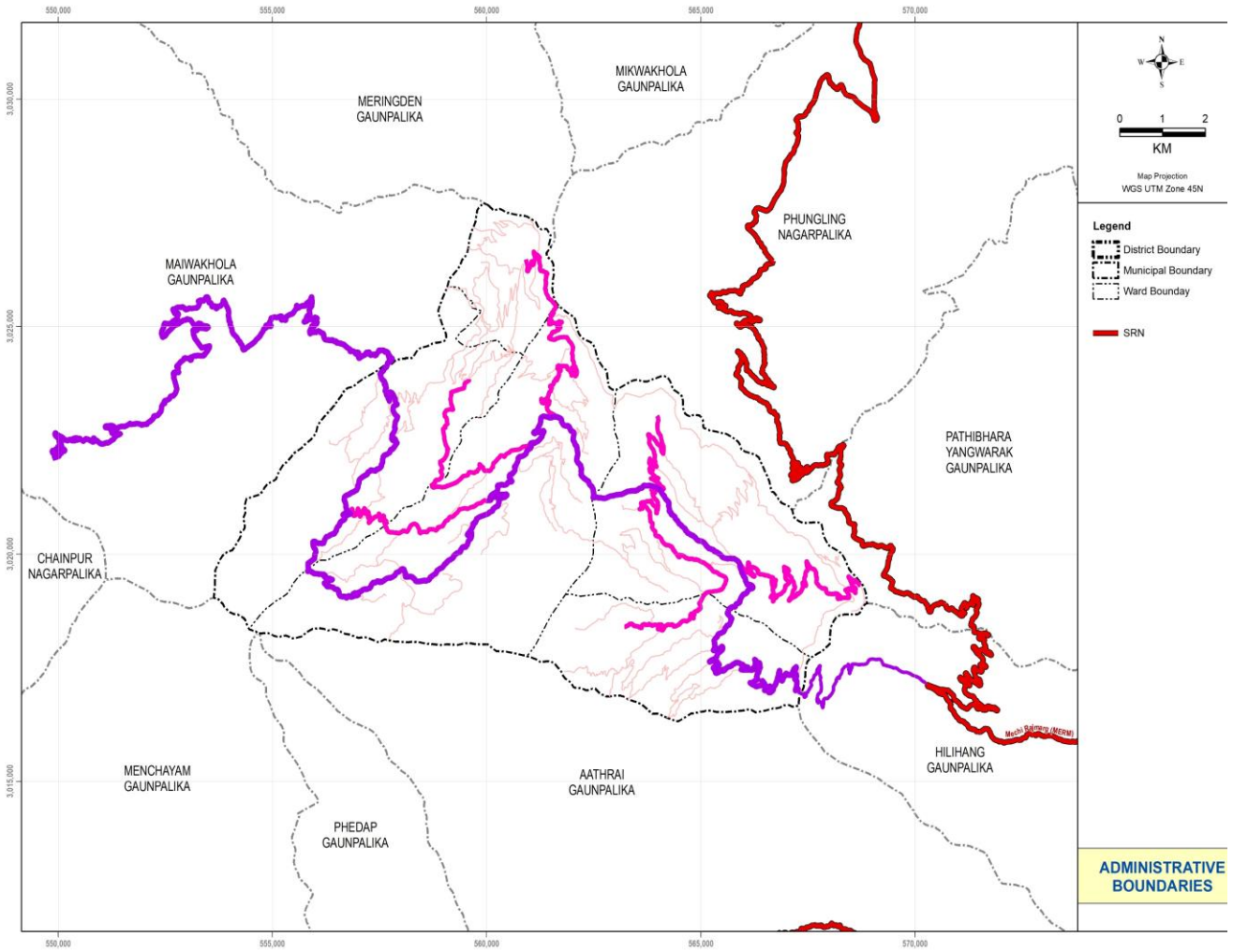
R M T M P

Rural Municipal Transportation Master Plan (RMTMP) of

AATHARAI TRIBENI RURAL MUNICIPALITY

TAPLEJUNG, KOSHI PROVINCE

Draft Report



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Acknowledgement

We extend our heartfelt gratitude and appreciation to all those who contributed to the successful completion of the Municipality Transport Master Plan Report for Aathrai Tribeni Rural Municipality. This comprehensive document, which serves as a road map for the sustainable development of our transportation infrastructure, would not have been possible without the dedicated efforts of numerous individuals and groups.

First and foremost, we express our sincere thanks to Mayor of Aathrai Tribeni Rural Municipality, Mr. Dipendra Pomu, Deputy Mayor Mr's. Shanta Kumari Angbuhang. and members of Rural Municipality Executive Body, the elected representatives including the Ward Chairpersons, whose valuable insights and commitment to the betterment of our community have significantly enriched the content of this report. Their active participation in discussions and decision-making processes reflects a shared vision for a well-connected and accessible Aathrai Tribeni Rural Municipality.

We would like to thank with immense appreciation to the Chief Executive Officer of the Office of Municipal Executive, Mr. Babu Nandan Mehta, the technical section Aathrai Tribeni Rural Municipality and all other staffs of Municipality Office and members of Office of Municipal Executive for the collective guidance and input which will lay a solid foundation for the forthcoming tasks. The officials of Aathrai Tribeni Rural Municipality, whose unwavering commitment and tireless dedication were instrumental in steering this project to fruition. Their leadership and guidance provided the necessary foundation for a collaborative and effective planning process. The role of social mobilizers in engaging with the local community and ensuring that their voices were heard throughout the planning stages cannot be overstated. Their active participation in discussions and decision-making processes reflects a shared vision for a well-connected and accessible Aathrai Tribeni Rural Municipality. Their ability to bridge the gap between the municipality and the residents played a crucial role in fostering transparency and inclusivity in the development of the Master Plan.

Our appreciation also goes out to the diverse stakeholders who actively participated in consultations, providing invaluable perspectives and feedback. This collaborative approach, involving government agencies, non-governmental organizations, businesses, and other key players, ensures that the Master Plan is a holistic reflection of the community's needs and aspirations.

Last but not least, we extend our heartfelt thanks to the local people of Aathrai Tribeni Rural Municipality. Their patience, cooperation, and active engagement in the planning process have been indispensable. The success of this Master Plan is a testament to the collective spirit of our community and its commitment to shaping a sustainable and well-connected future.

In conclusion, the completion of the Municipal Transport Master Plan Report stands as a testament to the power of collaboration and shared vision. We express our deepest gratitude to all involved, confident that this document will serve as a catalyst for positive change and improved transportation infrastructure in Aathrai Tribeni Rural Municipality.

The Study Team

Strength Engineering Company Pvt. Ltd.

Executive Summary

Transport facilities are vital for connecting rural and urban areas. Good road access reduces isolation, enhances crop production and marketing, supports public services, and facilitates technology transfer. Roads, often referred to as “the infrastructure for infrastructure,” play a transformative role in rural development. However, without proper planning and guidelines, road construction can lead to inefficient use of resources. To address this, the Rural Municipality Transport Master Plan (MTMP) was designed to evaluate and plan the road and transport facilities in Aathrai Tribeni Rural Municipality and its surrounding areas.

Aathrai Tribeni Rural Municipality, located in the southwest part of Tapalejung District. It shares borders with Yangwarak Rural Municipality and Panchthar District to the east, Maiwakhola Rural Municipality to the west, Phungling Municipality to the north, and Tehrathum District to the southThe municipality's administrative centre is located in Hangpang. Covering an area of 88.83 square kilometres, the municipality has a population of 12,296 as per the 2021 census. It comprises 2,888 households, with an average household size of 4.77. Ward 3 has the highest household size at 3.51members, while Ward 5 has the lowest at 6.74.

A critical lifeline of Aathrai Tribeni Rural Municipality is the Mechi Highway, which connects the municipality located 6 Km far from Limbuni Bridge, Ward 1 .Aathrai Rural municipality have total length of road network is 230Km , with 98% of roads consisting of earthen surface only 1.26 KM of black topped The municipality reliance on fragile earthen road underscores an urgent need for strategic upgrade particularly paving priority routes like class A to enhance resilience support local livelihood and stimulate regional economic growth. The road is categorized into four class . Class A is a Province road which is 35.22 Km ,Class B are the priority road by local level branch from A class road and rest are class C and D. The table shows the length of road according to ward wise :-

Ward	Category	Total Length	Total length of road in ward(KM)	Total Road length inRural Municipality
1	A	8.45	36.07	229.62
	B	4.94		
	C	13.95		
	D	8.73		
2	A	5.91	57.91	
	B	12.89		
	C	35.35		
	D	3.76		
3	A	13.62	66.12	
	B	11.94		
	C	30.06		
	D	10.51		
4	A	7.25	42.92	
	B	10.56		
	C	23.16		
	D	1.94		
5	A	0.00	26.59	
	B	7.43		
	C	17.39		
	D	1.8		

Aathrai Tribeni Rural Municipality has only one provincial road with a total length of 35.33 kilometers, which passes through four out of the five wards. This road is categorized as a Class A road, and the target for the next five years is to blacktop it, maintaining a right of way (RoW) of 12 meters. The municipality also has 7 Class B roads with a combined length of 47.768 kilometers, with a five-year target to gravel these roads while ensuring a RoW of 10 meters. In addition, there are 40 Class C roads totaling 119.91 kilometers, with a designated RoW of 8 meters, and 10 Class D roads covering 26.7 kilometers, with a RoW of 6 meters. The goal for both Class C and D roads is to carry out regular maintenance over the next five years.

Aathrai Tribeni Rural Municipality plans to upgrade 183 km of roads, with Class A roads requiring blacktopping and others to be graveled. The total estimated cost is NPR 255.14 Crores, while the available local budget is only NPR 89.29 Crores. This results in a significant funding gap of NPR 165.85 Crores (approximately 65% of the total). External support from provincial and central governments is essential to meet the municipality's road development goals. The table below shown the summary of road in Aathrai Rural Muncipality :-

Summary of Road in Aathrai Rural Municipality, Taplejung									
S.N.	Road Classification	No. Of Road	ROW (M)	Road Length (KM)	Road Surface			Tentative Budget(Nrs. Cr.)	Remarks / Rate
					BT	GR	ER		
1	Class A (Province Road)	1	12	35.2			35.2	140.80	4 Cr. Per KM
2	Class B Road	7	10	47.8			47.8	95.5	2Cr. Per KM
3	Class C Road	43	8	119.9	1.6		118.3	18.7	2 Cr. Per KM
4	Class D Road	15	6	26.7			26.7		
	Total Road Length	66		229.6			228.0	255.08	

To ensure sustainable road development in Aathrai Tribeni Rural Municipality. A phased implementation approach focusing on environmentally sustainable practices, local resource use , and community involvement is recommended to achieve durable and inclusive rural transport infrastructure.

• Acronyms/abbreviations

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
DOLIDAR	Department of Local Infrastructure Development and Agricultural Roads
GPS	Global Positioning System
SRN	Strategic Road Network
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

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SECTION 1. INTRODUCTION

This chapter briefly explains the background for preparation of transport master plan, objectives of study, scope of work to be performed for preparation of master plan and limitations of the study thereof.

1.1 Background

Rapid urbanization has led formation of rural areas to urban areas in short time. The presence of goods, services and facilities attracts people from rural areas to live in urban areas. While in past policy were made to encourage people to reside on their native area due to haphazard urbanization, recent study from economics and market theories supports dense population over urban areas based upon agglomeration and scale economies. Agglomeration economies are amplified by density and attenuated by distance. While in rural areas accessibility has been focused as major criteria in transportation, urban areas need better mobility with accessibility.

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 resource.

The centre of Aathrai Tribeni Rural Municipality is located in Hangpang. The municipality comprises five wards: Nighuradin, Fulbari, Hangpang, Chaange (Ward 4), and Chaange (Ward 5). According to the 2021 census, the total population is 12,296, and it covers an area of 88.78 square kilometers**.** Geographically, the municipality shares its eastern border with Pachthar District and southern border with Terhathum District**.** The Tamor River runs along the eastern boundary, while Phungling Municipality**,** the capital of Taplejung District, lies to the north.

In near future, Aathrai Tribeni Rural Municipality will attract more population as socio-economic growth and other infrastructure development will gain pace. The Rural Municipality and its surroundings will see a rapid increase in housing, infrastructure and urban services demand. In this regard and as per the decision of Office of Aathrai Tribeni Rural Municipality and its technical and Institutional support, is initiating the formulation of Municipal Transport Master Plan for assessing the present road and transport infrastructures and facilities within the Municipality and the surrounding so it can be presented as proper municipality or a city in coming times. Thus, it must have a very good mobility and accessibility by public and private means of transportation.

1.2 Objectives

The prime objective of this study is to prepare the Municipality Transport Master Plan (MTMP/MTPP) for Aathrai Tribeni Rural Municipality. The planning approach is participatory and bottom-up from the settlement level. It will include a constructive plan to incorporate all the transportation needs and facilities for now and tomorrow. The specific objectives of the MTMP are mentioned below:

1. Prepare the Rural Municipality Inventory Map (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 development plan.
5. Collection of demands for new/rehabilitation transport linkages from Municipality/ 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 Rural Municipality.
9. Prepare the Perspective Plan of transport services and facilities (Rural Municipal Transport Perspective Plan)
10. Prepare physical and financial implementation plan of prioritized roads for the MTMP period.
11. Prepare a five years Rural Municipality Transport Master Plan (MTMP).

1.3 Scope of work

The scope of this work and service the consultant provided for the project is given below:

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 not provided accessibility to all the population. The question then arises on how efficiently; economically and safely can the goods and passengers be 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 Development Potential Map (IDPM)
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 Rural Municipality Inventory Map (MIM) of existing roads within Aathrai Tribeni Rural Municipality.
Rural Municipality Inventory Map linking to strategic road networks such as national highways, district core road network, main trails 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 Aathrai Tribeni Rural 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 Limitations

- Lack of Comprehensive Town Development Plan, Proper Land Use Policy and Drainage Network Master Plan, which could have affected the future overall development pattern, and hence future development of these policy need to be based on the proposed MTMP.
- Lack of base year data for traffic and the trip.

1.5 Study area

Aathrai Tribeni Rural Municipality is located in the Southwest part of Taplejung District in Nepal. It was officially established on November 27, 2016 AD (2073 BS) by the Government of Nepal.
The municipality spans an area of 88.83 square kilometers and is divided into 5 wards: Nighuradin, Fulbari, Hangpang, Chaange(4) and Chaange(5). Its administrative centre is located in Hangpang. The rural municipality is strategically positioned along the Capital city of the Taplejung which coordinated with the boader of Aathrai Tribeni rural municipality of north part.

As of the 2021 census, Aathrai Tribeni Rural Municipality has a population of 12,296 with size 6066 males (49.3%) and 6230 females (50.7%). There are 2854 households, with an average household of 4.31. The rural municipality is bordered by Pachtar District in the east, Maiwakhola Rural Municipality west, Phungling Municipalities north, and Terhathum Districts in the south. Aathrai Tribeni experiences a temperate climate with distinct seasonal variations, including a monsoon season (June to September) that brings essential rainfall for agriculture but also poses challenges like landslides and flooding. With its rich cultural heritage, natural beauty, and strategic location, Aathrai Tribeni Rural Municipality has significant potential for development, particularly in agro-based industries, tourism, and transportation infrastructure.

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.

Section 5: - Describes the formulation of road hierarchy and name and description of different classes of roads.

Section 6: - Is dedicated to the five-year (short term) Municipality transport master plan (MTMP). It gives the comprehensive strategic framework, perspective plan of the roads, budget expenditure, financial institution, capital investment plan and the staging implementation plan.

Section 7: -summarizes the report and gives necessary recommendations.

SECTION 2. STUDY METHOD

Municipal roads are supposed to provide both access and mobility to all possible and potential areas. MTMP will helps to assist the planning of such roads to fulfil the stated objective. Better planning is incomplete without relevant quality data and quality data can only be acquired by use of properly selected survey methods. The chapter deals with the methodological framework adopted for data collection covering all used survey method, sampling techniques, quality and quantity of data along with data processing, analysis and presentation methods.

