa Road				1.65		1.65
A25	Purano Hulaki(Butwaliya Marga)			0.22	1.87		2.09
A26	Pokharapali(Ramgram N.P)-Banjariya-Dharampur-Bairagnath Road	2.71			1.12		3.84
A28	Rastriye Ma Vi-Brahmathan Road				1.64		1.64
B39	Krishi bato				1.26		1.26
B53	Bouddha Marg	2.48			1.17		3.65
B55	Laxmi Marg(Kotiya dada)	0.32			0.37		0.70
B56	Siddhartha Marg				1.10		1.10
B57	Panditpur-Badagaun-Samay mai mandir road	0.60			2.13		2.73
B61	Shanti Marga				0.15		0.15
C214	Mahaau Khola Marga				0.47		0.47
C216	Mahaau Khola Marga			0.51			0.51
C217	Diuhaar Marga			0.04			0.04
C218	Shiv Mandir Marg				0.15		0.15
C219	Prem Path Marg				0.07		0.07
C235	Shiva Parvati Marg				0.10		0.10
C236	Durga Marg				0.03		0.03
C237	ChakraPath Marg				0.21		0.21
C238	Amar Marg				0.04		0.04
C239	Shanti Marg				0.02		0.02
C240	Kuiya Tole Marga				0.05		0.05

Road Code	Ward/Road Name	Road Surface					
		Blacktop	Brick_Pave	Earthen	Gravelled	RCC	Total
C241	Koliya Marg				1.00		1.00
C242	Durga Marg				0.42		0.42
C244	Durga Marg				0.51		0.51
C265	Brahmathan Path				0.22		0.22
C266	Boudha Shakha				0.05		0.05
C267	Boudha Shaksha Road				0.15		0.15
C268	Dhun Tole Marga				0.05		0.05
C269	Amar Path	0.12					0.12
C270	Butwaliya road-Turiya Khola				0.64		0.64
C441	LINE -6(MAYADEVI MARGA)			0.42			0.42
C442	LINE 5(SIDDHARTHA MARGA)			0.85			0.85
C443	LINE 4(KRISHI SADAK MARGA)			0.59			0.59
C444	LINE 3(PURWATARA MARGA)			0.84			0.84
C445	LINE -2(HOLICHILD MARGA)			0.84			0.84
C446	kOLIYA MARGA-2			0.33			0.33
	Grand Total	93.36	1.40	78.95	153.86	2.76	330.32

STRATEGIC ROAD NETWORK MAP







N

W E

S

Legend

- National Boundary
- Province Boundary
- District Boundary

ROADCLASS

- National Highway
- Mid-Hill Highway
- Feeder Road Network
- Feeder Road Other
- Sub-Urban Road
- Proposed Road

Client:
Government of Nepal
Ramgram Municipality
Office of the Municipal Executive
Parasi,Nawalparsi

Consultant:
Abhiyantra Consulting (P).Ltd
New Baneshwor-34,
Kathmandu,Nepal

Coordinate System: Modified UTM84
Projection: Transverse Mercator
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False Northing: 0.0000
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Latitude Of Origin: 0.0000
Units: Meter

Map No. 01

LOCATION MAP

RAMGRAM MUNICIPALITY

Devdaha
Omsatiya
Rohini
Ramgram
Sunwal
Bardaghat
Sarawal
Palhi Nandan

1:60,000
0 0.75 1.5 3 4.5 6 km

Federal Democratic Republic of Nepal

CHINA
INDIA
Sudurpashchim Province
Karnali Province
Gandaki Province
Lumbini Province
Bagmati Province
Province No. 1
Province No. 2

LUMBINI PROVINCE

NAWALPARASI DISTRICT

RUPANDEHI
NAWALPARASI
PALPA
CHITAWAN

Legend

- Municipal Boundary
- Ward Boundary
- Municipality Office
- Ward Office

ROADCLASS
- National Highway
- Feeder Road Network
- Proposed Road

LANDUSE CATEGORY
- Barren Land
- Bush
- Cliff
- Cultivation
- Forest
- Nursery
- Orchard
- Pond
- Sand
- Swamp
- Waterbody

Client:
Government of Nepal
Ramgram Municipality
Office of the Municipal Executive
Parasi,Nawalparsi

Consultant:
Abhiyantra Consulting (P).Ltd
New Baneshwor-34,
Kathmandu,Nepal

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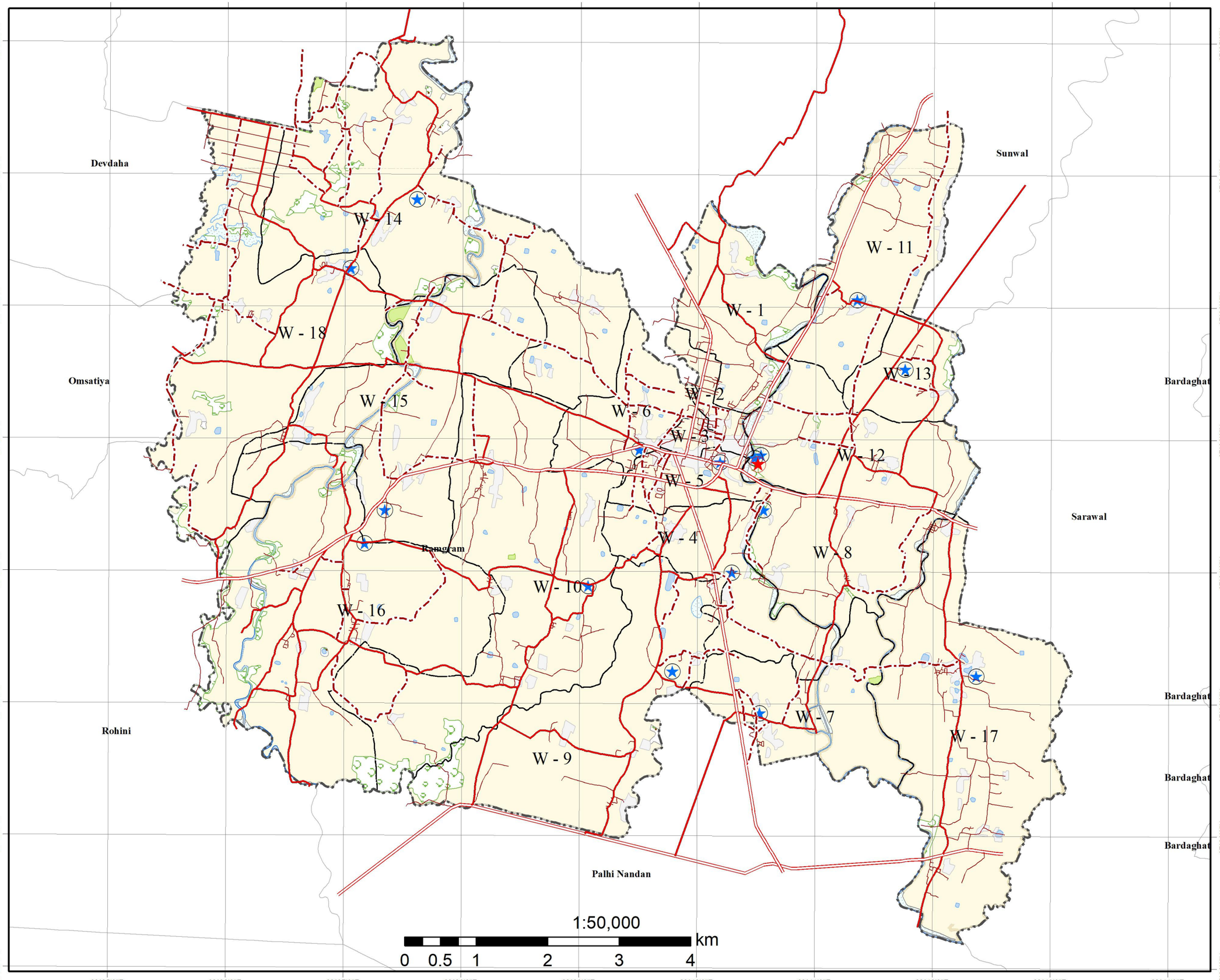
Map No. 02

LANDUSE MAP



Legend

- Ward Office
- Municipal Boundary
- Ward Boundary

Remarks

- Municipality Office

N_Class

- SRN
- A
- B
- C

LANDUSE CATEGORY

- Barren Land
- Bush
- Cliff
- Cultivation
- Forest
- Nursery
- Orchard
- Pond
- Sand
- Swamp
- Waterbody

Landuse Category	Percentage
Barren Land	3.46%
Bush	2.55%
Cliff	1.25%
Cultivation	90.06%
Forest	0.15%
Nursery	0.01%
Orchard	0.13%
Pond	0.37%
Sand	0.86%
Swamp	0.24%
Waterbody	0.91%

Client:
Government of Nepal
Ramgram Municipality
Office of the Municipal Executive
Parasi,Nawalparsi