2.1 Approach

Municipality 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 Municipality 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. Both primary and secondary data were collected.

2.2 Methodological framework

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 have been 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) have been obtained from each ward. Also, potential areas/location for various facilities have also identified based on interaction with local people and MRCC. The scoring criteria for prioritizing road network has been identified based on ToR and has approved by Municipality. Then, the hierarchy of road has been purposed and perspective plan of various interventions has been purposed and has been analysed based on available fund and finally physical and financial implementation plan of prioritized roads for MTMP period. After analysis, the study has been come up with potential roads, that need immediate intervention and roads that need to be given consideration for effective future planning.

2.3 Secondary Data Collection

Any sorts of data that are collected from secondary sources are called secondary data. These data has been 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 centres (hospital, health post, agriculture service sub-centre etc.). The information about demographic data of Municipality, various maps showing service centres, 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, 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.

2.4 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 wards has been 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 were:

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

Origin and Destination (OD) Survey Household questionnaire method is used to conduct OD survey which gave number of information reflecting, personal, household and trip making characteristics. This survey has also helped 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 helped in field validation of base maps and also assisted in the preparation of road inventory map, nomenclature and coding of the road linkages and proposed various interventions.

Road Demand survey comprised of interaction session with the members of *wada karya samiti* followed by ward level workshop to fill up demand survey form, which included demand of new facility or interventions to improve existing roads based on priority.

Classified vehicle count was conducted so as to reflect the usage of various vehicles in the certain route, especially where maximum volume occurs. Twelve-hour count has been done at required location and the vehicles have been classified to different types and finally traffic volume have been converted to passenger car unit (PCU) to visualize the exact condition.

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

2.5 Data Processing and Analysis

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.

2.6 Preparation of Indicative Development Potential Map (IDPM)

IDPM is basically the indication of the existing and potential market/service centres (key growth centres) 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 centres areas such as hospital, post office, telecommunication, school, campus, market centres, security offices and large settlements, important historic and religious places. Finally, it has indicated the grading of various markets of the district thus providing the basis of network planning.

2.7 Scoring Criteria for Prioritization

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 has been prepared. Existing population within the zone of influence, priority of road demand, road class, width of road, road density, density of settlement, type of service provided by the road and the service to minority were taken as the indicators for prioritization. The scoring criteria has been finalized after rigorous study and set in front of Municipality and MRCC for its approval. Scoring criteria has been discussed in detail and appended in Volume II of the report.

2.8 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.

SECTION 3. STUDY AREA PROFILE

The method of data collection described in chapter two was adopted in Aathrai Tribeni Rural Municipality. Traffic count has been conducted at various places of Aathrai Tribeni Rural Municipality. Household data is collected from different wards. Based on the collected data, study area profile has been mapped.

3.1 Location

Aathrai Tribeni Rural Municipality is located in the southwest bank of Taplejung district. This rural municipality was established as per the Nepal Gazette dated 27.11.2073 by the Government of Nepal. The local body was formed by merging four VDCs namely Nidhuradin, Fhulbari, Hangpang, Change(4), Change(5). Currently, it has a total of 5 wards. The third higest peak Mt. Kanchenjung, is located on this district. The municipality's center is Phungling market, which is the capital city of the Taplejung.

The municipality's center is Phungling market, which is the capitalcity of the Taplejug. Aarthrai Tribeni Rural municipality is comprised of 5 wards namely Nidhuradin, Phulbari, Hangpang, Chaange(4), Chaange(5) and the population is 12,296 (2021). Its area is 88.78square km. The Rural municipality is bordered by Pachtar District in the east, Maiwakhola Rural Municipality west, Phungling Municipalities north, and Terhathum Districts in the south.

Aarthrai Tribeni Rural Municipality experiences a temperate climate with distinct seasonal variations, heavily influenced by its topography. The lower regions enjoy a milder climate with warm summers and cool winters, while the higher altitudes experience cooler temperatures year-round. Monsoon rains, occurring from June to September, are a critical climatic feature, providing the much-needed water for agriculture but also posing challenges such as landslides and flooding in some areas.The post-monsoon and winter seasons are marked by clear skies and cooler temperatures. Aarthrai Tribeni Rural Municipality lies 27.182607°N 87.363277°E.

Aathrai Tribeni Rural Municipality has population of 12,296with size 6066 males (49.3%) and 6230 females (50.7). The Rural Municipality consists 2854 households. The average household size of Rural Municipality is 4.31. The brief pictorial descriptions of location, topography and district map is presented below.

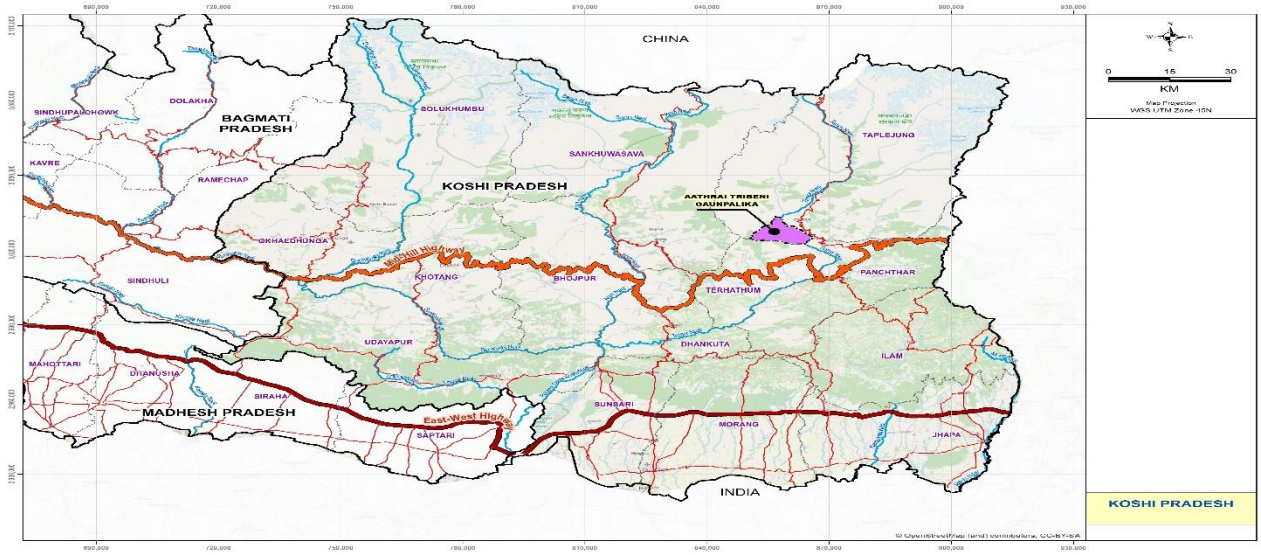

Figure 2 Location Map of Aathrai Tribeni Rural Municipality

3.2 Socio-economic and demographic status

"Socioeconomics is the social science that studies how economic activity affects and is shaped by social processes. In general it analyses how societies progress, stagnate, or regress because of their local or regional economy, or the global economy". According to Merriam Wester, demographics refers to "the statistical characteristics of human population (such as age or income) used specially to identify markets". Population data were taken from census data available at census CBS 2021. Area data were obtained from GIS satellite image.

3.3 Population

Aathrai Tribeni Rural Municipality has population of 12,296. Out of total population, 6,066(49.3%) are male whereas remaining 6,230 (50.7%) are female. The Rural Municipality consists of 2,854 households. The average household size of Rural Municipality is 4.31. Ward 3 has the highest household size with an average of 3.51 members per household, while Ward 5 has the lowest household size at 6.75 members per household. The overall average household size for Rural Municipality is 4.31 members per household. Additionally, the average sex ratio of the Rural municipality is 97.37, indicating a lower proportion of males to females in the population distribution.

Table 1 Demographic features of Aathrai Tribeni Rural Municipality

Ward No	Household	Population			Avg. Household Size	Sex Ratio
		Female	Male	Total		
1	455	1023	1129	2152	6.28	90.61
2	701	1482	1506	2988	4.08	98.41
3	814	1755	1723	3478	3.51	98.18
4	461	928	931	1859	6.19	99.68
5	423	878	941	1819	6.74	93.31
TOTAL	2854	6066	6230	12296	4.31	97.37

3.3.1 Household structure

Out of total population, 6,066(49.3%) are male whereas remaining 6,230 (50.7%)are female. The Rural Municipality consists of 3830 households where Residential house (75.87%), Business and trading (0.63%), Government (0.39%), Educational(2.19%), Health(0.37%), Industrial(0%), Hotel and Loges building(0.03%),Institutional(0.37%), Shed and Storage(12.3%),Other (1.02%),vacant (6.79%) . Ward 3 stands out with the largest average household size of 3.51 members, while Ward5 has the smallest average household size at 6.74 members. The average household size of Rural Municipality is 4.31.

3.3.2 Education Status

The total population of Municipality is 12296 of which the population above age 5 years is 9112. Nearly 2778 members of the Municipality have completed or are perusing only primary level education. About 2204 are enrolled or are having completed secondary level, 953 have completed SLC, 743 intermediate, 156 bachelor's degree and only 61 have higher education. 8559 people are

literate and remaining 3,737people are illiterate. As such, literacy rate is 81.2%. The details are shown in the chart below.

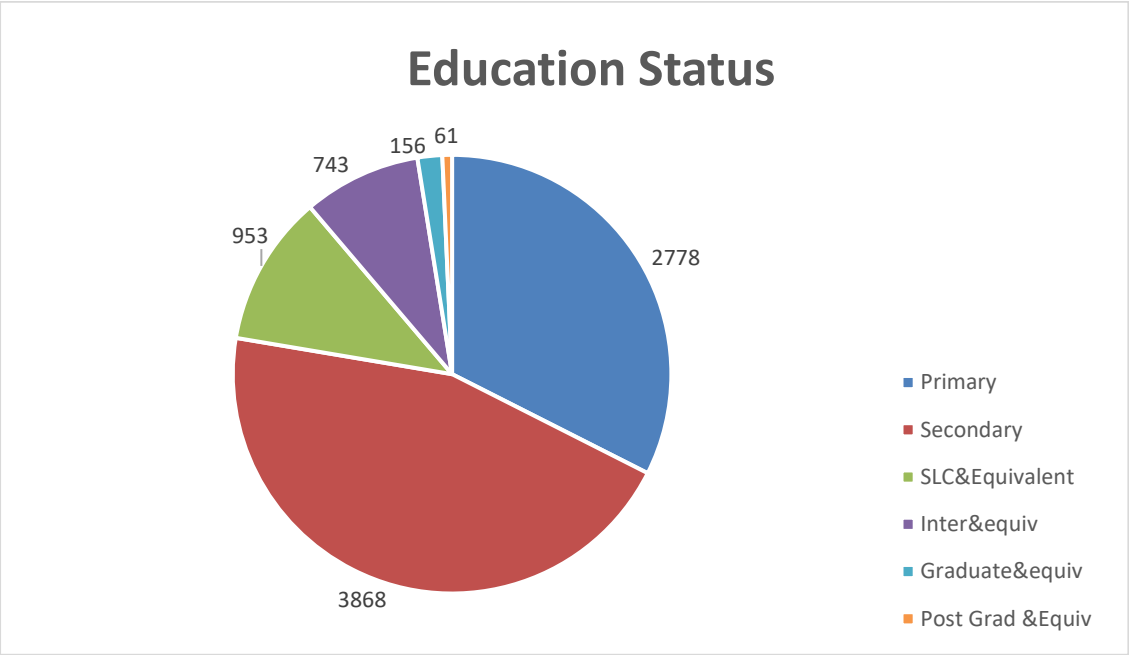

Chart 2 Education Status of Aathrai Tribeni Rural Municipality

3.3.3 Employment pattern and income

Data from the national household survey 2021 shows that Aathrai Tribeni Rural Municipality has a population of 12,296 out of which 8,244(58.9%) are economically active population out of them 2757(66.6%) male and 2096(51.1%) female.

The majority of employment of the Aathrai Tribeni Rural Municipality is seen as Skilled agriculture, forestry and fishery workers which accounts 7151 (87.2%) population out of them 3547 were male and 3604 were female, followed by Elementary Workers which is 481(5.9%) out of them 209 were male and 272 were female. 217 people (2.6%) are professionals of some sort followed by managerial level works 74 (0.91%). Similarly, 62 (0.80%) people are involved in craft and trade works and 94 people (1.1%) are involved in some sort of sales services works. 33 people (0.4%) are in plants and machines operation while 49 people (0.6%) are involved in technicians as a mode of employment. 28 people (0.3%) are office assistants and 12 people (0.1%) are involved as armed forces.

Most of the respondents with higher education are involved in service sector. Illiteracy is highest among unemployed people while agricultural, forestry and fishery workers dominate all other

occupation. A majority of the household have monthly family income of less than NRs. 30000. The employment pattern of Municipality is presented in Chart 3 below.

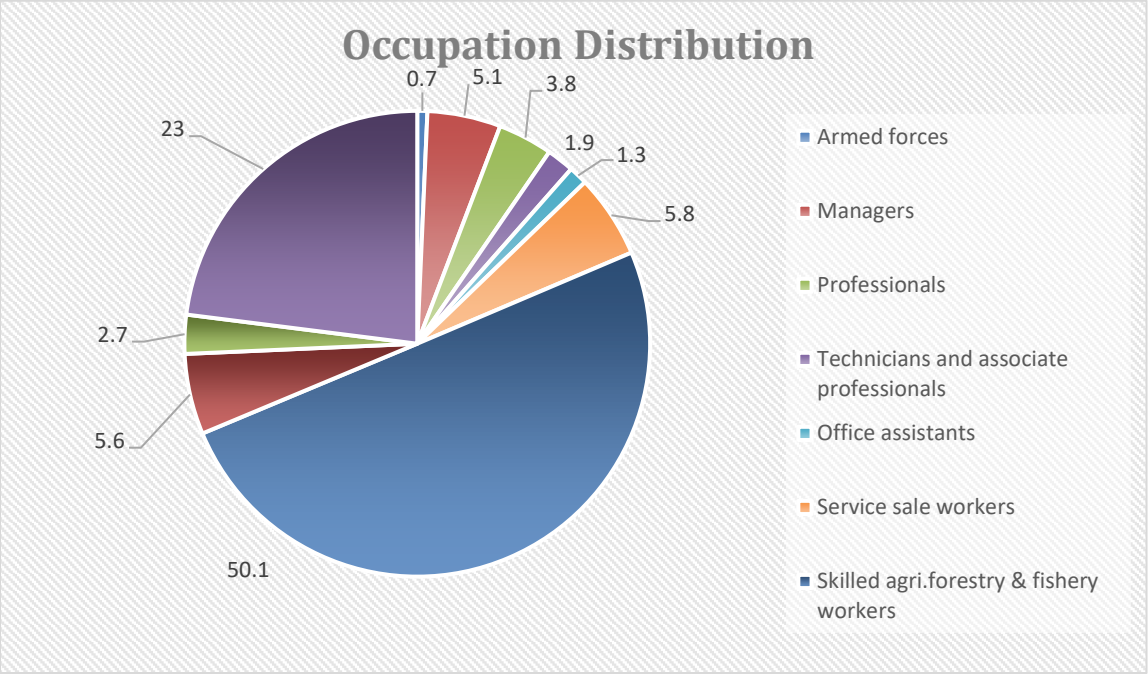

Chart 3 Occupation distribution of Aathrai Tribeni Rural Municipality

3.4 Land cover pattern

Aathrai Tribeni Rural Municipality is divided into 5 wards and covers is 88.78 square km in area. The land use pattern in Aathrai Tribeni Rural Municipality is primarily agricultural, covering 18.01% of the land. Forests occupy 69.91%, contributing significantly to the ecological balance. Residential and urban areas take up 3.04%, while water bodies and rivers account for 0.16%. The remaining 1.45% grass land and 7.42% wooden land.

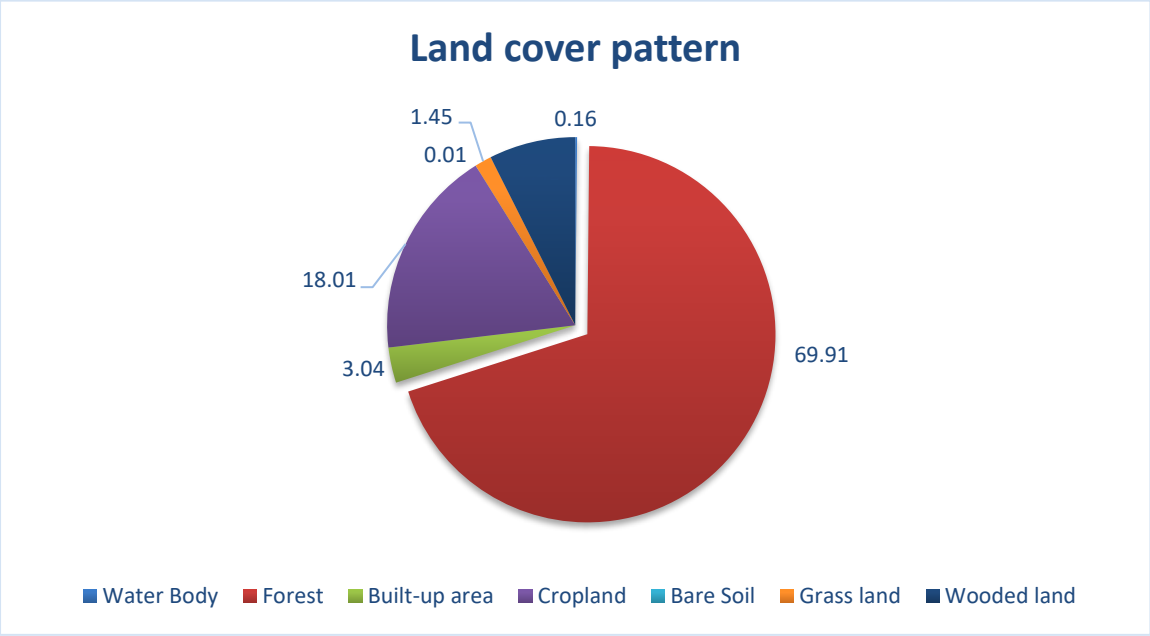

Chart 4 Land cover pattern of Aathrai Tribeni Rural Municipality

3.5 Road and traffic

Surface transport is the major and only mode of transport in Aathrai Tribeni Rural Municipality. Several road upgrading project have been initiated within municipality,Dovan Hangpang Juketar Dhodre Aathrai Tribeni Road project focused on upgrading the road spanning wards 1,2,and 3 covering a distance from 8+000 to 20+000 kilometer . Limbuni Pul Niguradin Dhakre Road is ward 1 is under upgrading. Ward connectivity Road are underway to improve to road connecting the ward 5 office to Nesum Gairi, extending to the ward no.4 office. Surketar Airport closure since Dec.9,2024 has further compounded travel challenges for residents of Taplejun and neighbouring area including Aathrai.The lack of flight services has increased reliance on road transportation, underscoring the importance of maintaining and upgrading road network in the region.

3.5.1 Road inventory

Road inventory survey was done and details of all the roads and cross structures were collected.

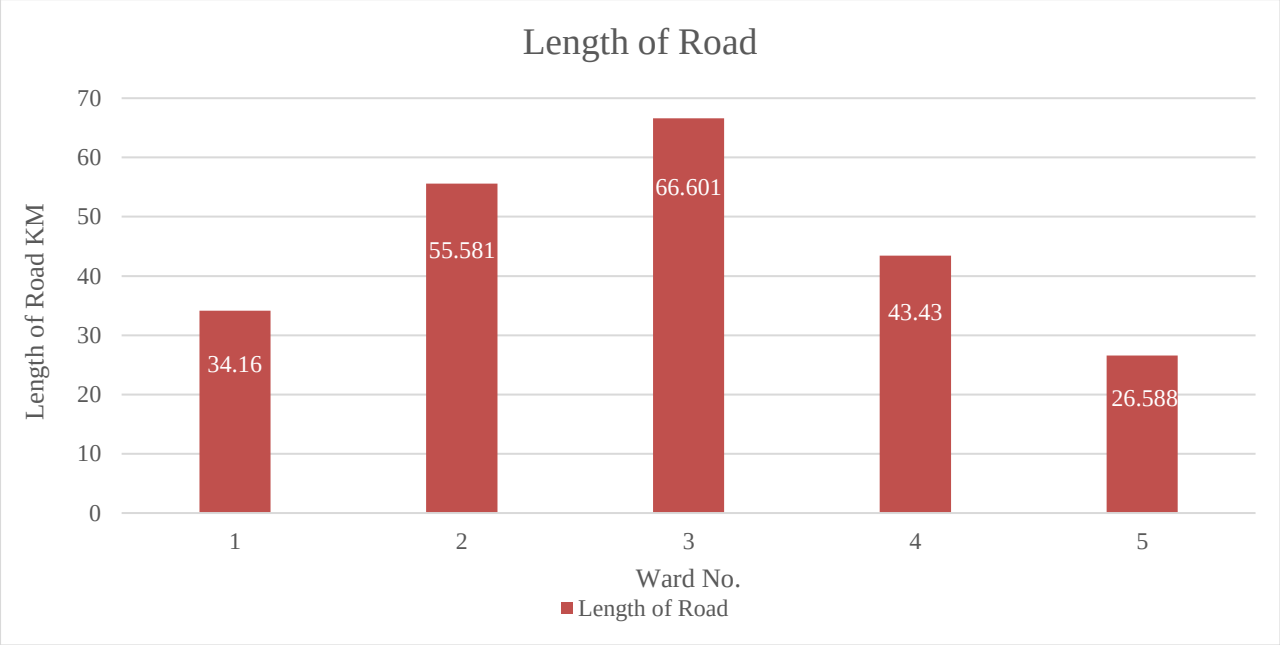

Chart 5 Ward wise composition of roads

At present, road density is about 2.549 per km for Municipality. Similarly, the road density per thousand populations is nearly 18.40 km. From the given chart below it is clear that road density per unit area is maximum at Ward 3 whereas that is lowest at Ward 5.

3.5.2 Traffic vehicle composition

The composition of vehicle shows that the major vehicle that motorcycles have the largest composition that plies on the roads of Aathrai Tribeni Rural Municipality i.e. 83%. Other than this, car/jeep has a share around 10%, buses around 1% and tractors 4% (Vehicle Count Survey)

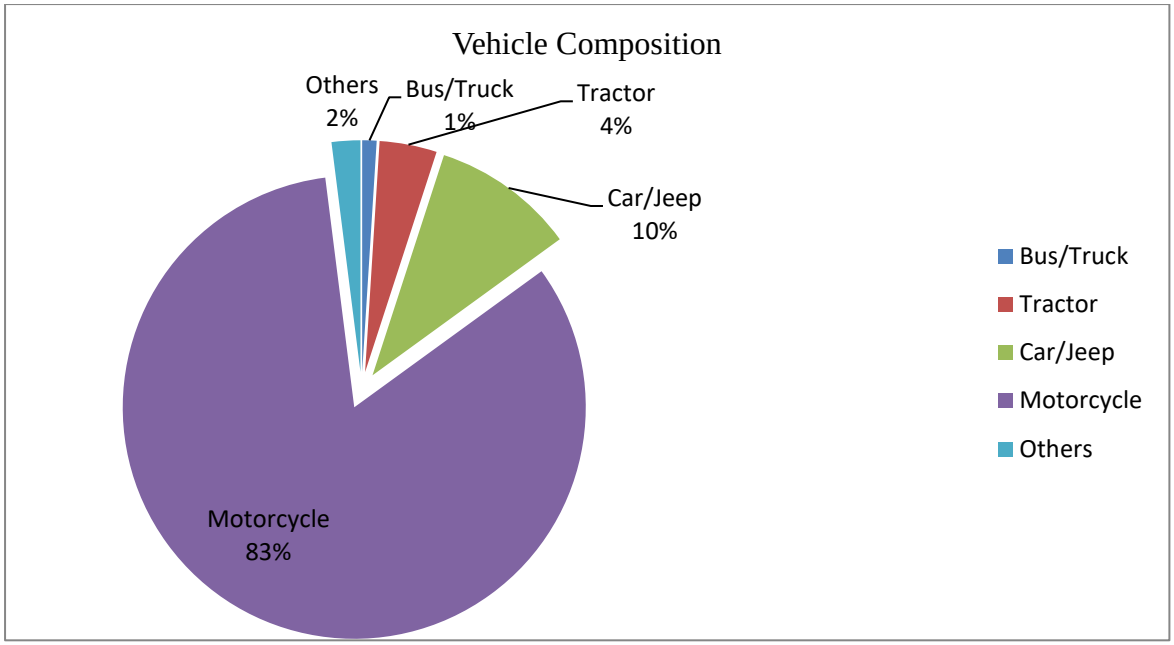

Chart 7 Vehicle composition of Aathrai Tribeni Rural Municipality

3.5.3 Vehicle ownership

Motorcycle owners in the Aathrai Tribeni Rural Municipality are 4.16% whereas household having Tractor and car/jeep are 0.25% and 1.52% respectively. 94.02% people own no vehicle as shown in the following chart.

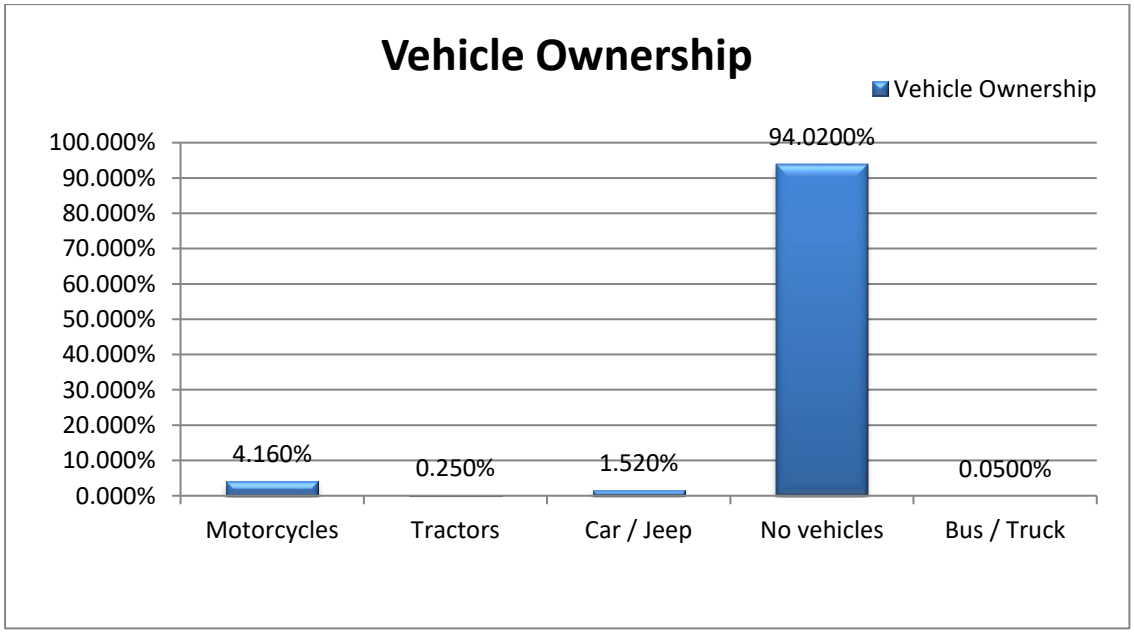

Chart 8 Vehicle ownership in Aathrai Tribeni Rural Municipality

3.5.4 Origin and destination survey

From the origin and destination survey carried out the following places are found to be major destination points Sangapur Bazar.

3.6 Accessibility and mobility

Ward 1 the most in terms of accessibility to public vehicles i.e. 45 minutes. The population of ward 1 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

Average travel time taken to travel to destination follows dissimilar trend to time to bus park. More or less people travel 60 minutes to get to transport. The proportion of trips of specific length (in minutes) made by different means is shown in the figure below.

The figure below shows majority of trips made on foot (86%) followed by public transport (7%). Out of the total trips, motorcycle and private vehicles share (5%). This shows walking is the most used means of transportation which shows huge reliability in human power. Although people do not prefer walking, they are compelled to walk due to absence of transport linkage in the Municipality. Even if it is connected by road, low availability of public vehicles linking to various parts of Municipality is also a cause which leads to more people walking. Distance of travel is variable based on the mode of transportation and the destination. Motorcycles are the best mean of mechanical transportation.

Due to the bad condition of the existing roads and insufficient number of public vehicles people are compelled to walk greater distance on foot. This has been identified as major problem in mobility and access. So identifying the most used destination and upgrading the road standard to imply more public vehicles is recommended in order to facilitate the people.

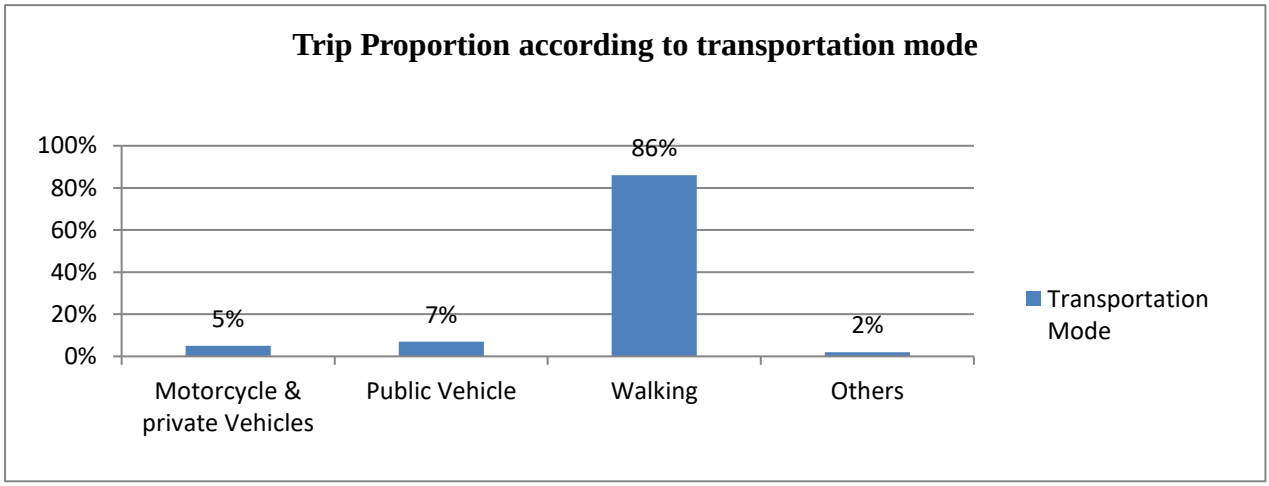

Chart 11 Trip Proportion according to transportation mode

3.7 Active and passive transport 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. It includes both utilitarian and recreational travel activity, plus stationary uses of pedestrian environments such as standing on sidewalks and sitting at bus stops (Litman, 2015). The sample household survey shows that nearly 91% 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.

The passive mode or the motorised mode of travel is about 9% which is vaguely below than the active mode users. Huge portion of Municipality is derived from road access and only a few roads are used for public transportation. This has remained as a huge problem to the people who are compelled to walk great distances ranging over a huge amount of time. It's a high time for Municipality to introduce various measures to subside this problem. People are denied not only of amenities but also basic necessities like health care, education due to absence of transport linkages. People are compelled to walk hours to fulfil their primary needs. So we can conclude that the condition of transportation is very deteriorating in Aathrai Tribeni Municipality.