Consultant:
Abhiyantra Consulting (P).Ltd
New Baneshwor-34,
Kathmandu,Nepal

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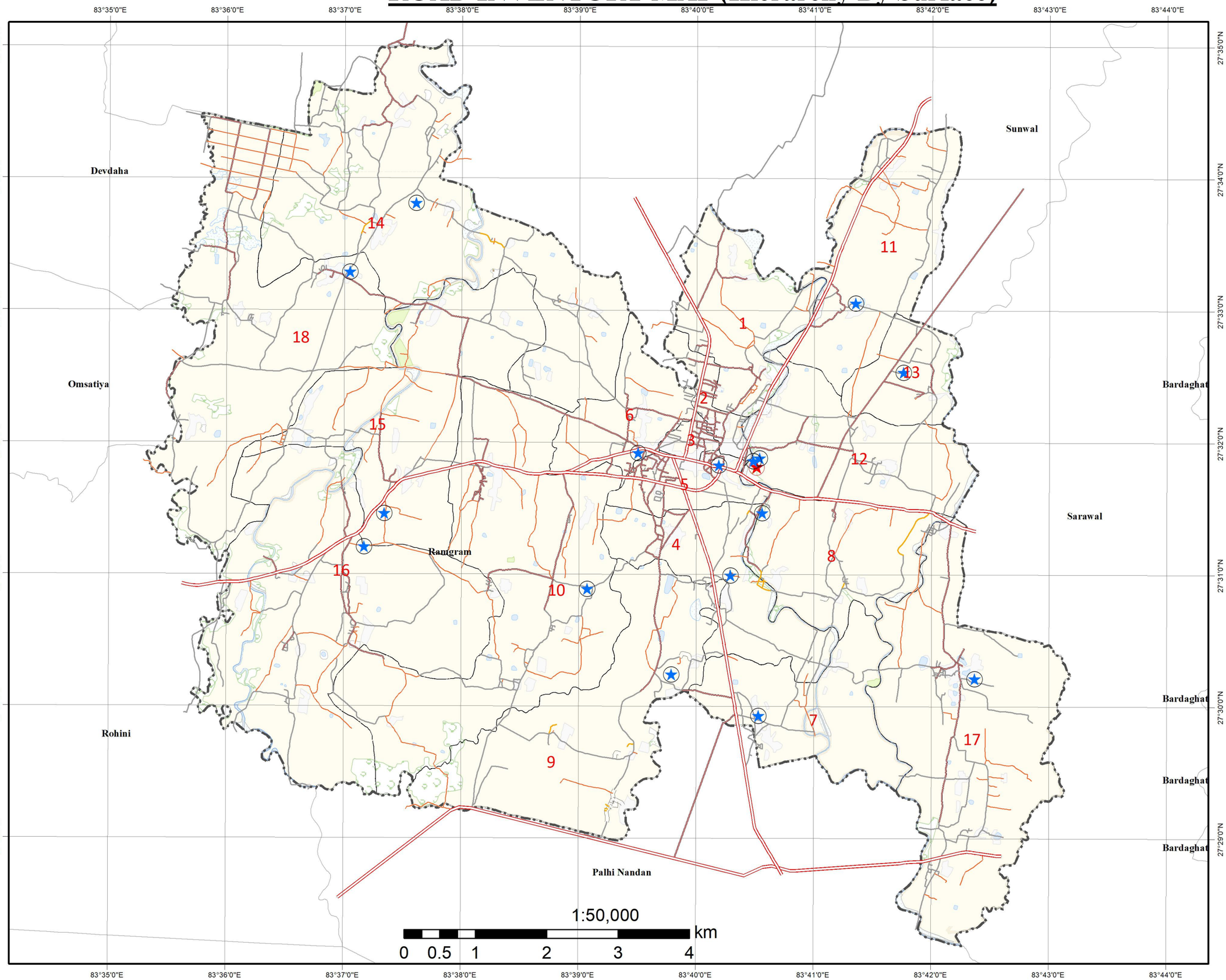
Units: Meter

Map No. 03

MUNICIPAL TRANSPORT MASTER PLAN
ROAD INVENTORY MAP (Hierarchy By Surface)



N
W E
S

Legend

- Municipal Boundary
- Ward Boundary
- Municipality Office
- Ward Office

Surface

- Blacktop
- Brick_Pave
- Earthen
- Gravelled
- RCC
- SRN

LANDUSE CATEGORY

- Barren Land
- Bush
- Cliff
- Cultivation
- Forest
- Nursery
- Orchard
- Pond
- Sand
- Swamp
- Waterbody

Client:
Government of Nepal
Ramgram Municipality
Office of the Municipal Executive
Parasi,Nawalparsi

Consultant:
Abhiyantra Consulting (P).Ltd
New Baneshwor-34,
Kathmandu,Nepal

Coordinate System: Modified UTM84
Projection: Transverse Mercator
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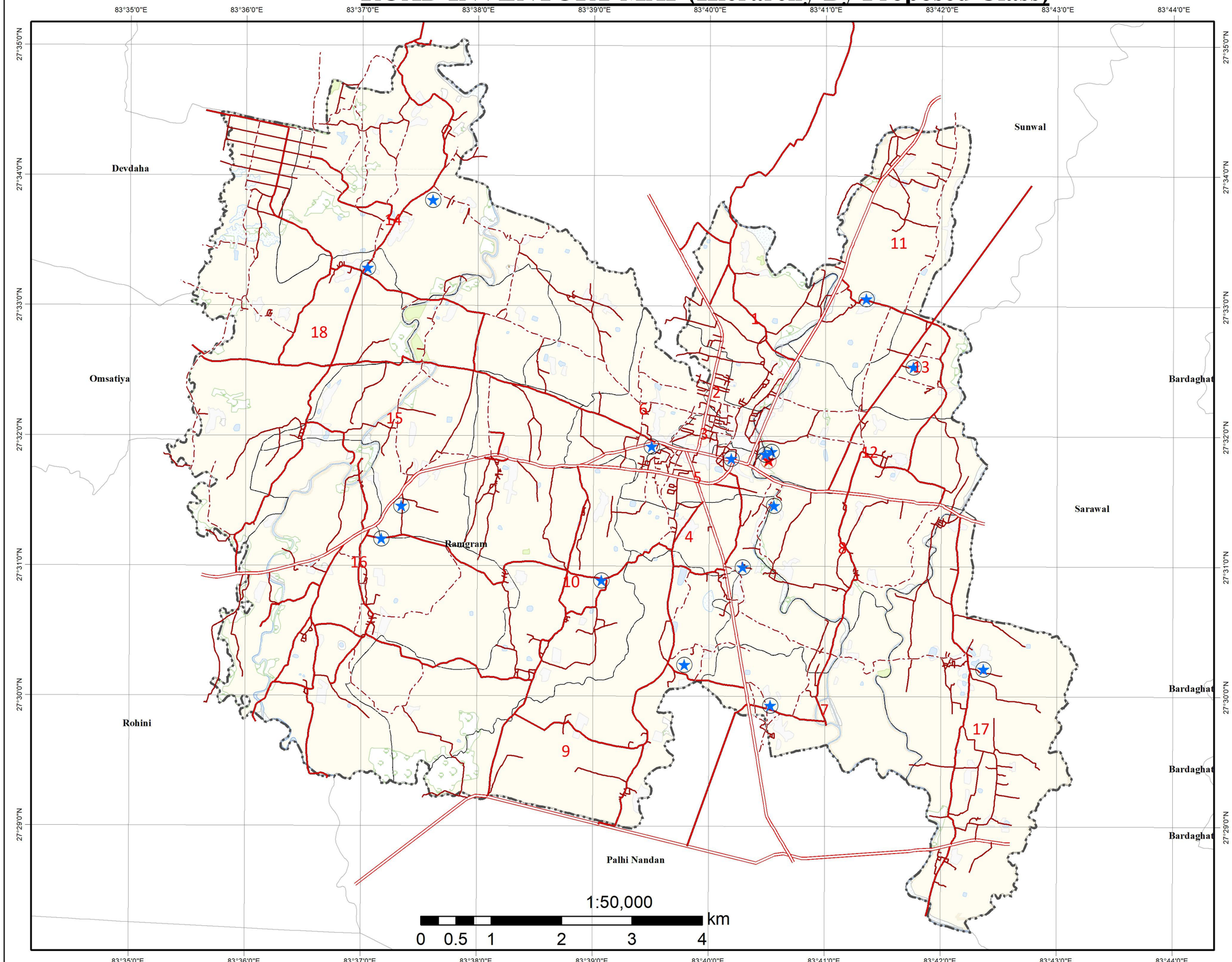
Units: Meter

Map No. 04

MUNICIPAL TRANSPORT MASTER PLAN
ROAD INVENTORY MAP (Hierarchy By Proposed Class)



N
W E
S

Legend

- Municipal Boundary
- Ward Boundary
- Municipality Office
- Ward Office

Proposed Road Class

- SRN
- Road Class A
- Road Class B
- Road Class C

Client:
Government of Nepal
Ramgram Municipality
Office of the Municipal Executive
Parasi,Nawalparsi

Consultant:
Abhiyantra Consulting (P).Ltd
New Baneshwor-34,
Kathmandu,Nepal

Coordinate System: Modified UTM84
Projection: Transverse Mercator
Datum: Everest Adj 1937
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False Northing: 0.0000
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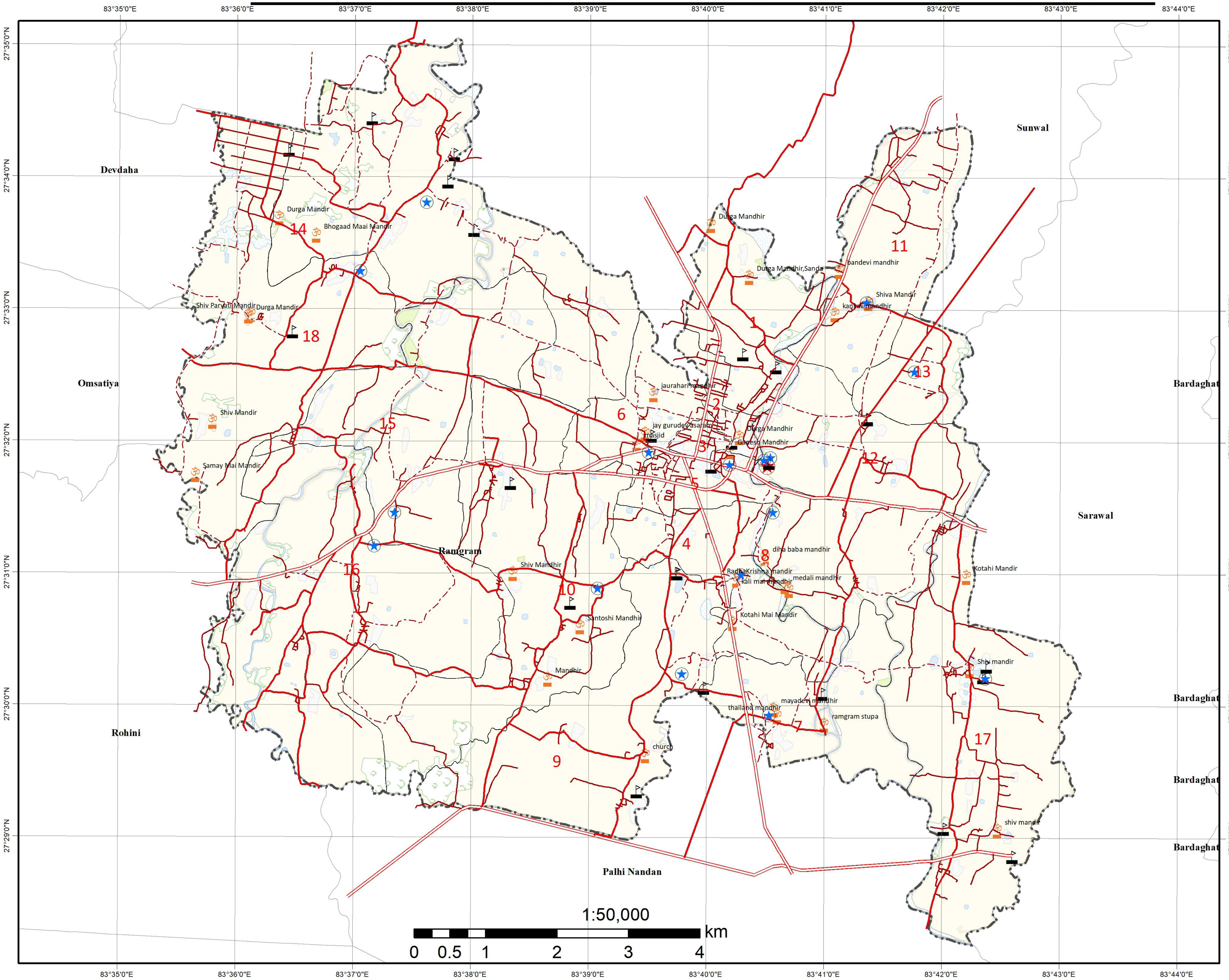
Units: Meter

Map No. 05

MUNICIPAL TRANSPORT MASTER PLAN
MAP SHOWING RELIGIOUS PLACES & EDUCATIONAL INSTITUTES



Legend

- Municipal Boundary
- Ward Boundary
- Ward Office
- Municipality Office
- Religious Place
- Educational Institute

Proposed Road Class

- SRN
- Road Class A
- Road Class B
- Road class C

Client:
Government of Nepal
Ramgram Municipality
Office of the Municipal Executive
Parasi,Nawalparasi

Consultant:
Abhiyantra Consulting (P).Ltd
New Baneshwor-34,
Kathmandu,Nepal

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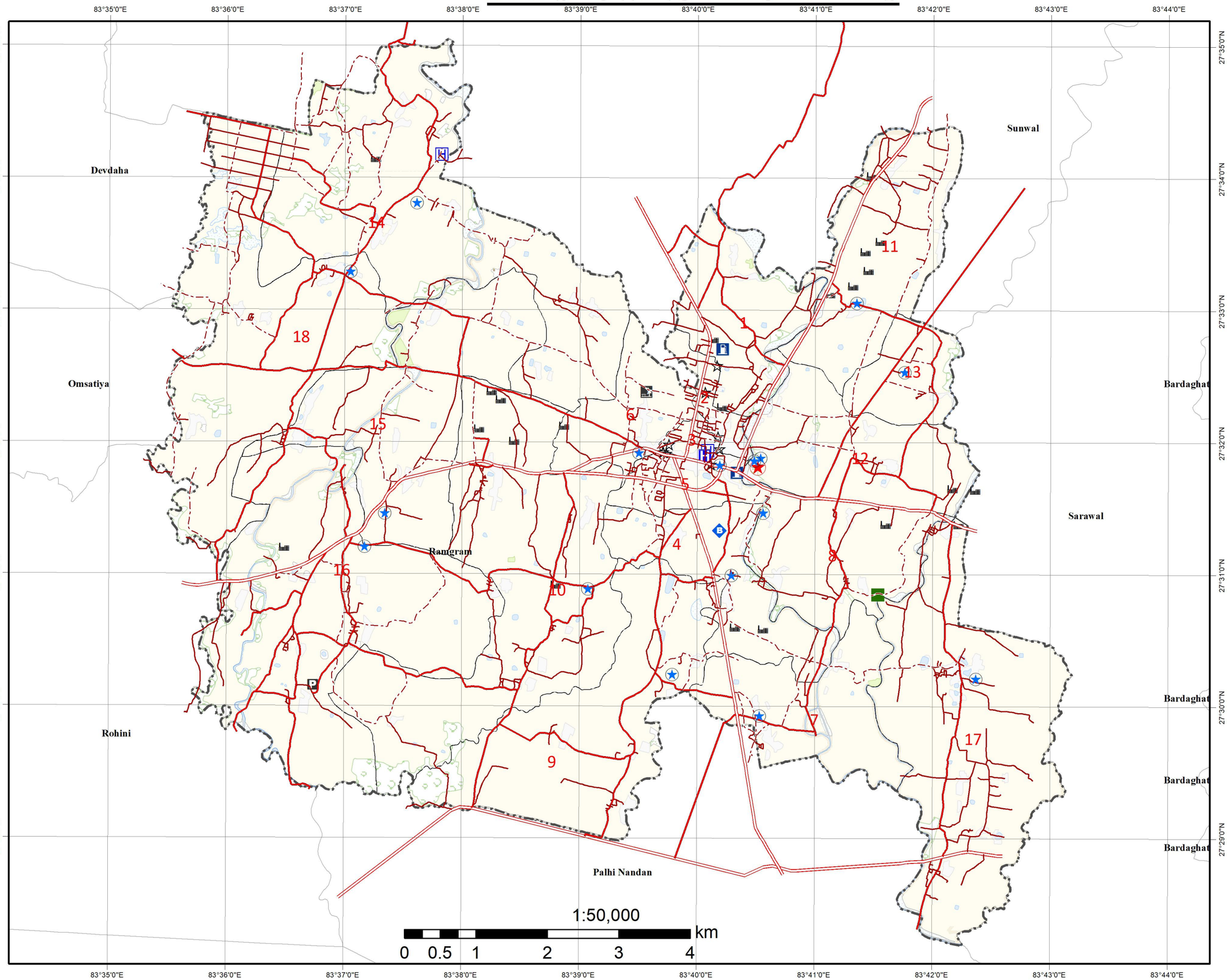
Map No. 06

MUNICIPAL TRANSPORT MASTER PLAN
MAP SHOWING PLACEMARKS



N
W E
S

Legend

- Municipal Boundary
- Ward Boundary
- Ward Office
- Municipality Office
- Government Office
- Health Post
- Hospital
- Bus Park
- Dharmasala
- Industry
- Park
- Petrol Pump
- Police Station

Client:
Government of Nepal
Ramgram Municipality
Office of the Municipal Executive
Parasi,Nawalparsi

Consultant:
Abhiyantra Consulting (P).Ltd
New Baneshwor-34,
Kathmandu,Nepal

Coordinate System: Modified UTM84
Projection: Transverse Mercator
Datum: Everest Adj 1937
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False Northing: 0.0000
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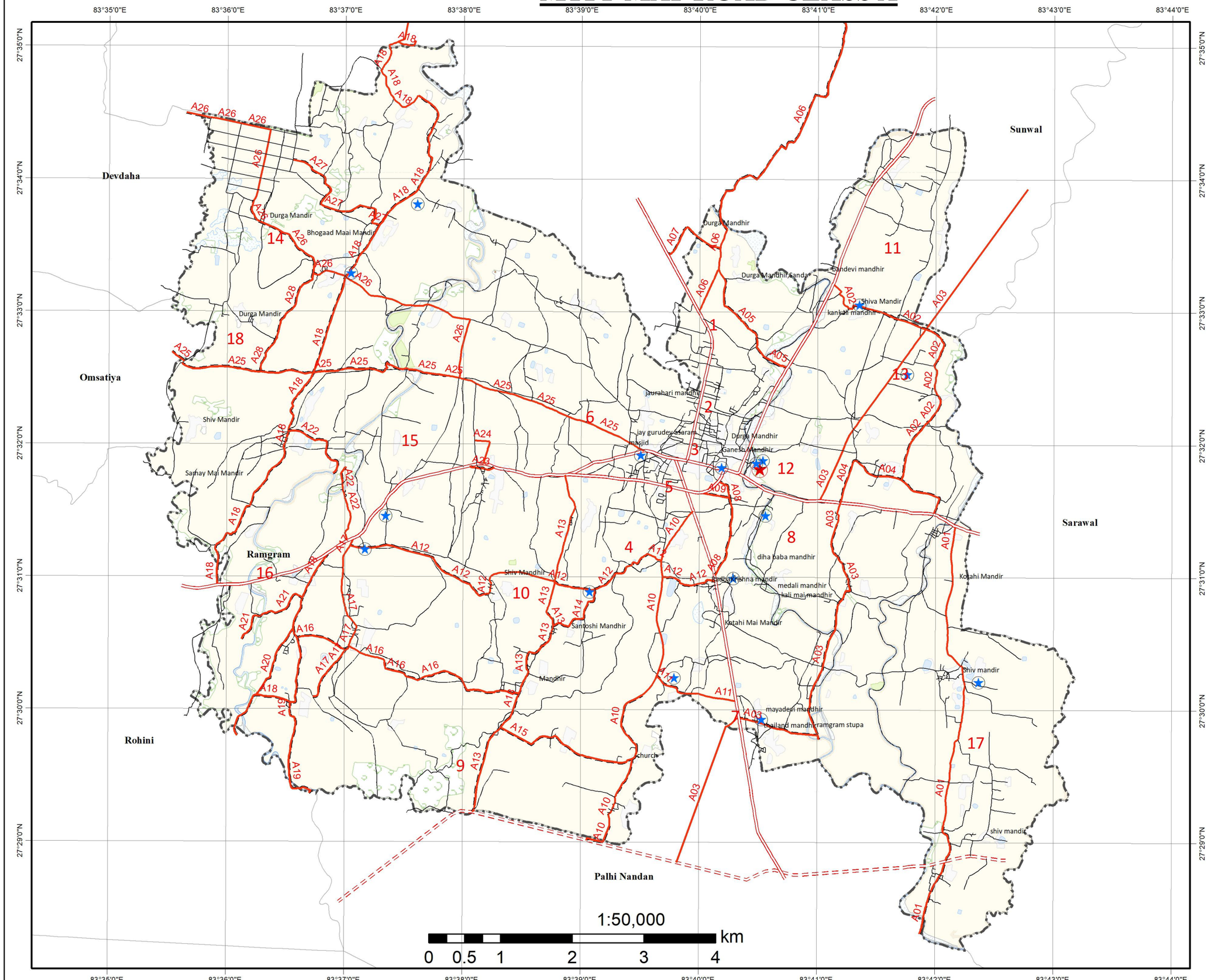
Units: Meter

Map No. 07

MUNICIPAL TRANSPORT MASTER PLAN
MTPP MAP ROAD CLASS A



Legend

- Municipal Boundary
- Ward Boundary
- Ward Office
- Municipality Office

Municipal Road Class, Interventions

- Other Municipal Roads
- SRN, Maintainance
- SRN, Upgradation
- A, Maintainance
- A, Upgradation

Client:
Government of Nepal
Ramgram Municipality
Office of the Municipal Executive
Parasi,Nawalparsi