Public Transport and Road Safety

The use of public transportation for daily trips is limited to only a few areas. There is no public transport in many road sections of the Municipality. Also many areas of Rural Municipality is yet to be connected through transportation linkages.

For the areas connected by road linkages, 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.

The Municipal roads are mainly used by motorcycle users and pedestrians. Use of motorized vehicles is very limited as the ownership of motor vehicles is low. Thus, large amount of pedestrians use the main Municipal roads in a large scale. This adds to danger in road safety.

The existing Municipal roads are not maintained periodically and vehicles face difficulties. Also, during the rainy seasons, the movement is restricted only to a few roads. Hence Aathrai Tribeni Rural Municipality faces an acute problem in public transportation.

Location of market area in Hangpang has exacerbated the risk. There are no proper footpaths in the main market and main residential area. Due to the low volume of traffic in the Rural Municipality and lack of proper safety measures, pedestrians may face a risk of meeting accidents in the near future when the traffic flow increases.

3.8 Summary and findings

Unemployment among the non-student sample is very high only about one fourth of the sample population are involved in earning jobs of business and service. Most of the population are involved in agriculture. As the monthly income level of households increases, the proportion of family members pursuing education is seen to increase and so does the proportion of individuals involved in business and service.

Road transport is major transport mode for movement in Aathrai Tribeni Rural Municipality and facilitated only through Class A roads. Built up area is very low with about one fourth usable area. There is high probability for settlement expansion in the Rural Municipality. Vehicle ownership is very low among the people of the Rural Municipality. Almost all roads are earthen with intermediate carriageway. The vehicle composition shows that most of the vehicles that ply along the roads are motorbikes.

SECTION 4. PERSPECTIVE PLANNING

This section discusses about the future anticipated population and the traffic and the planning road infrastructure to cater this traffic in short, medium and long term.

4.1 Projection of population

The underlying assumption for the preparation of MTMP is that, the recently designated Municipal area has a growing population and has also capacity to fulfil the population criteria to be a rural municipality in coming days. As such the Rural Municipality is a fast-growing area. One of the characteristics to be 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.

In the present time the urban population is increasing in high rate although the proportion of it is very small. To forecast the population in the Municipality for the preparation of MTMP the geometric method have been used considering the rapid urbanization of the area. For this the following formula is used:

$$P_n = P\,(1+ I_G/100)^{n}$$

Where, I_G = geometric mean (%)
P = Present population
n = no. of decades.
P_n=population at the end of nth decade

By using this method, we found that the average growth rate of population in this Rural Municipality is on average negative 7.84% as shown in table 3 which indicates rapid out migration from Municipality. This may be due inter district migration and migration from other districts out

of Baglung. Based on this trend, the minimum projected population of this Municipality on the year 2026 will be 16858.

Table 2 Population forecasting of Aathrai Trbeni Rurali Municipality

Rural Municipality	Population of Year		Growth Rate (%)	Present Year Population (2025AD)	Remarks
	2021 AD	2026 AD			
Aathrai Tribeni	12296	11747	**-8.93%**	11967	Avg. growth rate is negative

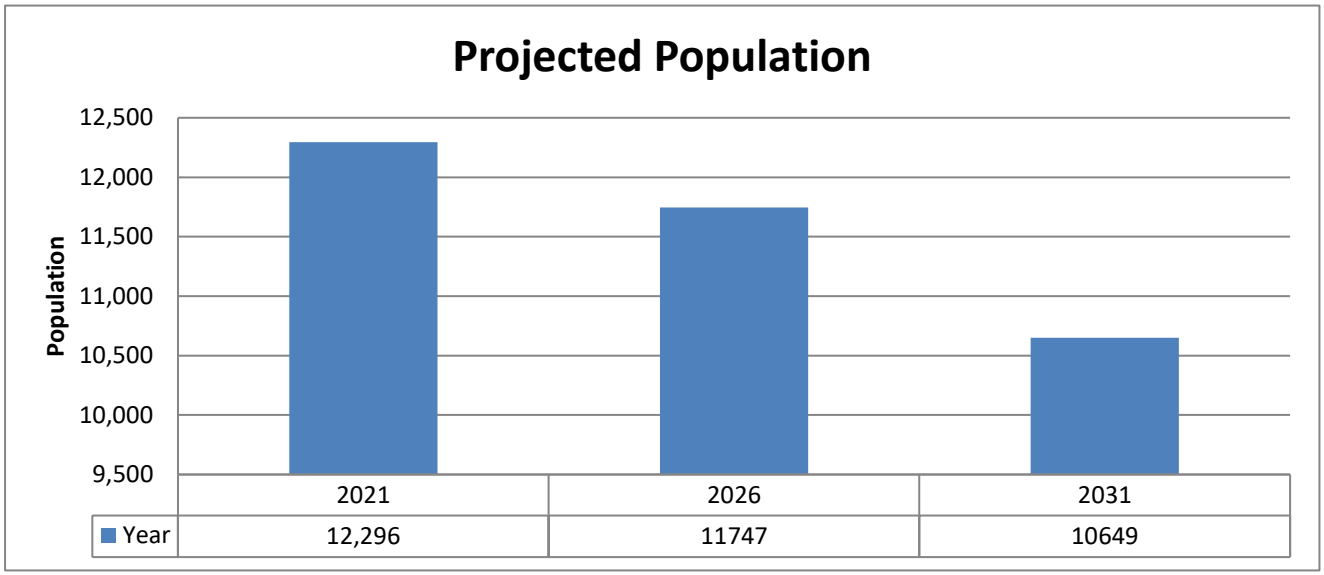

Chart 13 Projected population of Aathrai Tribeni Rural Municipality

4.2 Projection of road traffic

Transportation forecasting is the process of estimating the number of people or vehicles that will use a specific transportation facility in the future. Forecasts explain what the needs of the future might be and provide benchmarks for from developing overall transportation policy, to planning studies, to the engineering design of specific projects, and efficient transportation system operation. At the same time, the transport infrastructure and facilities paves the path for the development of the area. Thus, the existing trend in the development of the economy and change in land use along with the planned development and land use are considered to plan the transport facilities requirements in the future. In the planning process of the transport infrastructures, projection of the traffic is the most crucial factor. Traffic forecasting for planning projects determines the required number of lanes and road width to meet the future anticipated traffic demands. Future transportation demand will depend upon demographic and geographic factors, including population size and age, economic and employment growth, transportation network and operating conditions and transportation and land use policy, including cost of travel.

In case of Aathrai Tribeni Rural Municipality, there is no traffic data from past. Lack of proper city development plan and land use plan further restricts the use of complex models for reliable

traffic forecast. Thus, the use of primary data collected during the study is used to forecast the traffic.

4.3 Indicative development potential

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.

4.3.1 Gap Analysis

The planning norms and standards prepared by DUDBC published in 2013 has set the planning guideline for the urban area of different population size. As per the planning norms and standard, the Sub City area with a population between 10000 and 40,000 is considered as a city. Thus the Aathrai Tribeni Rural Municipality is considered to be a city on the basis of population also. There are several criteria mentioned in the standards varying from the size of road, water supply and sanitary measures, electric supply, waste management, educational institutions, health institutions, stadiums, university, public library and so on.

4.3.1.1 Educational Sector

As per Planning norms and standards, it is stated that there should be 1 primary school for 3000 populations within the distance of 0.4 to 0.8 km -0.2ha per site and 1 higher secondary school per 7500 populations within a distance of 30 minutes by public vehicles– 0.65 ha per site. Similarly, there should be at least 1 Campus per 25000 populations within a distance of 45 minutes by public vehicles and 1 University per 40,000 populations should be within distance of 1 hour by Public Vehicles.

4.3.1.2 Health Institutions

As per Planning Norms, there should be 1 Sub health post per 1,000 population (0.04 ha per site), and 1 Health post per 5000 population (0.15 per site) .

4.2.1.3 Open Space

There should be 5% of open space of the total city area. Accordingly, there should be 1 neighbourhood park with play equipment of 0.4-hectare area for 800 populations, 1 neighbourhood park with play equipment of 1-hectare area for 10000 populations, 1 local park of 1-hectare area for 10,000 populations.

4.2.1.4 Community Services

According to the standards for a city, one community level Library per 7,500 populations of 0.5-hectare area. Accordingly, there should be one fire station for 3 to 4 km radius of 0.5-hectare area. In case of religious institution, incineration / Crematorium area / Burial ground should be of 0.5 hectare per site. For the security, there should be 1 police post per 10,000 populations and 1 police station per of 0.1 ha/site and 0.5 ha/site respectively. And there should be one Exhibition Centre of National Level for 50,000 population of 4 ha/site.

4.3.2 Indicative development plan

Aathrai Tribeni Rural Municipality has immense potential for development in various aspects. The major economic sectors of the municipality are education, tourism and health services. The

presence of colleges for studies such Kalikaa Primary Secondary School,Jal kanya Primary School, Santi Primary School ,Phuguwa Primary School, Namuna Primary School , Singa Devi Primary School,Devi Primary School , Guptashwor Secondary School, Sarashwoti Secondary school presents the high potential of the municipality to grow. Similarly, the municipality also has its strength in terms of tourism. The presence of, attracts the tourists in a large number every year. In addition, Tamor River bounded municipality from Northern side and Eastern side which had higher potential of developing the agricultural products, one of the major destinations of both domestic and foreign tourists is also located within the municipality. Pathavara temple can, therefore, be developed in terms of both religious as well as recreational tourism.

4.4 Visionary city development plan

Lead sectors for visionary development of Aathrai Tribeni Rural Municipality are:

a) Health/Sanitation
b) Environmental Concern
c) Irrigation
d) Employment Training
e) Tourist and Religious Destination
f) Business/Trade
g) Agriculture

a) Health/sanitation

Access to quality health services and education for everyone in Municipality. Upgrading of every Health Posts in the Municipality. Establishment of a well facilitated Health Office in every ward. Strict rules to be implemented on Tobacco and Alcohol products. Deny consumption of Alcohol and Smoking in public places. Building Public Toilets in various places within the Municipality. Ensuring good services in Health Posts in the Municipality. Fixing location of Dumping Site in the Municipality. Community clinics and free vaccination programs. Drainage management in different wards of Municipality.

b) Environmental Concern

Strict rules and programs to be implemented to conserve the Forest in the Rural Municipality. Conserving the drinking water sources within the Rural Municipality.

Forestation and Plantation programs in various wards. Introduction of various kinds of programs to protect the biodiversity.

c) Irrigation and Drinking Water

Providing drinking water facility in every house of the Rural Municipality in near future. Facilitate the agricultural lands within the Rural Municipality with irrigation. Establishing Drinking Water facilities in Rural Municipality. Encouraging cleanliness by rewarding the cleanest tole committee. Conserving all the water sources within the Rural Municipality.

d) Employment Training

Self-Employment programs to be conducted focussing the youths. Creating a Medium grade Technical Manpower in the Rural Municipality. Vocational Trainings to the unemployed youths within the Rural Municipality.

e) Tourist and Religious Destination

Recognizing the places with tourist, religious and cultural importance. Establishing the recognised sites as major tourist destination. Establishing co-operation among various Sector to develop the Rural Municipality as an important touristic destination in the district. Recognizing and Establishing Home Stays within the Rural Municipality. Develop Tourism activities of the Rural Municipality.

f) Business/Trade

Market Management within the Rural Municipality. Expand the Taxable areas to increase the internal income of the Rural Municipality. Development and management of the market centres within the Rural Municipality. Request the Provincial Government to extract the various mineral ore in the Rural Municipality. Encouragement programs in establishing Small and Medium Cottage Industries in the Rural Municipality.

g) Transport

To enforce the traffic laws and regulations in the Rural Municipality. Regulating programs aiding Periodic maintenance and upgrading of the Municipal roads. Development and implementation of Municipal Transport Master Plan. Cross Drainage Structure and Bridges to be built in different transport linkages.

h) Agriculture

Encouraging agricultural activities by introducing various programs regarding non seasonal agricultural products, commercializing agriculture and upgrading the agriculture sector. Establishing Organic farming area within the Rural Municipality and rebate of 50% on organic composts to discourage increasing use of chemical fertilizers. Develop and implement Agriculture programs to attract the foreign returnees and involve them in agricultural sector.

4.5 Transport and land use

Land-use potential is a measure of the scale of socioeconomic activity that takes place on a given area of land. A unique property of land use is its ability to generate traffic. The connection between transportation and land use is a fundamental concept in transportation. Everything that happens to land use has transportation implications and every transportation action affects land use. Actions by transportation agencies shape land use by providing infrastructure to improve accessibility and mobility.

Planning of any land-use and transportation system is to ensure that there is an efficient balance between land-use activity and transportation capability. Trip generation provides the linkage between land use and travel as depicted in the below cycle.

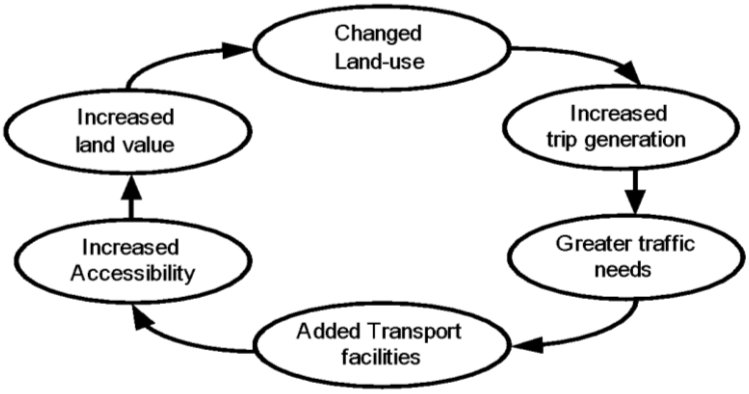

Figure3 Land use and Transportation Interaction

4.6 Accessibility and mobility scenario

Transportation system most often needs to trade-off between accessibility and mobility. Need of travel is a derived demand, not being end in itself but a means. Accessibility is the ease with which goods, services, people and opportunities can be reached. In the context of Aathrai Rural Municipality with core market centres as epicentre of all goods, services and facilities, people lying on the peripheral regions need accessibility.

Mobility is efficient movement of goods and people. Mobility is more focused on trips and distance covered. Mobility values transportation as end rather than means, but still in outlying areas accessibility requires a lot of mobility, while central population need smaller trip lengths. While we provide space for active mode users and public transits as a means of enhancing accessibility, we are trading a part of road space from the mobility sector, and when we provide more road space for private vehicles to move efficiently, we trade part of road space associated with accessibility.

Present scenario of Aathrai Rural Municipality reflects the access to bus stop on an average about 45 minutes, Class "C" and "D" roads that are planned for public vehicle to ply are expected to reduce this time to within 30 minutes in future. People will have access to either Class "B" or Class "A" roads designed for more mobility within 30 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.

4.7 Perspective Plan of Transport Infrastructure

Perspective plan of transportation is long term strategic plan which sets the long term objectives, target and milestone for a focused direction of better coordination, guidance and harmonization of the investment for the prosperity of municipality and development in the regional context. The MTPP gives a basic framework for period of 20 years; a broad outline on how the transport sector should evolve and look like so that local and regional harmony on accessibility and mobility is achieved. The long term perspective plan of Aathrai Tribeni Rural Municipality involves widening of the narrow road whose ROW have already been fixed by the Municipality building by laws and implementation of traffic management strategies for safe, effective, efficient and reliable transportation infrastructure and services. The long term perspective plan is segregated into short term plan, medium term plan and long term plan. The MTMP and MTPP should be revised every five years to updates the plans based on changing scenario.

Land use and transport, developed road hierarchy, accessibility and mobility scenario are the policy level guidelines for development and planning of transport infrastructures.

Nearly every household do not own any type of vehicle, whereas a few people own motorcycle. Thus, from the perspective of sustainable transport also, we need to protect the peoples' utilization of motorcycle and cycle in planning works.

While 91% 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 negative growth rate of 9.25%, population would fall in upcoming years which will certainly affect economic size and income scenario. People will aspire to have private vehicles of their own to increase mobility, requiring greater road space width which

will be Province 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 Province 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.