Consultant:
Abhiyantra Consulting (P).Ltd
New Baneshwor-34,
Kathmandu,Nepal

Coordinate System: Modified UTM84
Projection: Transverse Mercator
Datum: Everest Adj 1937
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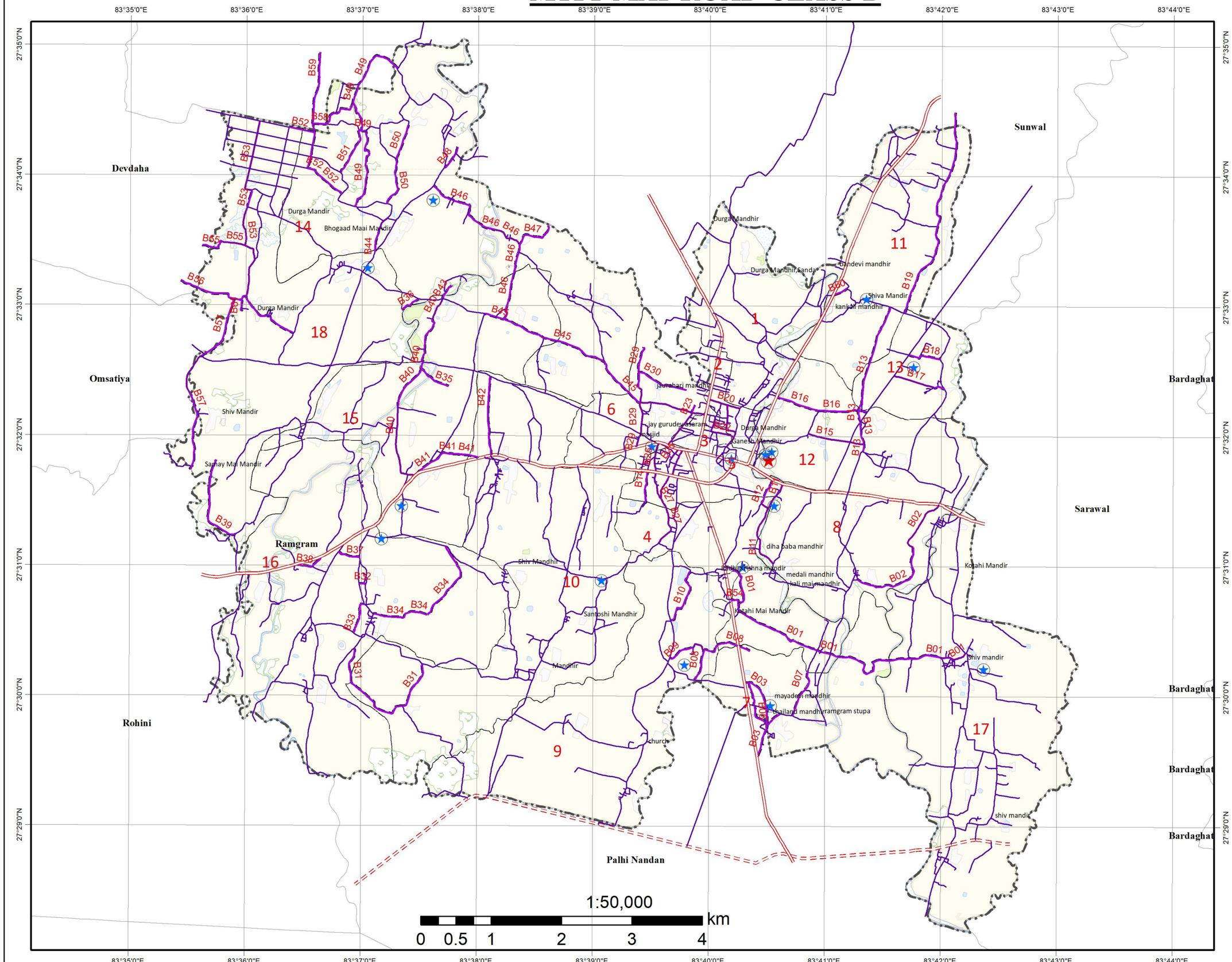
Map No. 08

MUNICIPAL TRANSPORT MASTER PLAN
MTPP MAP ROAD CLASS B



N
W E
S

Legend

- Municipal Boundary
- Ward Boundary
- Ward Office
- Municipality Office

Municipal Road Class, Interventions

- Other Municipal Roads
- SRN, Maintainance
- SRN, Upgradation
- B, Maintainance
- B, Upgradation

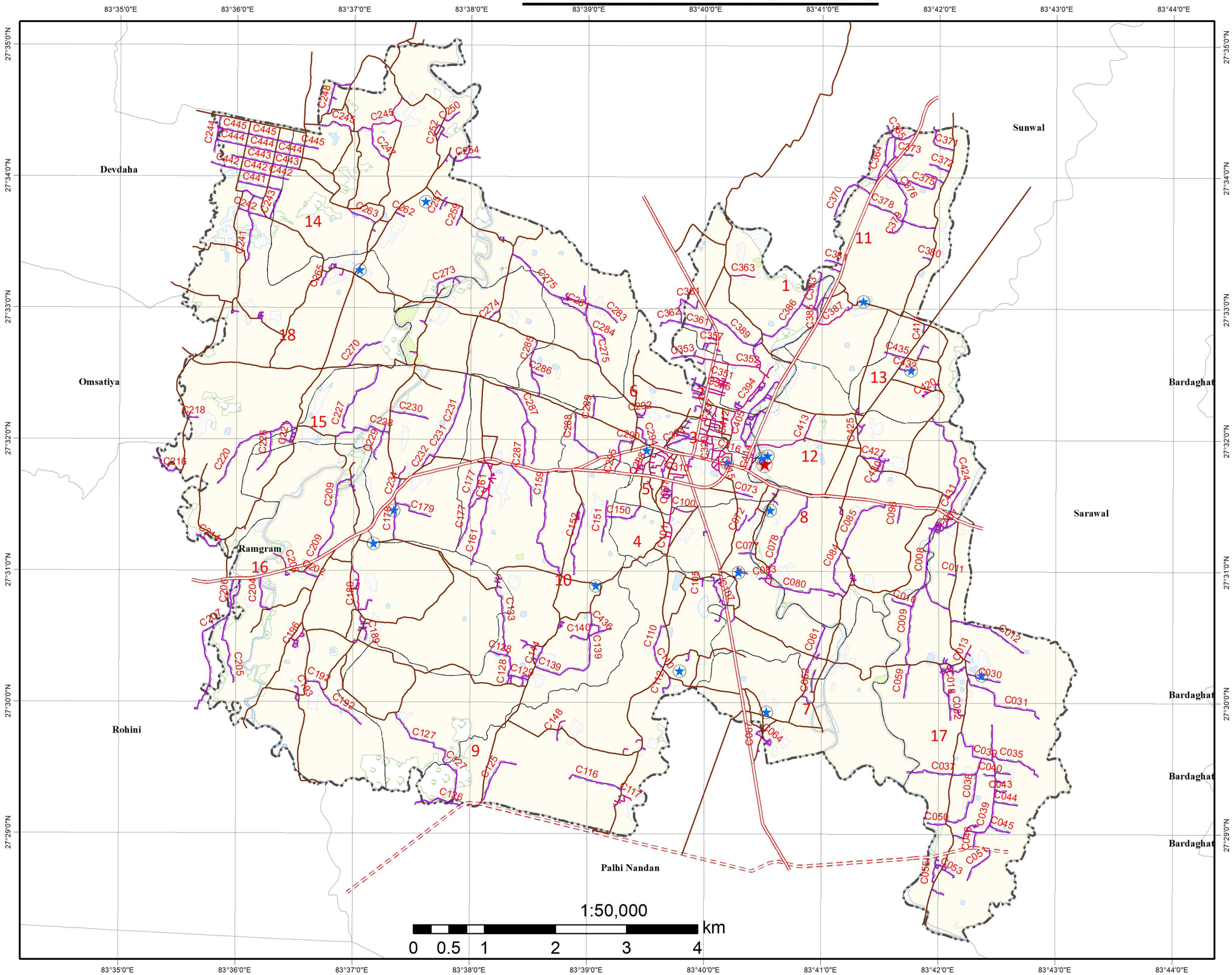
Client:
Government of Nepal
Ramgram Municipality
Office of the Municipal Executive
Parasi,Nawalparsi

Consultant:
Abhiyantra Consulting (P).Ltd
New Baneshwor-34,
Kathmandu,Nepal

Coordinate System: Modified UTM84
Projection: Transverse Mercator
Datum: Everest Adj 1937
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: 84.0000
Scale Factor: 0.9999
Latitude Of Origin: 0.0000
Units: Meter

Map No. 09

MUNICIPAL TRANSPORT MASTER PLAN
MTPP MAP ROAD CLASS C



N
W E
S

Legend

- Municipal Boundary
- Ward Boundary
- Municipality Office
- Ward Office

Municipal Road Class, Interventions

- Other Municipal Roads
- SRN, Maintainance
- SRN, Upgradation
- C, Maintainance
- C, Upgradation

Client:
Government of Nepal
Ramgram Municipality
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Parasi,Nawalparsi