4.8 Short term Municipality Transport Master Plan (Five years)

The short-term Municipality transport master plan has been developed to guide the municipal investments on road infrastructure through 2023-2024. 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.

4.9 Medium term Municipality Transport Master Plan (Ten years)

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.

Medium term and long-term Municipality transport plan gives the layout for the development of higher hierarchy road corridors with higher mobility and limited direct access. During the short term (first five years) development of local access roads and collector roads develops the concept and culture of wide roads among the locals. This facilitates in creating the demand for expansion of the roads to their designated class width during the medium term (five to ten years). Medium term plan continues the development and maintenance of the access roads and, expansion and maintenance of collector roads to their respective standard layout. Class "B" roads will also be constructed and expanded during the medium-term plan depending upon the necessity/demand of road hierarchy.

All the roads of Class "C" and "D" will be constructed and maintained at their designated standard layout at the end of medium-term plan. Class "B" and Class "A" roads will also be constructed

wide enough to address the demand generated during this period. Few Class “B” roads will be constructed to their full width with designated pedestrian paths. For other Class “B” roads, the medium-term time period will allow opening of the track by shifting the existing structures and stopping further construction of other structures within the designated ROW.

4.10 Long term Municipality Transport Master Plan (Twenty years)

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.

This time period (first ten years) is critical in developing proper implementation policies, tools and plans for the construction and implementation of the standards of these roads in the long-term time period of ten to twenty years. Plans to integrate other service facilities such as electricity, drainage and drinking water pipes should be developed during this period. Other plans such as land use plan, city development plan (if not developed), drainage network master plan should be developed in compliance with the Municipality transport master plan. Depending upon these plans, MTMP may also be revised. During the long-term plan of ten years to twenty years, the higher hierarchy roads will be constructed in full phase.

SECTION 5. FORMULATION OF ROAD HIERARCHY

Roadways serve a variety of functions, including but not limited to the Province 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 Province of public transport routes, pedestrian 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 A, B and C basically deals with access while Class D basically deals with mobility and accessibility to higher services. \

Table 3 Classification factors of Road

Criteria	**Class A & B**	**Class C**	**Class D**
Purpose	Mobility	Mobility and control access	Access and mobility
Function	Through and long-distance movement	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

Criteria	Class A & B	Class C	Class D
	High network coverage	Support through movement of traffic	Access to property
	Segregated NMT facilities and Bus lay byes	Segregated NMT facilities and Bus lay byes	Segregated NMT facilities
	Complete access to public transport	High access to public transport	Limited access to public transport
Maintenance Responsibility	Rural Municipality	Rural Municipality	Rural Municipality & Local people
Speed (Kmph)	80-100	60-80	50-60
Capacity (PCU/hr)	4000-4800	2400-3600	1500-2400
Access Control	Full Control	Partial Control	No
Public transport services	Mass Transit facilities	Mass Transit, Local Public transport	Limited access to public transport
Right of Way	Minimum 15m	12m	10m

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

5.1 Road Classification

Road Network with in the Rural Municipality lies under the two level of government. There is road of Limbuni-Juketar-Hanpang-Pabhek-SanoPhedi-Kattike –Sobuwa -Lungsungwang- Phungthaple -Sanghu (Province Strategic Road) which connect two local level government centers. All the Other roads apart from these two roads are under the Aathrai Tribeni Rural Municipality.
Aathrai Tribeni Rural Municipality has already classified as Province Sadak which is the Major Road to connect four ward (1,2,3,4), similarly there is another Krishi sadak which move along the farm area connecting different wards of Rural Municipality. Rural Municipality has proposed Road Tamor Corridor. Along with above mentioned road and remaining roads are classified in different Class Class A to Class D.

5.1.1 Province Road (Strategic Road Network)

Having ROW 12 m, Class A all Province Highway Total length of road with in the Municipality is 226.36. The proposed Province sadak in Aartari Tribeni Rural Municipality. The Province road will cover four ward of Aathrai Tribeni Rural Municipality. Every road network within the along with their length, ROW, places through and new construction is given in tabular form below.

In Aathrai Tribeni Municipality, Class A roads have a **Right of Way (ROW)** of 12 meters. The road includes:

- Two carriageways, each 5.5 meters wide, separated by a 1-meter-wide median.
- Sidewalks for pedestrians, 1-meter-wide on each side, with drainage below them.

5.2 Class 'A' Road

Class A roads are the main roads that connect key areas like markets, tourism centers, industries, or several wards. These roads are directly linked to the National Strategic Road Network or district roads. A list of Class A roads is provided, and their detailed map is shown in the accompanying figures. The typical cross-section of a Class A road is shown in Figure 4.

In Aathrai Tribeni Rural Municipality, Class A roads have a **Right of Way (ROW)** of 12 meters. The road includes:

- Two carriageways, each 5.5 meters wide, separated by a 1-meter-wide median.
- Sidewalks for pedestrians, 1-meter-wide on each side, with drainage below them.
- A setback distance of 2 meters on both sides of the road.

This design ensures smooth traffic flow and safety for pedestrians.

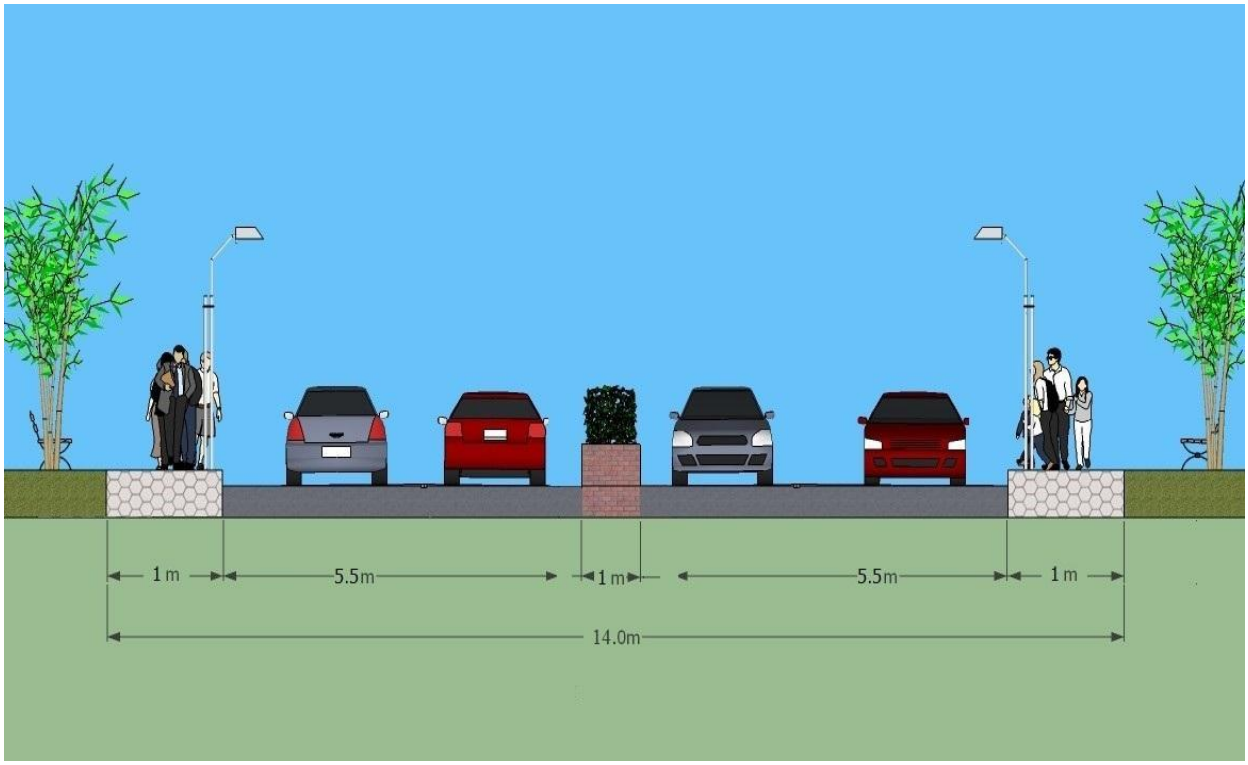

Figure 4 Typical cross section of Class A road

Table 4 Class A Roads

Muncipal Code	Name of Transport Linkage	Ward No	Class	ROW (m)	Length (km)	Surface	Existing Width (m)	Pavement Width (m)	Setback (m)	Length (km)				Road Condition (Upgrading and Repairs needed)
										Black	Gravel	Earthen	New	
M10105	Limbuni -Juketar-Hanpang-Pabhek-Sano Phedi -Kattike -Sobuwa-Lungsungwang-Phungthaple-Sanghu	1,2,3,4	A	12	35.22	ER	4.5		3			35.22		

Table A Class Road Alignment

S.N.	Road Alignment	Ward No.	Length (kM)
1	Limbuni-Dhande-Amale-Nighuradin-Kachure	1	8.45
2	Kachure-Danaban-Juketar- Arubote-Dandagaun-Khuwakholagaun	2	5.91
3	Khuwakholagaun-simbu-Balang-Hampang-Chungwa-Mehele-Yakse-Pabhek	3	13.62
4	Sano Phedi-Kattika-Subuwa-selele-Lungsungwang	4	7.25
	Total Length		**35.23**

5.3 Class 'B' Road

Class B roads are those that connect to major road networks and other roads of similar hierarchy. They link major growth centers within the same ward or neighboring wards and provide access between Class A and Class C roads. A list of Class B roads is provided, and their detailed map can be found in the accompanying figures. The typical cross-section of a Class B Road is shown in Figure 5.

In Aathrai Tribeni Municipality, Class B roads have a **Right of Way (ROW)** of 10 meters. The design includes:

- A carriageway of 7 meters' width.
- Shoulders, each 0.5 meters wide, on both sides.
- Footpaths on both sides, each 1-meter-wide, with drainage below them.
- A setback of 1.5 meters on either side of the road.

This layout ensures efficient connectivity and access while accommodating both vehicles and pedestrians.

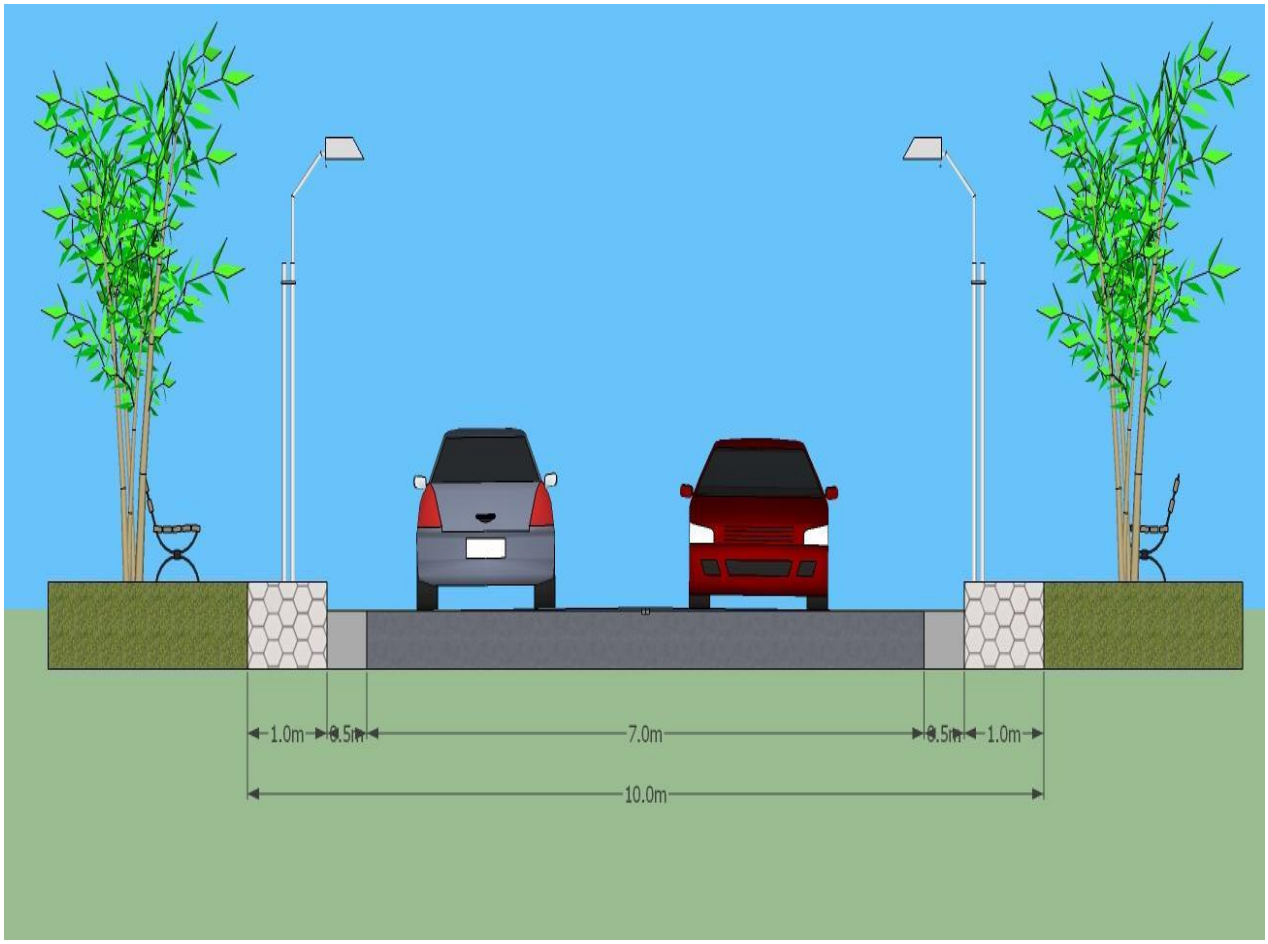

Figure 5 Typical cross section of Class B Road

Table 5 Class B roads

Muncipal Code	Name of Transport Linkage	Ward No	Class	ROW (m)	Length (km)	Surface	Existing Width (m)	Pavement Width (m)	Setback (m)	Length (km)				Road Condition (Upgrading and Repairs needed)
										Black	Gravel	Earthen	New	
M10105	Juketar-Nagi Danda	1,2	B	10	4.94	ER	4		2			4.94		
M10105	Ward 2-Danaban-Chokpur	2	B	10	8.91	ER	4.5		2			8.91		
M10105	Dandagaun - Ambote	2	B	10	3.99	ER	4		2			3.99		
M10105	Paalika-Sobuwakhola Dobhan	3,5	B	10	8.28	ER	4.25		2			8.28		
M10105	Paalika-Charaane	3,4	B	10	7.14	ER	5		2			7.14		
M10105	Kattike - Mehele	3,4	B	10	5.61	ER	3.5		2			5.61		
M10105	Dobhan-Sobuwa W4-W5	4,5	B	10	8.87	ER	5		2			8.87		

5.4 Class 'C' Road

Class C roads are those that connect to higher-order roads and include agricultural roads that link farms with mini-market centres or agro-based production centres. These roads primarily support local trips and the mobility of goods and people within the municipality. A list of Class C roads is provided, and their detailed map can be found in the accompanying figures. The typical cross-section of a Class C Road is shown in Figure 6.

In Aathrai Tribeni Rural Municipality, Class C roads have a **Right of Way (ROW)** of 8 meters. The design includes:

- A carriageway of 5.5 meters width with no additional shoulders.
- Footpaths on both sides, each 1.2 meters wide, with drainage underneath.
- A setback of 1.5 meters on either side of the road.

This design ensures these roads effectively serve local transportation and agricultural needs while providing safe access for pedestrians.