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Coordinate System: Modified UTM84
Projection: Transverse Mercator
Datum: Everest Adj 1937
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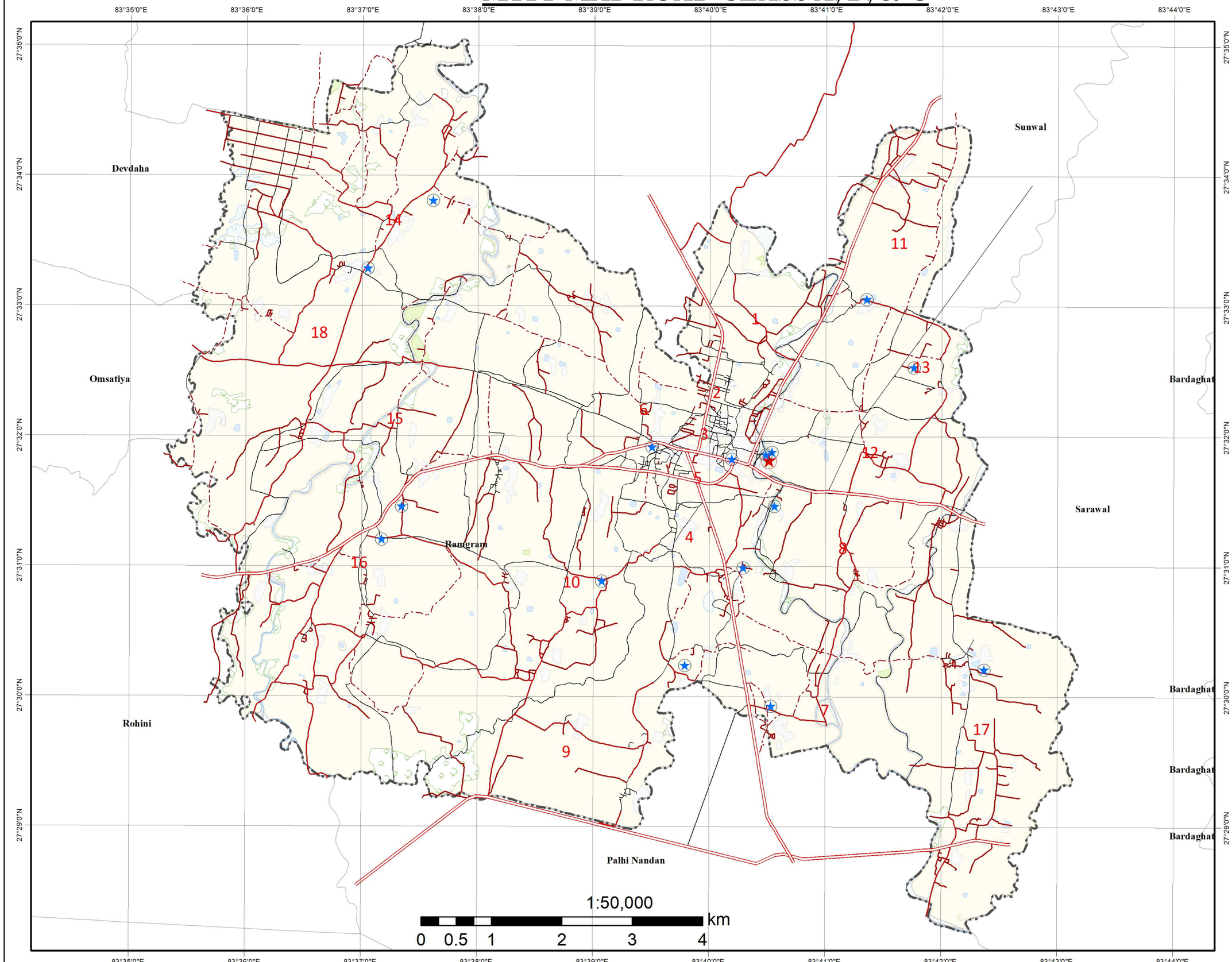
False Northing: 0.0000
Central Meridian: 84.0000
Scale Factor: 0.9999
Latitude Of Origin: 0.0000
Units: Meter

Map No. 10

MUNICIPAL TRANSPORT MASTER PLAN
MTPP MAP ROAD CLASS A, B, & C



N
W E
S

Legend

- Municipal Boundary
- Ward Boundary
- Municipality Office
- Ward Office

Municipal Road Class, Interventions

- Other Municipal Roads
- A, Upgradation
- B, Upgradation
- C, Upgradation
- SRN

Client:
Government of Nepal
Ramgram Municipality
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Coordinate System: Modified UTM84
Projection: Transverse Mercator
Datum: Everest Adj 1937
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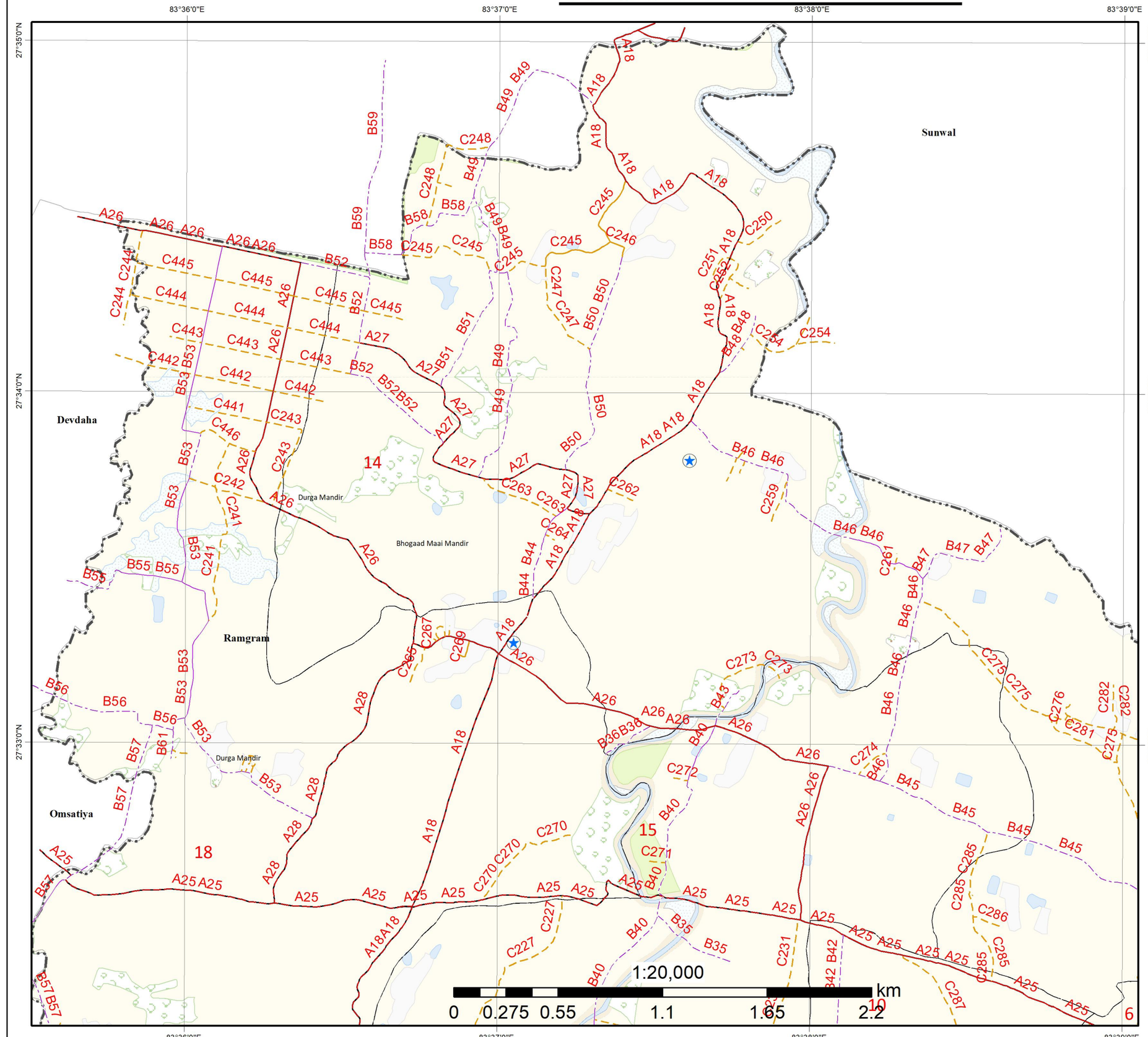
False Northing: 0.0000
Central Meridian: 84.0000
Scale Factor: 0.9999
Latitude Of Origin: 0.0000
Units: Meter

Map No. 11

MUNICIPAL TRANSPORT MASTER PLAN
CONSOLIDATED MTTP MAP



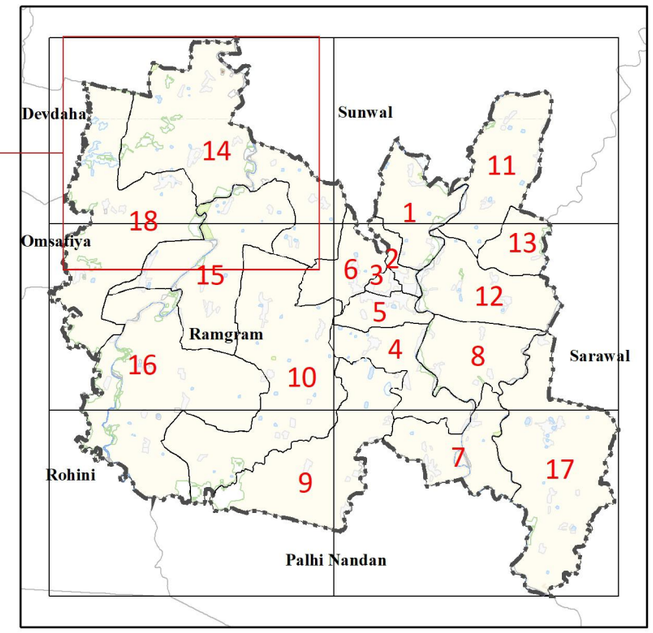
N
W E
S

Legend

- Municipal Boundary
- Ward Boundary
- Ward Office

Municipal Road Class, Interventions

- A, Maintainance
- A, Upgradation
- B, Maintainance
- B, Upgradation
- C, Maintainance
- C, Upgradation



Client:
Government of Nepal
Ramgram Municipality
Office of the Municipal Executive
Parasi,Nawalparsi

Consultant:
Abhiyantra Consulting (P).Ltd
New Baneshwor-34,
Kathmandu,Nepal

Coordinate System: Modified UTM84
Projection: Transverse Mercator
Datum: Everest Adj 1937
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False Northing: 0.0000
Central Meridian: 84.0000
Scale Factor: 0.9999
Latitude Of Origin: 0.0000
Units: Meter

Map No.
12-A

MUNICIPAL TRANSPORT MASTER PLAN
CONSOLIDATED MTTP MAP

N
W E
S

83°39'0"E 83°40'0"E 83°41'0"E 83°42'0"E
27°35'0"N 27°34'0"N 27°33'0"N

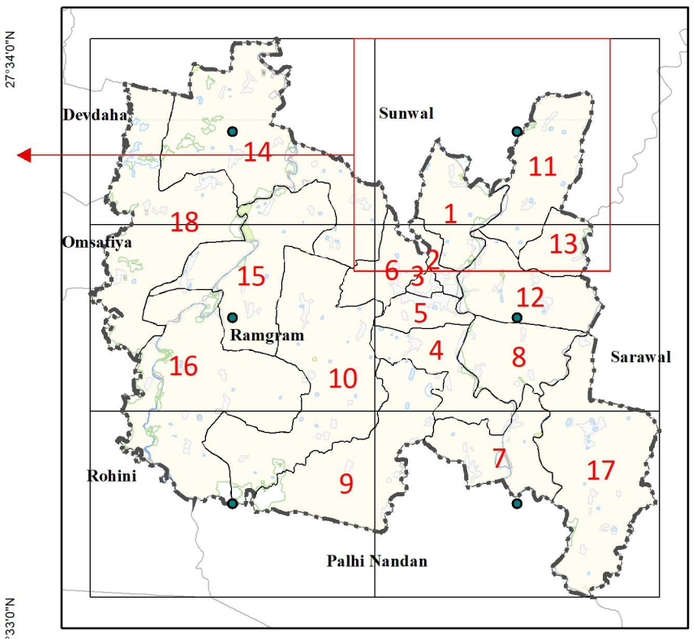
Legend

- Municipal Boundary
- Ward Boundary
- Ward Office

Municipal Road Class, Interventions

- A, Maintainance
- A, Upgradation
- B, Maintainance
- B, Upgradation
- C, Maintainance
- C, Upgradation
- SRN