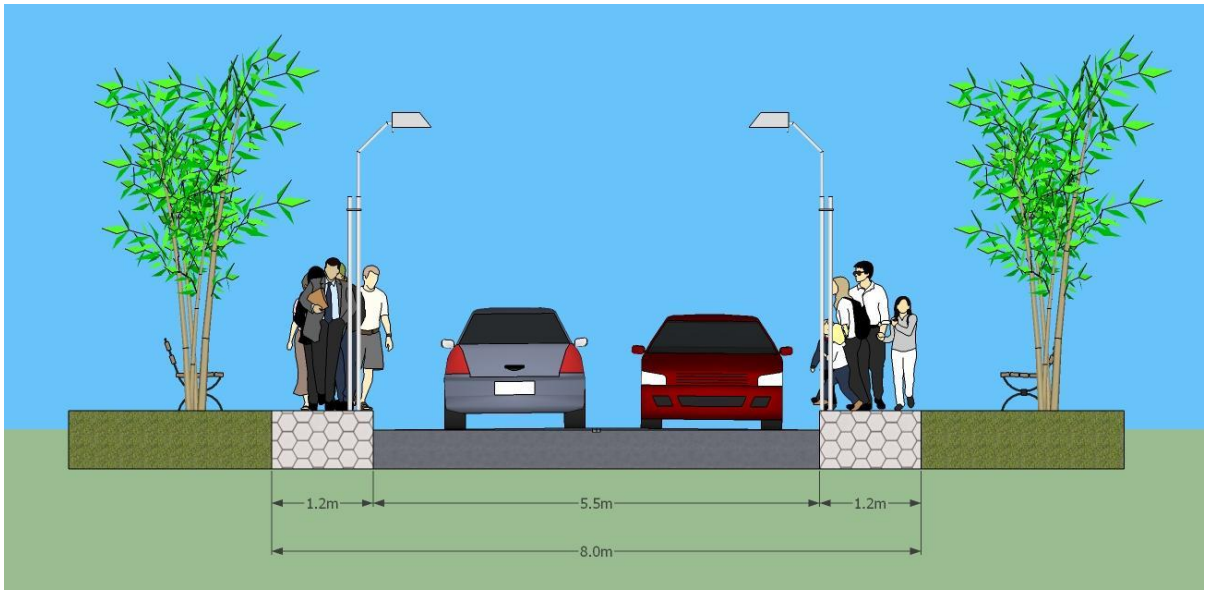

Figure 6 Typical Cross Section of Class C roads

Table 6 Class C roads

Muncipal Code	Name of Transport Linkage	Ward No	Class	ROW (m)	Length (km)	Surface	Existing Width (m)	Pavement Width (m)	Setback (m)	Length (km)				Road Condition (Upgrading and Repairs needed)
										Black	Gravel	Earthen	New	
M1010503C	Khari Vir -Khaltea-Phunguwa	1	C	8	3.06	ER	4		1.5			3.06		
M1010504C	Krishi Sadak	1,2,3,5	C	8	15.36	ER	3		1.5			0.85		
M1010506C	Paalika-Kachure	1	C	8	0.87	ER	4.25		1.5			0.87		
M1010507C	Phunguwa	1	C	8	1.58	ER	3.75		1.5			1.58		
M1010509C	Phunguwa khola-Mallaraj Pomu Ghar-Bheralo vir(Part I)	1	C	8	2.49	ER	3.75		1.5			2.49		
M1010511C	Sukamerwori-vadaue-yuwa-Dhungasaagu	1	C	8	3.31	ER	4		1.5			3.31		
M1010512C	Ward1- Malbanse	1	C	8	1.79	ER	4		1.5			1.79		
M1010513C	Arubote-Dandagaun	2	C	8	1.71	ER	3.5		1.5			1.71		
M1010514C	Arubote-Juketar-Mahabir-Dandagaun	2	C	8	2.44	ER	4		1.5			2.44		
M10105	Ward 2 office-Ramite-Ambote- Tamor Corridor	2	C	8	1.80	ER	4		1.5			1.80		
M1010517C	Hangpang Mulchowk-Dandakharka-Mahabir-Dandagaau-Nagi Danda	2	C	8	5.27	ER	3.2		1.5			5.27		
M1010518C	Juketar-Nagi Danda	2	C	8	2.77	ER	4		1.5			2.77		
M1010519C	Juketar-Ward Offce 2	2	C	8	1.18	ER	3		1.5			1.18		

M1010520C	Kaabeli Mandir-Corridor	2	C	8	0.81	ER	2.75		1.5			0.81		
M10105	Pathivara Temple	2	C	8	1.32	ER	3.5		1.5			1.32		
M10105	Ward 2 Office -Paire	2	C	8	5.51	ER	4		1.5			5.51		
M10105	Paalika-Pamgra jhamal-Khuwakhola-ward 2	3	C	8	4.24	ER	3		1.5			4.24		
M10105	Bagdwar Primary School	3	C	8	1.11	ER	3.75		1.5			1.11		
M10105	Chungwa Road	3	C	8	1.81	ER	3		1.5			1.81		
M10105	Daurali Bhanjyan-ShyamChowk	3	C	8	3.63	ER	4.5		1.5			3.63		
M10105	Dhungea-Osalea-Titeani	3	C	8	0.98	ER	4.5		1.5			0.98		
M10105	Kalika Primary School-Chuwo Khola-Tar Gaau-DandaKharka	3	C	8	2.15	ER	4.5		1.5			2.15		
M10105	Kanxi Chowk-Makarjung ko ghar-thultar	3	C	8	2.39	ER	3.75		1.5			2.39		
M10105	Tek Raj ko Ghar -Bhangtar -Tityane	3	C	8	1.02	ER	3		1.5			1.02		
M10105	Ward 3 office-Balang-Bismure-Khuwa (Kirshi Sadak)	3	C	8	3.58	ER	4		1.5			3.58		
M10105	Charaane Chowk-Nesum-HealthPost Road	4	C	8	1.97	ER	2.75		1.5			1.97		
M10105	Gufaa-Bhuja-gojar-Lungsungwang-Selele	4	C	8	2.57	ER	3.2		1.5			2.57		
M10105	Kamal Danda-Lungsungwang-Bhandari Danda-Okhre Road	4	C	8	1.89	ER	3.75		1.5			1.89		

M10105	Lungsungwang-Devi Than-Kattike-Poudel Gaau-Mijar Gaau Road	4	C	8	3.36	ER	3.75		1.5			3.36		
M10105	Nesum	4	C	8	3.01	ER	4.75		1.5			3.01		
M10105	Nesum-Banjhogare-Sobuwa Dovan Ghat	4	C	8	0.12	ER	4.75		1.5			0.12		
M10105	Sobuwa-Selele	4	C	8	1.73	ER	4		1.5			1.73		
M10105	Sobuwa-selele-Phungthaple	4	C	8	1.97	ER	3.75		1.5			1.97		
M10105	Ward 5-Tellabung	4	C	8	0.51	ER	3.5		1.5			0.51		
M10105	Dandagaun-Sasinala Road	5	C	8	1.26	BT	6		1.5			1.26		
M10105	Dobhan-Sasinala	5	C	8	2.87	ER	6		1.5			2.87		
M10105	Nesum-Banjhogare-Sobuwa Dovan Ghat	5	C	8	5.14	ER	4.75		1.5			5.14		
M10105	Nesum-Change-Ward5	5	C	8	0.80	ER	4.2		1.5			0.80		
M10105	Ward 5-Tellabung	5	C	8	1.10	ER	3.5		1.5			1.10		
M10105	Ward5-Dandagaun	5	C	8	1.31	ER	4		1.5			1.31		
M10105	Ward5-Lungdharn-Dandagaun	5	C	8	1.77	ER	5.75		1.5			1.77		

5.5 Class 'D' Road

Class D roads are smaller roads that connect to higher-order roads and serve local purposes, such as linking farms to mini-market centers or agro-based production centers. These roads support the mobility of people and goods within local areas. A list of Class D roads is provided, and their detailed map can be found in the accompanying figures. The typical cross-section of a Class D Road is shown in Figure 6.

In Aathrai Tribeni Rural Municipality, Class D roads have a **Right of Way (ROW)** of 6 meters. The design includes:

- A carriageway of 3.8 meters' width.
- Shoulders on both sides, each 0.5 meters wide.
- A footpath on one side, 1.2 meters wide, with drainage underneath.
- A setback of 1.5 meters on both sides of the road.

This design ensures Class D roads effectively support local travel and agricultural activities while maintaining safety for pedestrians.

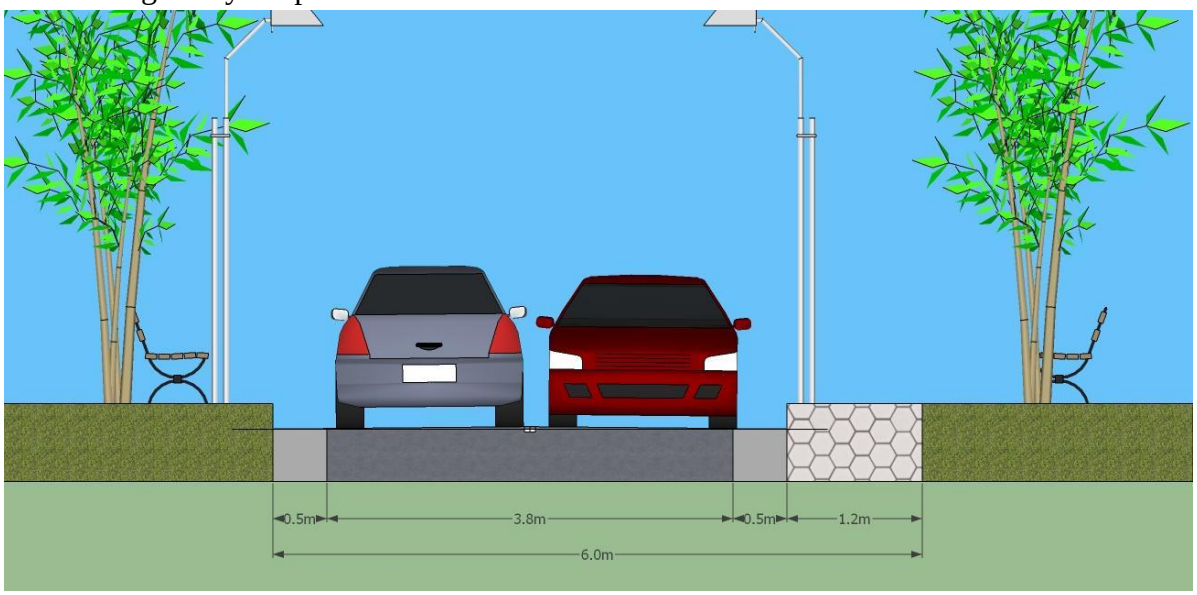

Figure 7: Typical Cross Section of Class D roads

Muncipal Code	Name of Transport Linkage	Ward No	Class	ROW (m)	Length (km)	Surface	Existing Width (m)	Pavement Width (m)	Setback (m)	Length (km)				Road Condition (Upgrading and Repairs needed)
										Black	Gravel	Earthen	New	
M1010501C	Banpale-Gaire gaau-Phoktang	1	D	6	1.68	ER	4		1.5			1.68		
M1010505C	Oli Danda-Bhota Tar-Dhodra	1	D	6	2.60	ER	3.75		1.5			2.60		
M1010508C	Phunguwa Khola-Janakalyan School-Paalikaa	1	D	6	2.40	ER	4		1.5			2.40		
M10105010C	Phunguwa to Pathivara mati jangule	1	D	6	2.04	ER	3		1.5			2.04		
M10105	Maata/Mitlaa-Corridor	2	D	6	1.34	ER	3.25		1.5			1.34		
M10105	Tamor Corridor - Ambote-Majhagaun-Ward 2 office	2	D	6	2.42	ER	3.75		1.5			2.42		
M10105	Connector of paalika road and Khuwo khola road	3	D	6	0.90	ER	4		1.5			0.90		
M10105	Paalika -Sirjaag Secondary School-Mill-Kanchi Chowk	3	D	6	1.95	ER	3.25		1.5			1.95		
M10105	Pabhek-Newokham-Sobuwa Khola	3	D	6	1.01	ER	4		1.5			1.01		
M10105	Shree Santi Basic School-Micherigha-Krishi Sadak	3	D	6	0.73	ER	3		1.5			0.73		
M10105	Gai Thun-Chuwaa Khola-Thuti-Sobuwa Khola	3	D	6	2.49	ER	4		1.5			2.49		
M10105	Gaurab Sadak -Simbu	3	D	6	1.90	ER	3		1.5			1.90		

M10105	Health Post-Paalika-Charaane	3	D	6	1.52	ER	3.25		1.5			1.52		
M10105	Sobuwa Khola-Gairi-Nesum	4	D	6	1.94	ER	4		1.5			1.94		
M10105	Ward5- Lungdarn-Dandagaun	5	D	6	1.45	ER	4		1.5			1.45		

Table 7: Class D Roads

SECTION 6. FIVE YEARS MUNICIPAL TRANSPORT MASTER PLAN

6.1 Strategic framework

The framework adopted during the entire planning and how it is compatible with long term vision of transportation planning and economic-social development is described in the underlying headings.

6.1.1 Hierarchy of road

In any urban area, Province of proper hierarchy of roads at proper spacing helps to reduce traffic congestions and increase the mobility along the roads. A well-formed road hierarchy and its network of roads will reduce overall impact of traffic on the land use and at the same time guide the planned change of the land use. Thus, a proper hierarchy of road networks should be provided at proper spacing so that their purpose and functions can be justified.

Hierarchy should be maintained according to the major SRN road (national highway, feeder road) that passes through the Rural Municipality or is closest to the municipal area. Urban/municipal roads that open into these SRN should be have proper ROW and spacing so that the traffic that enters the SRN is justified and the purpose of the road is also preserved. The NRS (2070) gives the Province of parallel service (frontage roads) at the spacing of at least 750 meters. Larger spacing creates bottlenecks while closer spacing may be unnecessary.

A well-formed network of Class “A” and “B” roads creates blocks of 1 sq. km. to 2 sq. km. in the urban area and bigger blocks in the rural areas. The hierarchy also provides well connected pedestrian way.

6.1.2 Rural roads

Rural roads are used by all sorts of users including pedestrians, motorists and pubic vehicles. Their speed of travel varies significantly. Pedestrians move slowly while other motorized vehicles travel at greater speed. Sharing of common roadway by all these users is very unsafe and unpleasant, especially for the active users. Their volume is also quite significant and thus cannot be ignored. Thus, proper road infrastructure should be provided to ensure their safety by segregated pedestrian facilities.

6.1.3 Public transport

Public transport is a means for enhancing mobility of local people. High proportion of active transport users justifies the necessity of public transport to increase their mobility and thus access to wider services and facilities within the perceived travel time budget. Proper structured public transport routes are vital for sustainable transport development. The existing economy and travel pattern may not sustain on its own. Development of proper roads to facilitate access and (through access) mobility to various services and facilities will create more trips and thus demand. Strategic development of such roads will not only create demand for public transport (greater mobility) but also develop proper road network where public transport vehicles can play.

As the demand increases, before well-structured and formal transport is justified economically, the local government should introduce **public transport.** They are government run public vehicles. Their sole purpose is to provide greater mobility to the local people even when the demand is not economically justified. Such Province adds fuel to the overall development of the local economy. It also captures the potential public transport users and retains those users. This is a "pull factor" to increase public transport users in the future and creates an environment to introduce formal public transport services.

6.1.4 Principle guideline of road planning

Change in land use and transport are cause and effect of each other, as depicted by the land use cycle in previous chapter. Thus, current land use and the predicted/planned change in land use in the future is the basic guideline for transport planning. Development of compact settlements and corresponding development scenario has been considered for road planning. The Municipality is urbanizing area whose population is expected to rise in the coming years. As the population is added, the settlements grow both horizontally and vertically. Horizontal expansion increases the built up area while vertical expansion increases the population density. With higher road densities, the required width of the transport facilities also increases locally and along the major roads. Increase in built up area demands bigger network of local and collector roads which ultimately demand wider roads of higher hierarchy.