Sunwal
Durga Mandhir
Durga Mandhir,Sanda
bandevi mandhir
Shiva Mandir
kankali mandhir
Ramgram
jaurahari mandhir
Sarawal



1:20,000
0 0.275 0.55 1.1 1.65 2.2 km

Client:
Government of Nepal
Ramgram Municipality
Office of the Municipal Executive
Parasi,Nawalparsi

Consultant:
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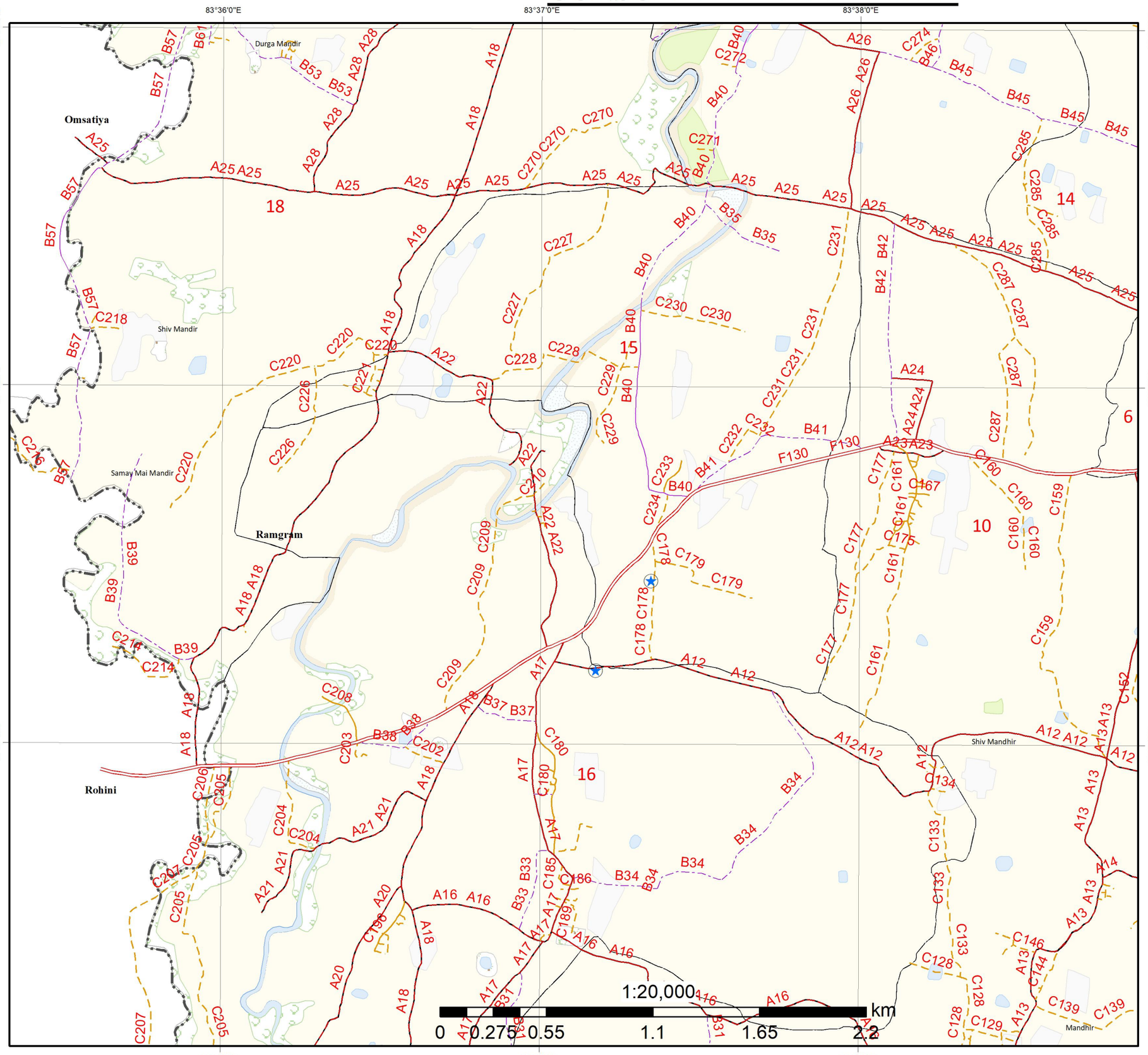
New Baneshwor-34,
Kathmandu,Nepal

Coordinate System: Modified UTM84
Projection: Transverse Mercator
Datum: Everest Adj 1937
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: 84.0000
Scale Factor: 0.9999
Latitude Of Origin: 0.0000
Units: Meter

Map No.
12-B

MUNICIPAL TRANSPORT MASTER PLAN
CONSOLIDATED MTTP MAP

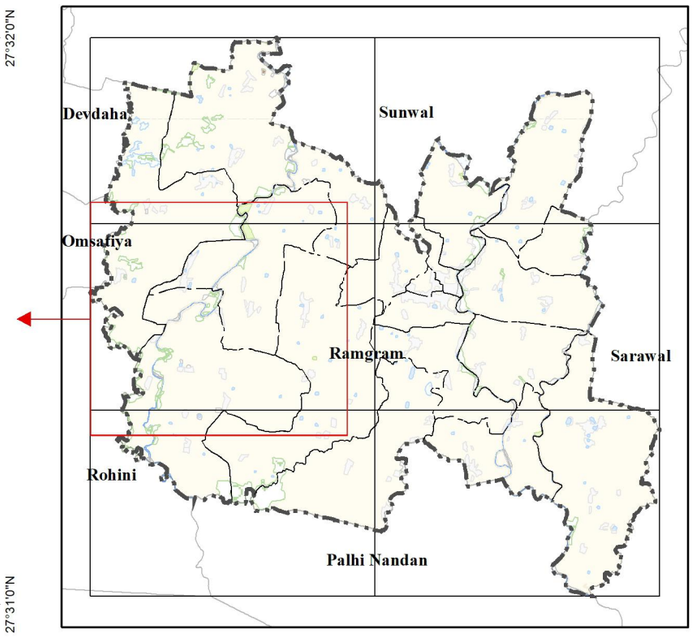


Legend

- Municipal Boundary
- Ward Boundary
- Ward Office

Municipal Road Class, Interventions

- A, Maintainance
- A, Upgradation
- B, Maintainance
- B, Upgradation
- C, Maintainance
- C, Upgradation
- SRN



Client:
Government of Nepal
Ramgram Municipality
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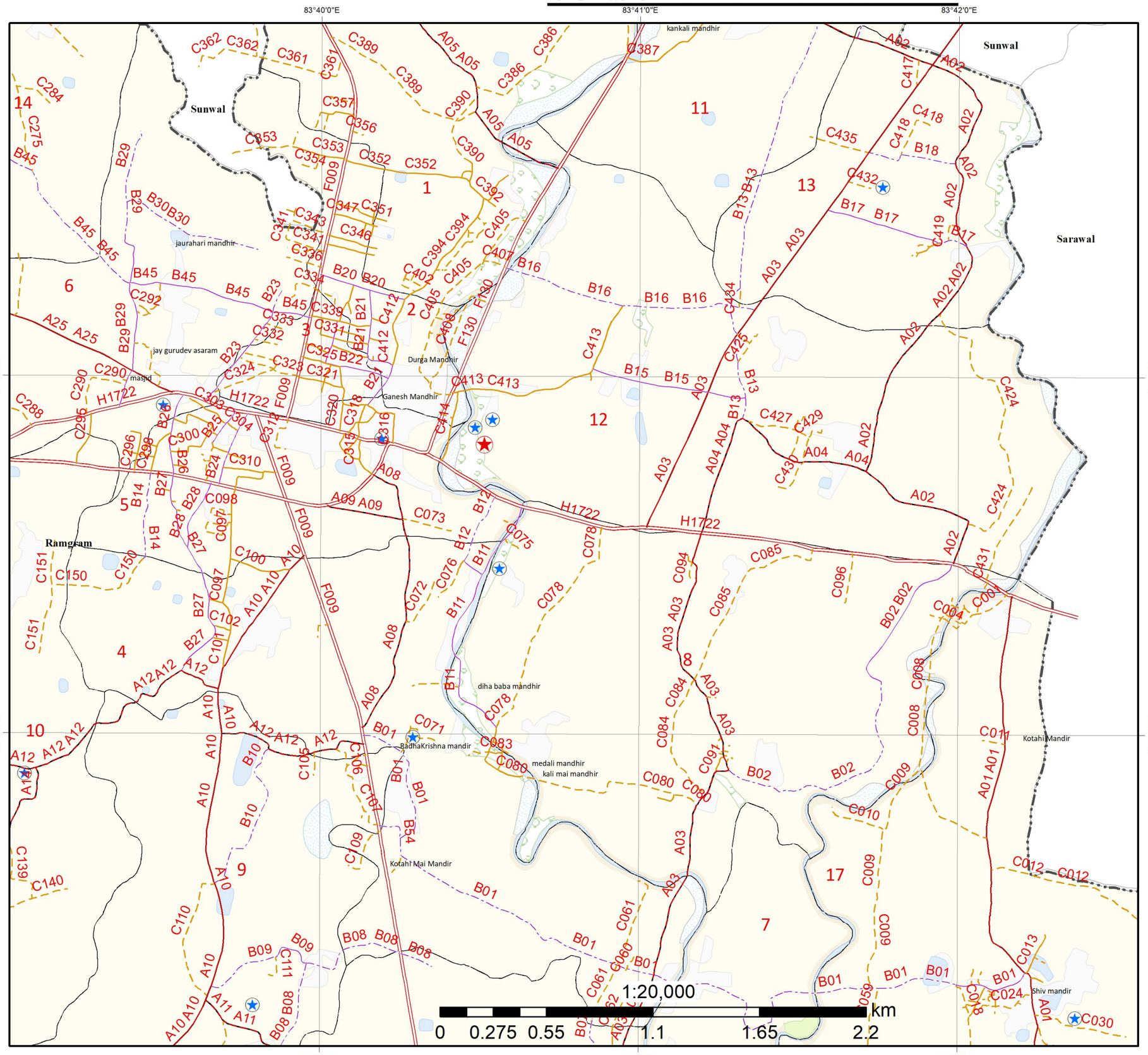
Parasi,Nawalparsi

Consultant:
Abhiyantra Consulting (P).Ltd
New Baneshwor-34,
Kathmandu,Nepal

Coordinate System: Modified UTM84
Projection: Transverse Mercator
Datum: Everest Adj 1937
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: 84.0000
Scale Factor: 0.9999
Latitude Of Origin: 0.0000
Units: Meter

Map No.
12-C

MUNICIPAL TRANSPORT MASTER PLAN
CONSOLIDATED MTTP MAP



Legend

- Municipal Boundary
- Ward Boundary
- Municipality Office
- Ward Office

Municipal Road Class, Interventions

- A, Maintainance
- A, Upgradation
- B, Maintainance
- B, Upgradation
- C, Maintainance
- C, Upgradation
- SRN

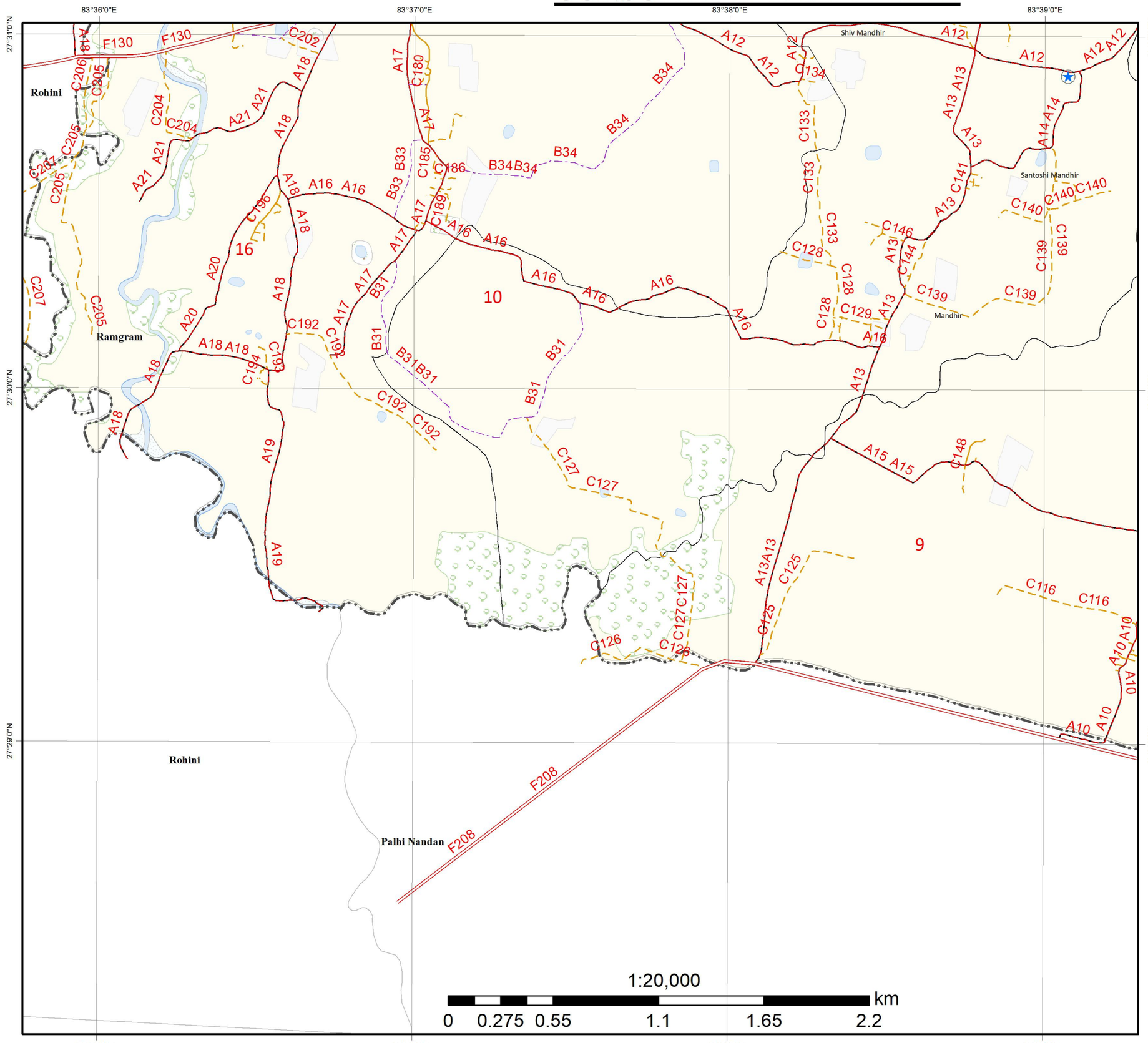
Client:
Government of Nepal
Ramgram Municipality
Office of the Municipal Executive
Parasi,Nawalparsi

Consultant:
Abhiyantra Consulting (P).Ltd
New Baneshwor-34,
Kathmandu,Nepal

Coordinate System: Modified UTM84
Projection: Transverse Mercator
Datum: Everest Adj 1937
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: 84.0000
Scale Factor: 0.9999
Latitude Of Origin: 0.0000
Units: Meter

Map No.
12-D

MUNICIPAL TRANSPORT MASTER PLAN
CONSOLIDATED MTTP MAP



N
W E
S

Legend

- Municipal Boundary
- Ward Boundary
- Ward Office

Municipal Road Class, Interventions

- A, Maintainance
- A, Upgradation
- B, Upgradation
- C, Maintainance
- C, Upgradation
- SRN

Client:
Government of Nepal
Ramgram Municipality
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Parasi,Nawalparsi

Consultant:
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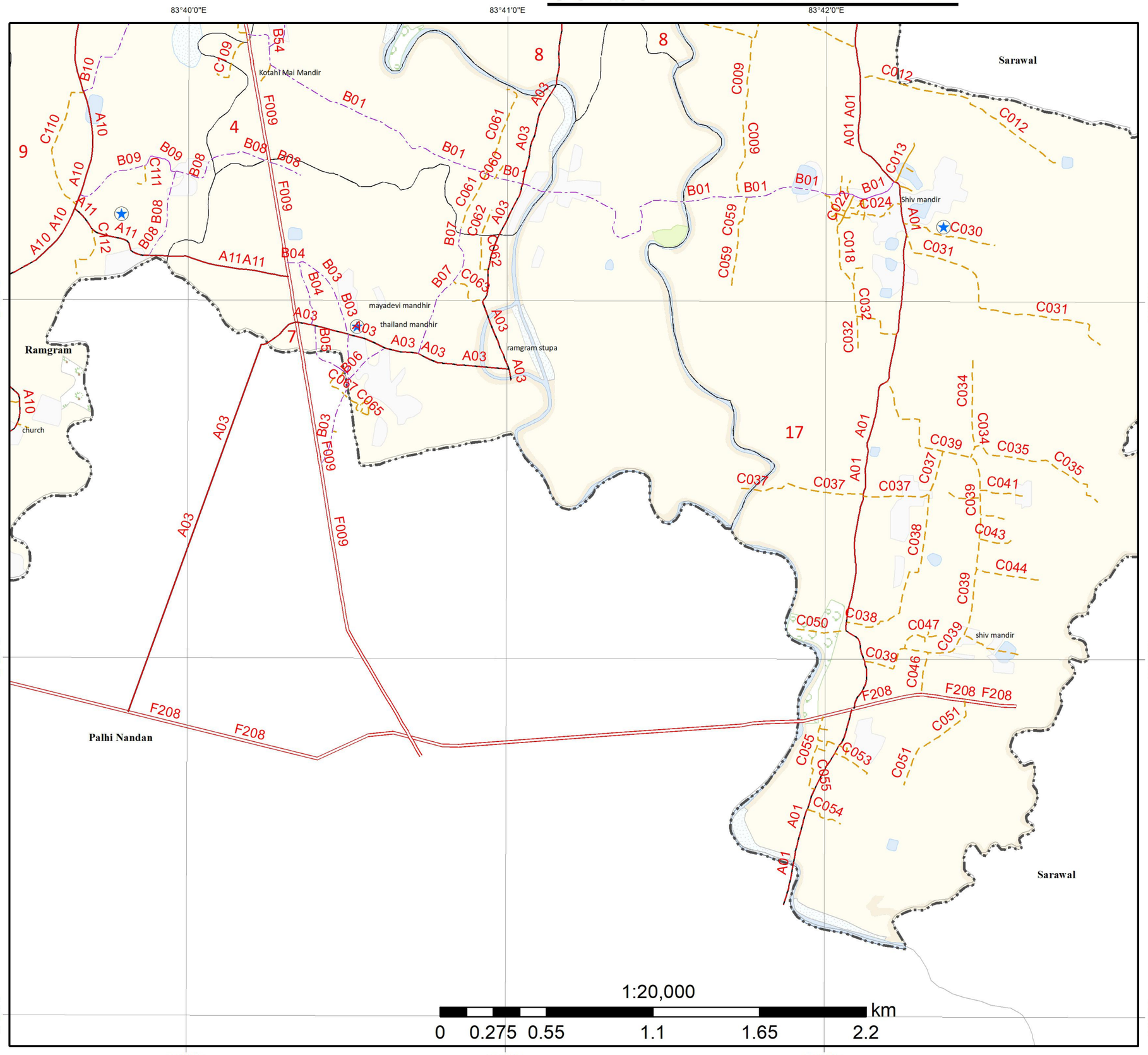
New Baneshwor-34,
Kathmandu,Nepal

Coordinate System: Modified UTM84
Projection: Transverse Mercator
Datum: Everest Adj 1937
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: 84.0000
Scale Factor: 0.9999
Latitude Of Origin: 0.0000
Units: Meter

Map No.
12-E

MUNICIPAL TRANSPORT MASTER PLAN
CONSOLIDATED MTTP MAP



Legend

- Municipal Boundary
- Ward Boundary
- Ward Office

Municipal Road Class, Interventions

- A, Maintainance
- A, Upgradation
- B, Maintainance
- B, Upgradation
- C, Maintainance
- C, Upgradation
- SRN