6.1.5 Hierarchy of settlement

A proper hierarchy of settlement should be developed to segregate the commercial and business centres from settlement areas and industrial area. A hierarchy of the market centres should be developed as main market centre and local market centres. Promotion of bi-nuclear or multi-nuclear city is necessary for even development of the settlements within the municipality. These bring many services and facilities closer to the demand and reduce the need to travel to the main market centre.

6.1.6 Introduction of basic road and road side infrastructure

There is a need to redefine the term "road way" among the local people who perceive only paved road surface for motorized vehicles as proper road way. Although, the proportion of active transport users is very high, the road infrastructure necessary to support these users do not fit within the defined road by the locals. Such perception and construction of road infrastructure accordingly will lead to high rate of motorization which creates problem to manage the generated traffic, pollution and other externalities.

In the present context, with very high active users, proper networks of pedestrian way and cycle tracks should fit in the basic road width. It should be planned and implemented as basic road side infrastructure. Similarly, the landscaping of the road sections with proper greenbelt increases the greenery in the city, provides shade to the active users, segregate different users and a pleasant travelling environment for all the users.

Proper lay by s are necessary elements for proper public transport system. Bus stops should have proper sheltering furniture, seating benches, lighting system, trash boxes, information boards and displays of routes and schedule of buses and proper connected pedestrian ways and zebra crossings.

6.1.7 Urban road discipline

Obeying of proper discipline and enforcement of it is equally important as the Province of the urban road infrastructure itself. Proper discipline not only makes the use of the facility efficient, it also creates a sense of comfort and safety. Segregation of the pedestrian way and cycle track from the main carriageway enforces certain level of discipline among the users. Province of proper NMT crossing facilities and control of jay walkers is necessary to maintain proper flow of traffic in the Main Street and safety.

6.1.8 Integrated service planning

Integrated service planning is a very important factor for damage minimization during construction and expansion of various facilities. As the road follows, settlement also expands which demands other facilities such as electricity, drainage and drinking water. All these facilities are provided along with road infrastructure, mostly within the ROW of road. Proper integration of these services with road planning is necessary to minimize multiple investments in the individual infrastructure and the damage to other infrastructure during maintenance and/or expansion.

6.1.9 Development phase of roads

The proposed roads cannot be directly implemented at a glance. Proper phases of development of roads of all hierarchy should be envisaged and planned. The first phase is simply the formulation of necessary hierarchy and identification of road sections that serves/ can serve as different hierarchy roads. During this phase, bylaws as demanded by the formulated road hierarchy along the identified roads should be enforced. The next phase is to develop necessary policy and implementation plan for expansion and construction of the road. The phases of construction total road width should also be worked out as development of full road width as demanded by the respective road hierarchy may not be possible. As such, implementation of road hierarchy starts from roads in lowest hierarchy and stage wise expansion of the roads according to the demand and necessity of wider roads and facilities to the higher hierarchy roads.

6.1.10 Grass root institutions

The grass root institutions/committees should be empowered with the Province of local technicians in such institutions. Such institutions include consumers' groups, ward level committees, MRCC and others.

6.2 Prospective 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 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.

6.3 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.

6.4.1 Budget Trend

Municipality has been established which has not adequate internal resources. Majority of budget is provided by the Government of Nepal in different headings. The budget of the municipality is given below:-

6.4.2 Allocated Budget on Road Development

Municipality has allocated budget for the development of urban roads mainly on the upgrading and maintenance of roads. The budget allocated on the annual plan of municipality is given

Table 1 Last five year budget of Aathrai Rural Municipality

S.NO	Budget Year(Fisical year)	Total Budget(NRs.)	Budgets for Road and Bridge(NRs.) in Lakhs	Percentage Increment
1	76/77	324530000	132	0
2	77/78	391681678	136	4%
3	78/79	443093980	550	41.10%
4	79/80	435588980	757.5	20.75%
5	80/81	502290200	833.25	10%
6	81/82		999.9	20%
7	82/83		1199.88	20%
8	83/84		1439.86	20%
9	84/85		1727.83	20%
10	85/86		2073.39	20%
11	86/87		2488.07	
		Total add five year	8929.03	

The rural municipal budget for road and road side infrastructures has been rapidly increasing in the past years. The budget has 1 crore 32 Lakh in the fiscal year 2076/77 to 1crore 36 lakh in the fiscal year 2077/78. After that, the budget has increased by 4% in the fiscal year 2076/77. The budget has 5 crore 50 Lakh in the fiscal year 2078/79 to 7crore 57lakh in the fiscal year79/80. The total budget required in the MTMP for a period of 5 years is 24 cores 88 lakhs. With this requirement and assuming a growth rate of 20% for the every fiscal year with a steady growth rate of 20% per annum thereafter, the total budget required in the fiscal year of 2086/87 for road and road side infrastructures for the first five years is Rs. 24 cores 88 lakhs. The trend for the budget dissemination is shown in the figure below

Table 2 Budget Trend and Projection

Budget Year(Fisical year)	Budgets for Road and Bridge(NRs.) in Lakhs	Time period
76/77	132	Past Year
77/78	136	
78/79	550	
79/80	757.5	
80/81	833.25	
81/82	999.9	Present Year
82/83	1199.88	Forecasted Budget
83/84	1439.856	
84/85	1727.8272	
85/86	2073.392	
86/87	2488.071168	

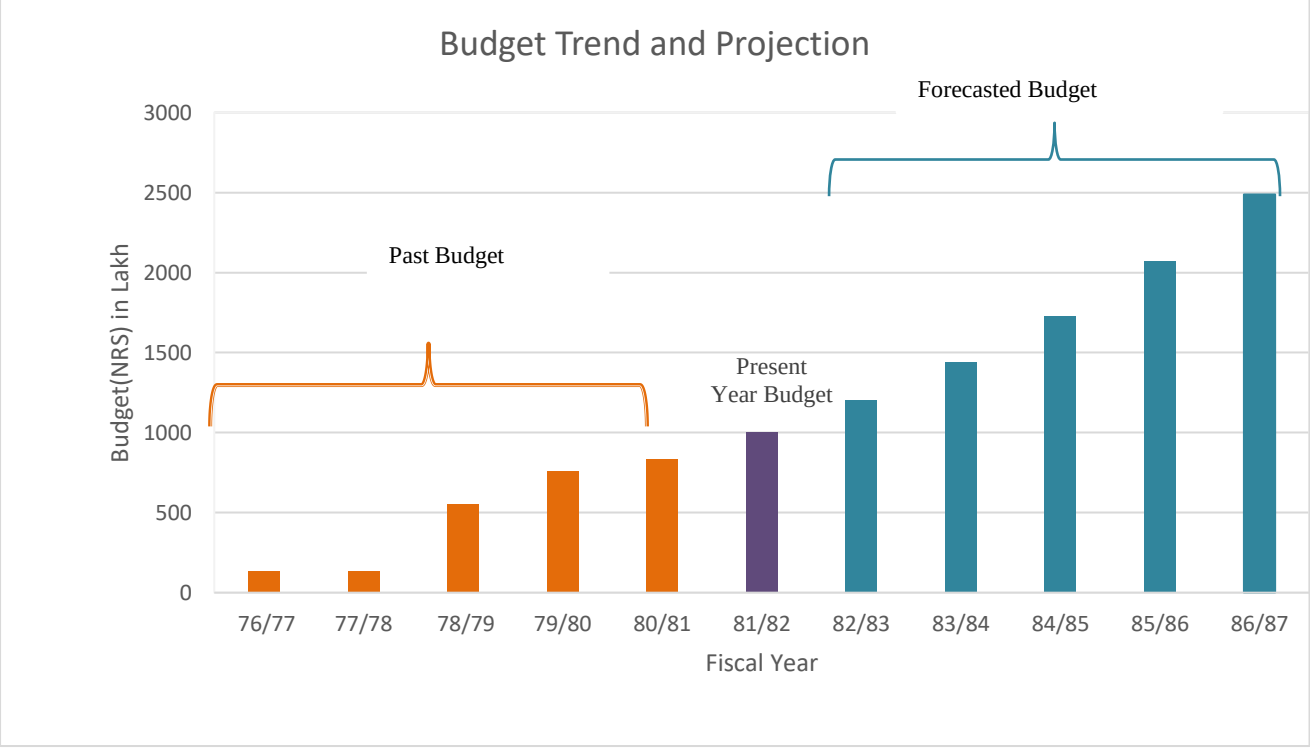

Figure : Budget Trend and Projection.

6.5 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 20% per year. Total budget acquired for the 5 years was found to be approximately **NRs. 892.9 Million.**

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, Class B road is to be made intermediate lane Gravel road and Class C and D road is to be maintenance and lane considered are assumed to be metalled. 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.

MTMP mainly deals with all Class roads. 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 province and 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. Of the total budget available for construction of roads, 40% are allocated for construction of class A roads and 30% is allocated for Class B and 30% for Class C and D roads.

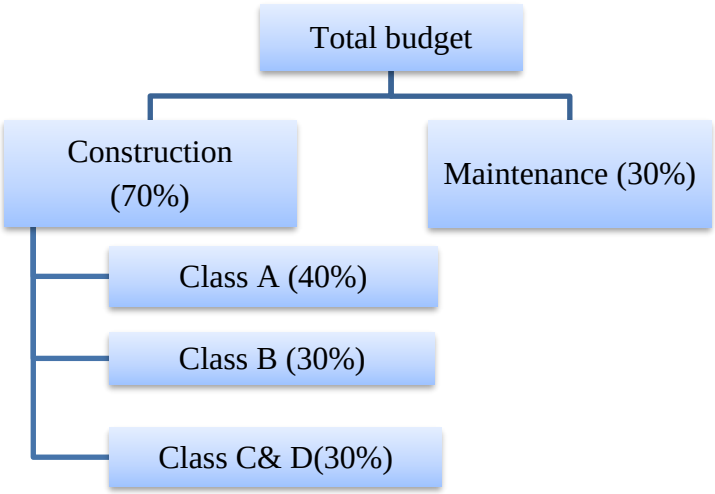

Figure 8: Budget Distribution

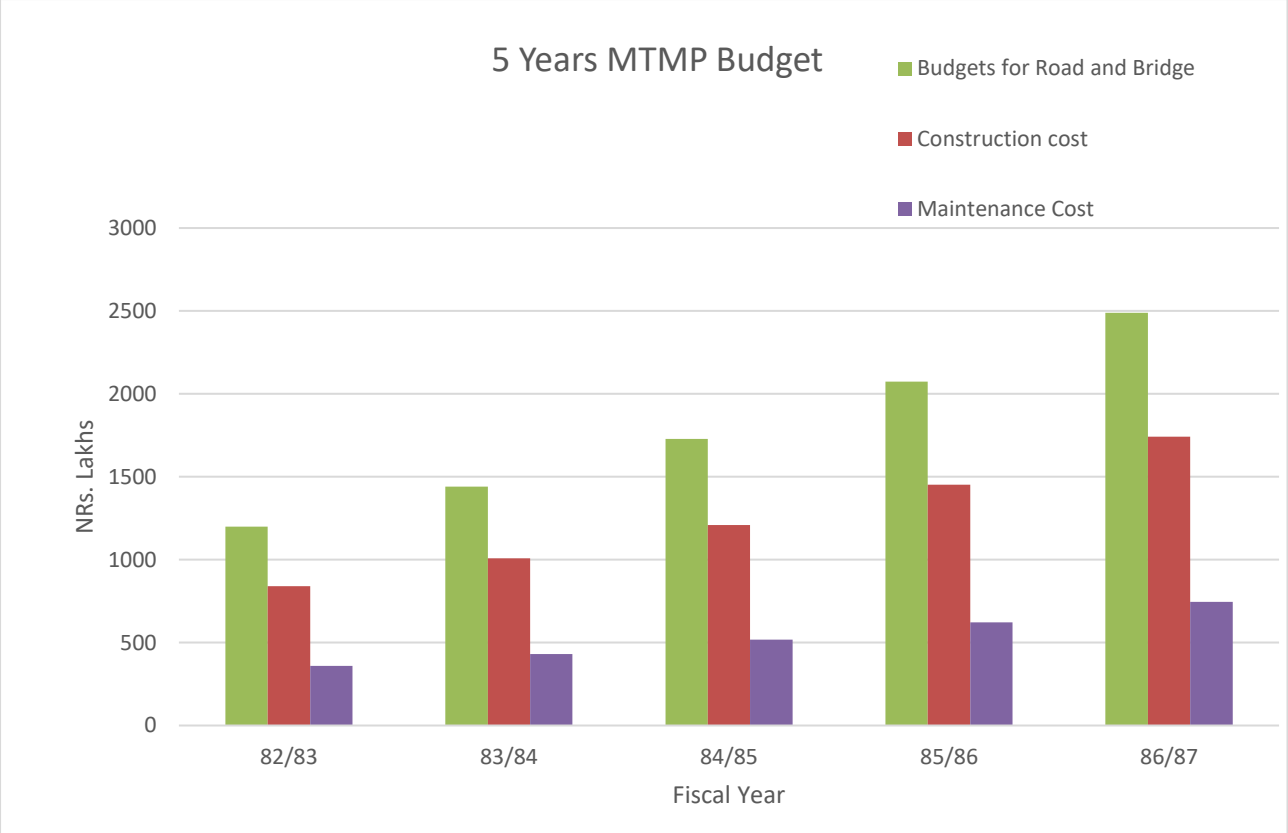

Chart 14: Five years MTMP Budget

From fund available for construction of A, B, C roads, each year for the next five years from preparation of MTMP, Rs. 1,000,000.00 shall be allocated for study and advocacy of development of road corridor through major road class for clearance of right of way from maintenance fund. Total cost for the required interventions proposed is calculated based on the rates of ToR and was found to be **approximately NRs 892.9 Million.**

The details of budget with roads along with their length, rank and interventions for five years have been presented in *ANNEX II*.

6.6 Scoring Criteria and Priorities

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 and various interventions need to be taken based on the prioritization. After developing a municipal level road network, the cost estimate of the road is prepared and benefit of each link in the network is assessed. There might be various criteria of prioritization, which may differ from place to place The basic criteria that is used for prioritization includes existing population within the zone of influence, present road demand, future potential route, accessibility situation, land use pattern, proximity to the market/service centres, religious and tourism places, existing road width and surface type. These criteria are given various weightage and weightage average of all the criteria is summed up to come with a priority of intervention. All type of intervention is provided with same scoring criteria. The finalized scoring criterion based on rigorous study is set in front of municipality and MRCC for its approval.

Each road link is allocated the number of points corresponding to the fulfilment of the particular criteria. The weighted average of score that each intervention receives leads to a ranking/prioritization of the intervention options. Short description of the indicators used is given below and detail discussion is given in ***Volume II*** of the report.

- **Demand priority of wards** indicates higher the priority order of the road by ward, higher the weightage the road gains.
- **Proposed road class:** higher the road class, higher number of people it serves and it should get more priority.
- **Total existing width:** the road with more width should get higher priority because it indicates the necessity of road and the people's dedication for wide roads.
- **Population served:** the main purpose of the road is to serve people and more a road serves for population it should be given high priority.
- **Road surface condition:** from the point of view of accessibility to mobility, more priority should be given to road of poor surface condition to upgrade to higher condition.
- **Road density:** it may be defined in two ways. In one way it is the length of road per unit area of the settlement and in another way it indicates the length of road per 1000 population it serve.
- **Settlement density:** higher the settlement density, higher will be the road users and hence such area should be given more priority.
- **Service provided by the road such as Recreational(R), Agricultural (A), Market (M) and Service centre(S) (RAMS):** if a road provides more service than another then this road should be given higher priority.
- **Access to poor and minor:** if a road serves for poor and marginalised people then it should be given higher priority.

6.7 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 and green belt along the edges of the ROW restricts any possible encroachment of the road space. For detail, see on ***Annex II*** of this report.\

6.8 Gap Analysis

In this method used to compare the current state with a desired future state in order to identify the gaps that need to be addressed.