Client:
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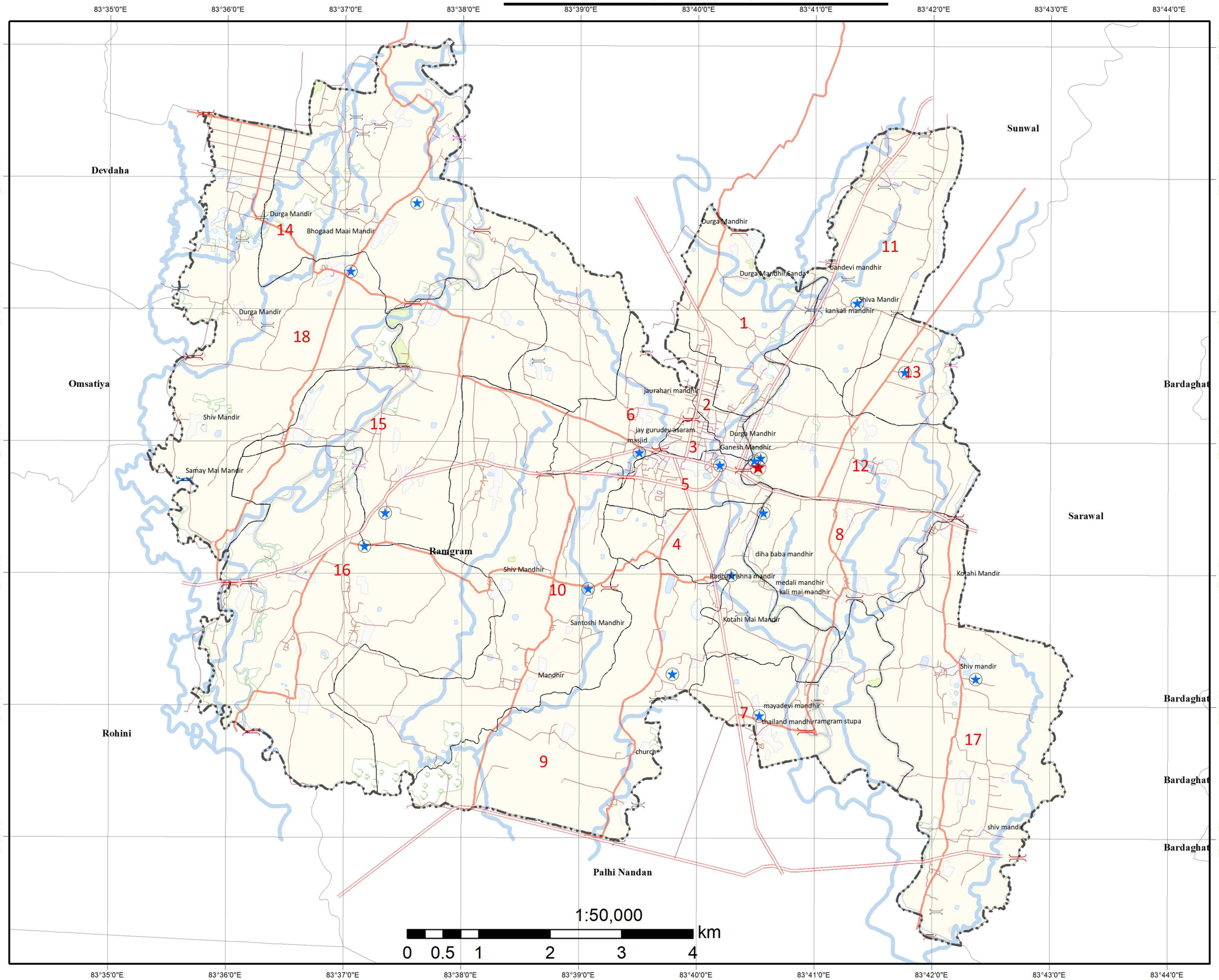
Coordinate System: Modified UTM84
Projection: Transverse Mercator
Datum: Everest Adj 1937
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: 84.0000
Scale Factor: 0.9999
Latitude Of Origin: 0.0000
Units: Meter

Map No.
12-F

MUNICIPAL TRANSPORT MASTER PLAN
BRIDGE AND CULVERT MAP



N
W E
S

Legend

- Municipal Boundary
- Ward Boundary
- Ward Office
- Municipality Office
- Bridge
- Culvert
- Suspension Bridge
- Proposed Bridge
- Bridge Under Construction
- SRN
- DRCN
- Municipal Road
- River Network

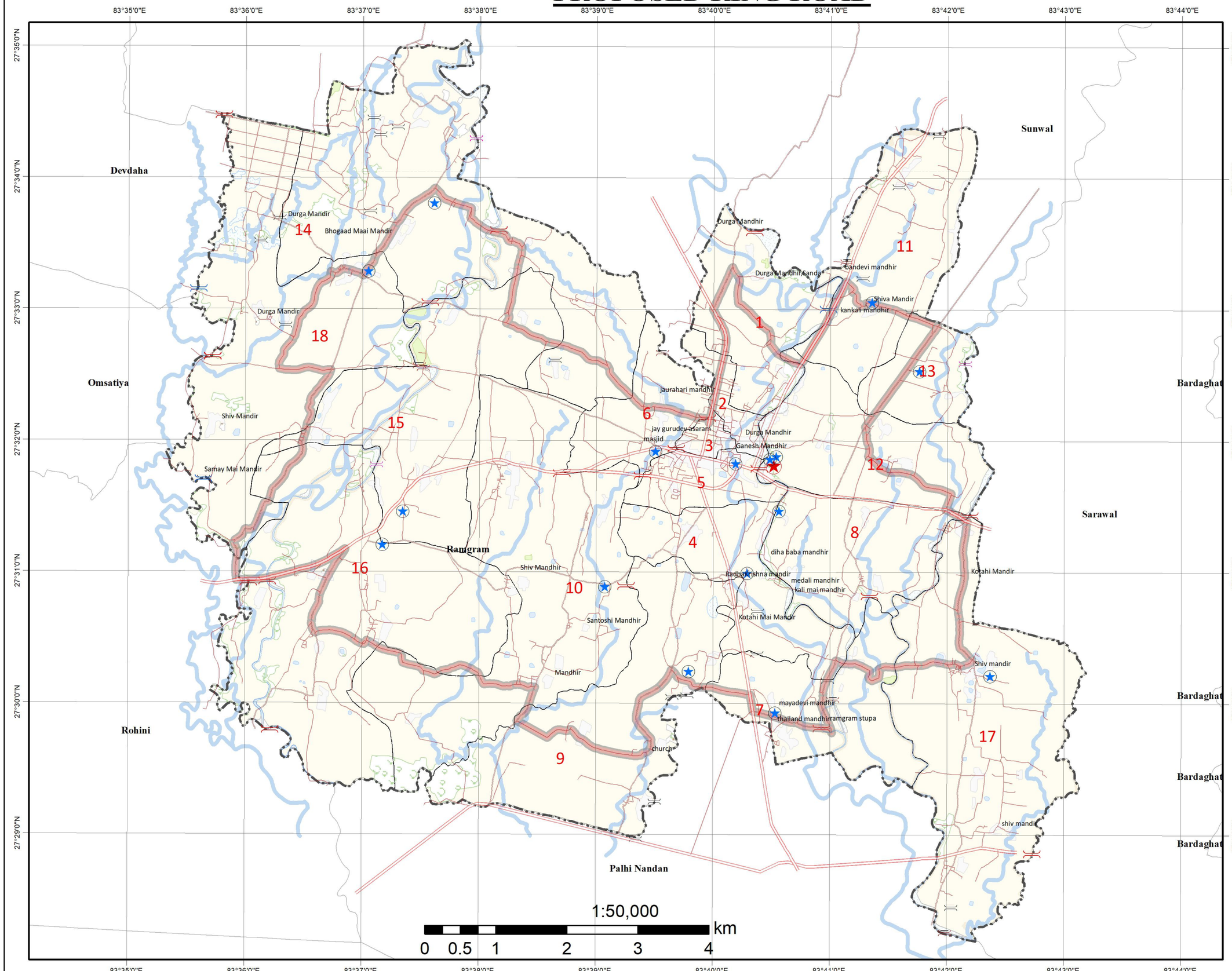
Client:
Government of Nepal
Ramgram Municipality
Office of the Municipal Executive
Parasi,Nawalparsi

Consultant:
Abhiyantra Consulting (P).Ltd
New Baneshwor-34,
Kathmandu,Nepal

Coordinate System: Modified UTM84
Projection: Transverse Mercator
Datum: Everest Adj 1937
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: 84.0000
Scale Factor: 0.9999
Latitude Of Origin: 0.0000
Units: Meter

Map No. 13

MUNICIPAL TRANSPORT MASTER PLAN
PROPOSED RING ROAD



N
W E
S

Legend

- Municipal Boundary
- Ward Boundary
- Ward Office
- Municipality Office
- Bridge
- Culvert
- Suspension Bridge
- Proposed Bridge
- Bridge Under Construction
- SRN
- DRCN
- Municipal Road
- Proposed Ring Road
- River Network

Client:
Government of Nepal
Ramgram Municipality
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Parasi,Nawalparsi

Consultant:
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New Baneshwor-34,
Kathmandu,Nepal

Coordinate System: Modified UTM84
Projection: Transverse Mercator
Datum: Everest Adj 1937
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: 84.0000
Scale Factor: 0.9999
Latitude Of Origin: 0.0000
Units: Meter

Map No. 14

MAP SHOWING AREA COVERED BY 1KM BUFFER ZONE OF ROADS (Except Road Class C)

	Area in sqkm.																	
	Ward 1	Ward 2	Ward 3	Ward 4	Ward 5	Ward 6	Ward 7	Ward 8	Ward 9	Ward 10	Ward 11	Ward 12	Ward 13	Ward 14	Ward 15	Ward 16	Ward 17	Ward 18	Total
Ward Wise Area covered by 1km buffer road	3.26	0.69	0.32	3.37	1.37	2.17	3.75	3.64	7.04	10.44	4.76	4.20	1.73	10.77	6.74	11.21	8.30	9.20	**92.97**
Percentage covered by 1km buffer road	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**99.92%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**99.74%**	**100.00%**	**100.00%**	**90.27%**	**100.00%**	**99.01%**

N

W E

S

Legend

- Municipal Boundary
- Ward Boundary

Remarks

- Municipality Office
- Ward Office
- Area reachable within 15 mins.

N_Class

- SRN
- A
- B
- C

LANDUSE CATEGORY

- Barren Land
- Bush
- Cliff
- Cultivation
- Forest
- Nursery
- Orchard
- Pond
- Sand
- Swamp
- Waterbody

Landuse Category	Percentage
Barren Land	3.46%
Bush	2.55%
Cliff	1.25%
Cultivation	90.06%
Forest	0.15%
Nursery	0.01%
Orchard	0.13%
Pond	0.37%
Sand	0.86%
Swamp	0.24%
Waterbody	0.91%

1:50,000

0 0.5 1 2 3 4 km

Client:
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Scale Factor: 0.9999
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Units: Meter

Map No. 15