Gap Analysis							
Total Projected Budget (NRsCr.)	Construction(70%)		Total Length (Km)	Existing Surface	Target Surface	Rate Per Km(Cr.)	Target meet by local bugget(Km)
89.29	NRs62.5 Cr.	Class A (40%) NRs.Cr	35.2	ER	BT	4	6.25
		25					
		Class B (30%) NRs.Cr	47.8	ER	GR	2	9.375
		18.75					
		Class C&D (30%) NRs.Cr	146.6	ER		2	9.375
		18.75			GR		

	Maintenance(30%)
	NRs. 26.787 Cr.

Table 3 Gap Analysis Target according to present budget trend.

The above table provided presents the 5year total projected budget of Nrs 89.29 crores will be utilized for road construction and maintenance. Out of the total, 70% (NPR 62.5 Crores) is allocated for construction and the remaining 30% (NPR 26.787 Crores) for maintenance. The construction budget is further divided among road classes: Class A, Class B, and Class C&D. Class A roads receive 40% of the construction budget (NPR 25 Crores) to upgrade 35.2 km of existing earthen roads (ER) to bituminous standard (BT), but with a cost of NPR 4 Crores per km, only 6.25 km can be upgraded, indicating a significant gap. Class B roads, which involve upgrading 9.375km of ER to gravel roads (GR), are allocated 30% of the construction budget (NPR 18.75 Crores). At the rate of NPR 2 Crore per km, only target 9.375 km can be achieved. Similarly, Class C&D roads have the same allocation of NPR 18.75 Crores for upgrading 146.6 km of ER to GR. However, at the same rate, only 9.375km can be addressed, leaving a large portion unmet. The remaining 30% of the total budget, NPR 26.787 Crores, is dedicated to maintenance works, though specific details are not provided in the table. Overall, the analysis highlights a budgetary shortfall, especially in the Class A and Class C&D road categories, pointing to the need for either additional funding or a prioritization strategy.

Municipal Demand and Expectation							
Types of Road	Length Of Road	Surface of Road	Rate per KM	Cost(Cr.)	Total Cost(Cr.)	Local Budget(Cr.)	Budget demand from Province And Central government (Cr)
Class A /Province Road	35.2	BT	4	140.8	255.14	89.29	165.85
Class B	47.8	GR	2	95.6			
Class C&D	9.37	GR	2	18.74			

Table 4 Municipal Demand and Expectation

The table illustrates the municipal demand and expectation for road construction based on three road categories: Class A (Province Roads), Class B, and Class C&D. It presents the total length of roads, surface type, cost per kilometer, total cost required, available local budget, and the budget shortfall expected to be covered by the provincial and central governments.

Overall, the total length of roads to be upgraded is 183 km, with Class A roads requiring bituminous surfacing and the remaining roads planned for gravel surfacing. The total estimated cost for upgrading all roads stands at NPR 255.14 Crores, whereas the available local budget is only NPR 89.29 Crores, resulting in a funding gap of NPR 165.85 Crores.

Looking at the details, Class A roads span 35.2 km and are expected to be upgraded to bituminous standard at a rate of NPR 4 Crores per km. This results in the highest individual cost of NPR 105.6 Crores. On the other hand, Class B roads, which are 46.87km long and to be surfaced with gravel at a rate of NPR 2 Crores per km, require NPR 18.74 Crores. Class C&D roads cover 9.37 km and also need gravel surfacing, amounting to NPR 18.74 Crores in total.

When the total projected cost of NPR 225.14 Crores is compared with the local budget of NPR 89.29 Crores, a clear gap of NPR 165.85 Crores is observed. This shortfall represents approximately 37.6 % of the total financial requirement and is expected to be fulfilled through support from the provincial and central governments.

In summary, the data highlights a significant funding gap, especially in Class A roads, and emphasizes the importance of external funding to achieve the municipality's road development goals.

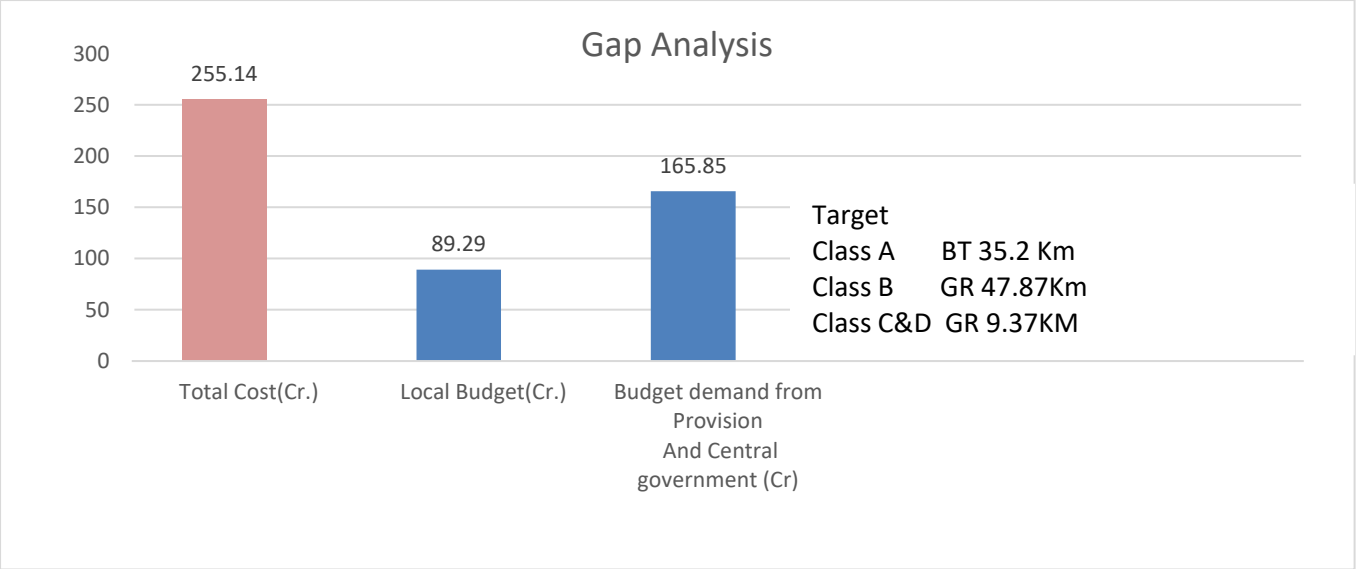

Figure 1. 6-1 Gap Analysis

7 CONCLUSION AND RECOMMENDATION

The country has undergone restructuring and the way of planning and implementing development activities has changed as compared to the past practices, giving more power and budget to the local levels. The new formed local levels are required to provide maximum input for implementation of the prepared plans and support the development of the municipality and its infrastructures. The institutional capacity of the Municipality needs to be strengthened with technical experts such as urban planner, GIS experts and others to effectively understand and implement the plans prepared. To make the transport sector sustainable, a more rigorous study that prepares plans at local level for the management of traffic at local level should be done. Further, the coordination among the stakeholders for different kind of development activities need to be strengthened to ensure effective implementation of such plans prepared.

Municipality Transport Master Plan has been prepared for Aarthrai Tribeni Rural 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 Rural Municipality, their status and interventions required. The map of IDPM, MIM, MTPP and other maps has been 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 unavailability of transport linkage and also 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.

Although local government budgets are crucial for development at the grassroots level, relying solely on them is often not sufficient to achieve the desired outcome with in a five-year period. For instance, in local government has only been able to blacktop 6.25 kilometres of road , which falls significantly short of the total requirement. The municipality comprises approximately 35 kilometres of Province road, indicating a substantial gap between the planned and actual progress.

This shortfall highlights the need for additional financial support beyond the governments regular budget. Without adequate resources, essential infrastructure such as road cannot be development to meet the growing need of population. Therefore, to ensure the effective implementation of the road network plan and to fulfil the five year development goals, it is necessary to allocate a separate Province budget dedicated specifically to the construction of these roads .

Over all, while local government efforts are commendable, they are not enough to address the scale of infrastructure development required within the planned timeframe. To bridge the gap between plans and outcomes, a dedicated Province budget should be allocated for road construction. This will ensure timely progress, enhance connectivity, and contribute to the overall socio-economic development of the municipality

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 Province of pedestrian facilities and bicycle tracks is 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, Aathrai Tribeni Rural 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 this 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.

SECTION 7. 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 vehicular 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 2028 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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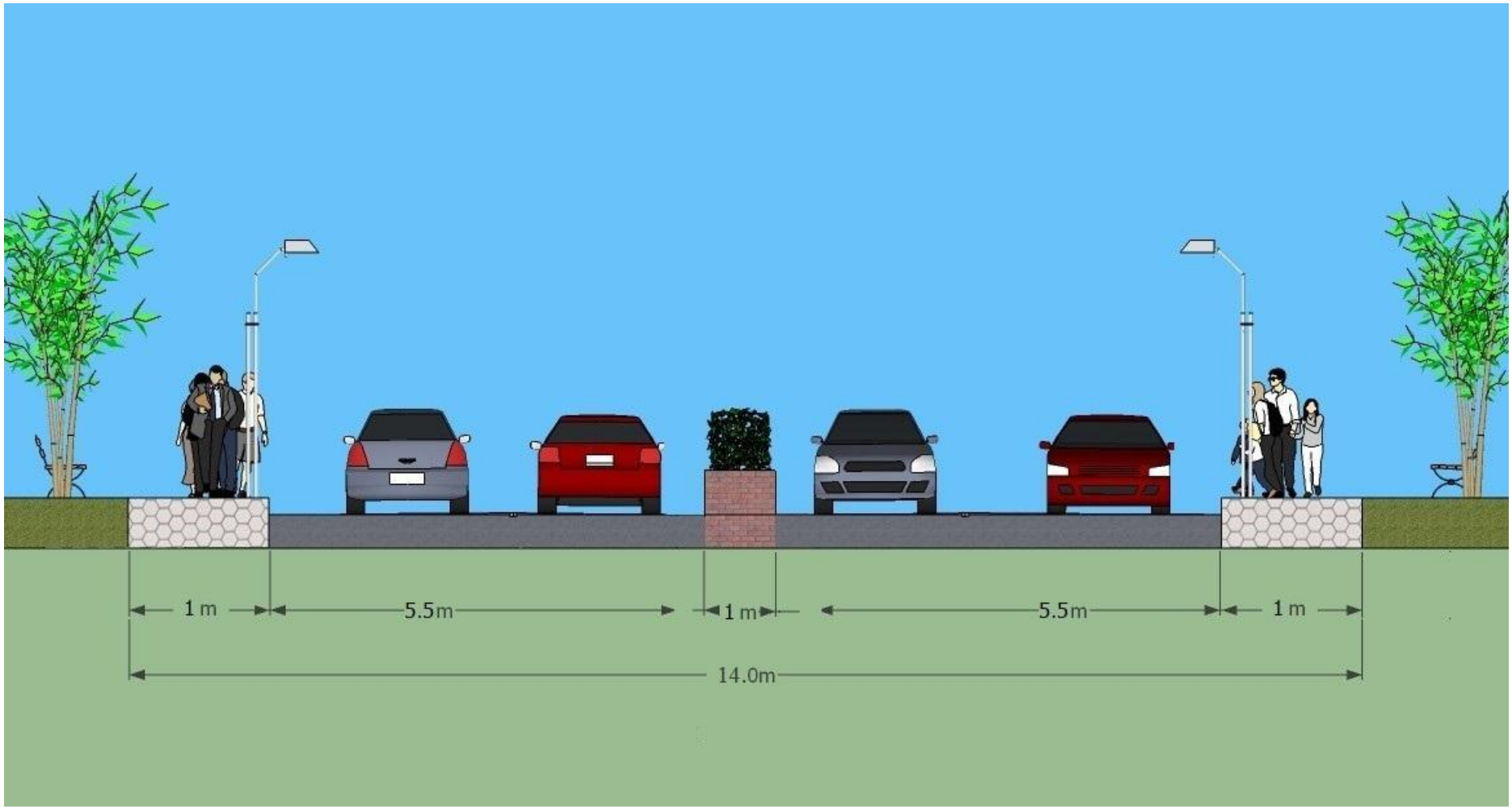
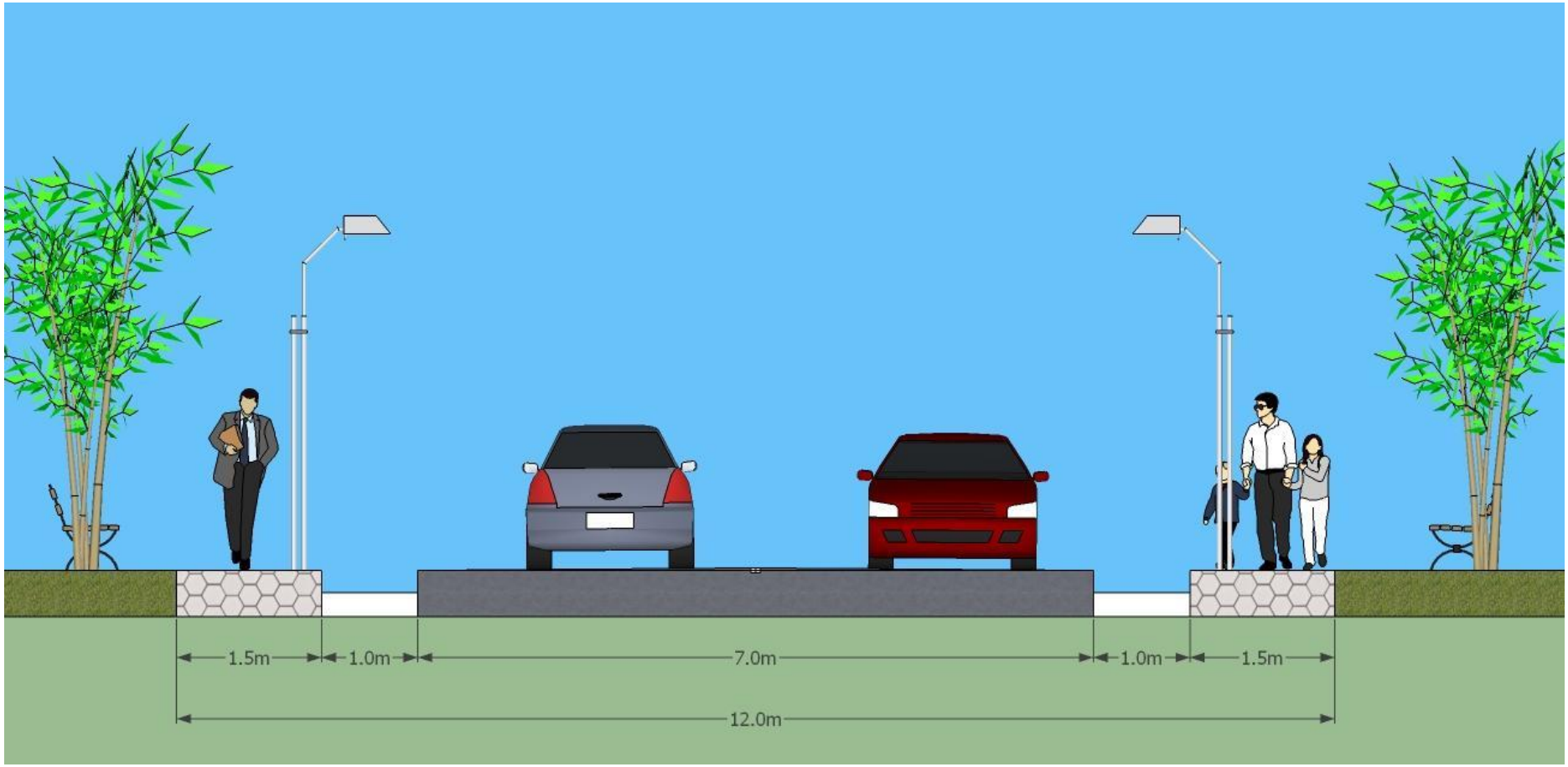
Municipality Profile

ANNEX I-A

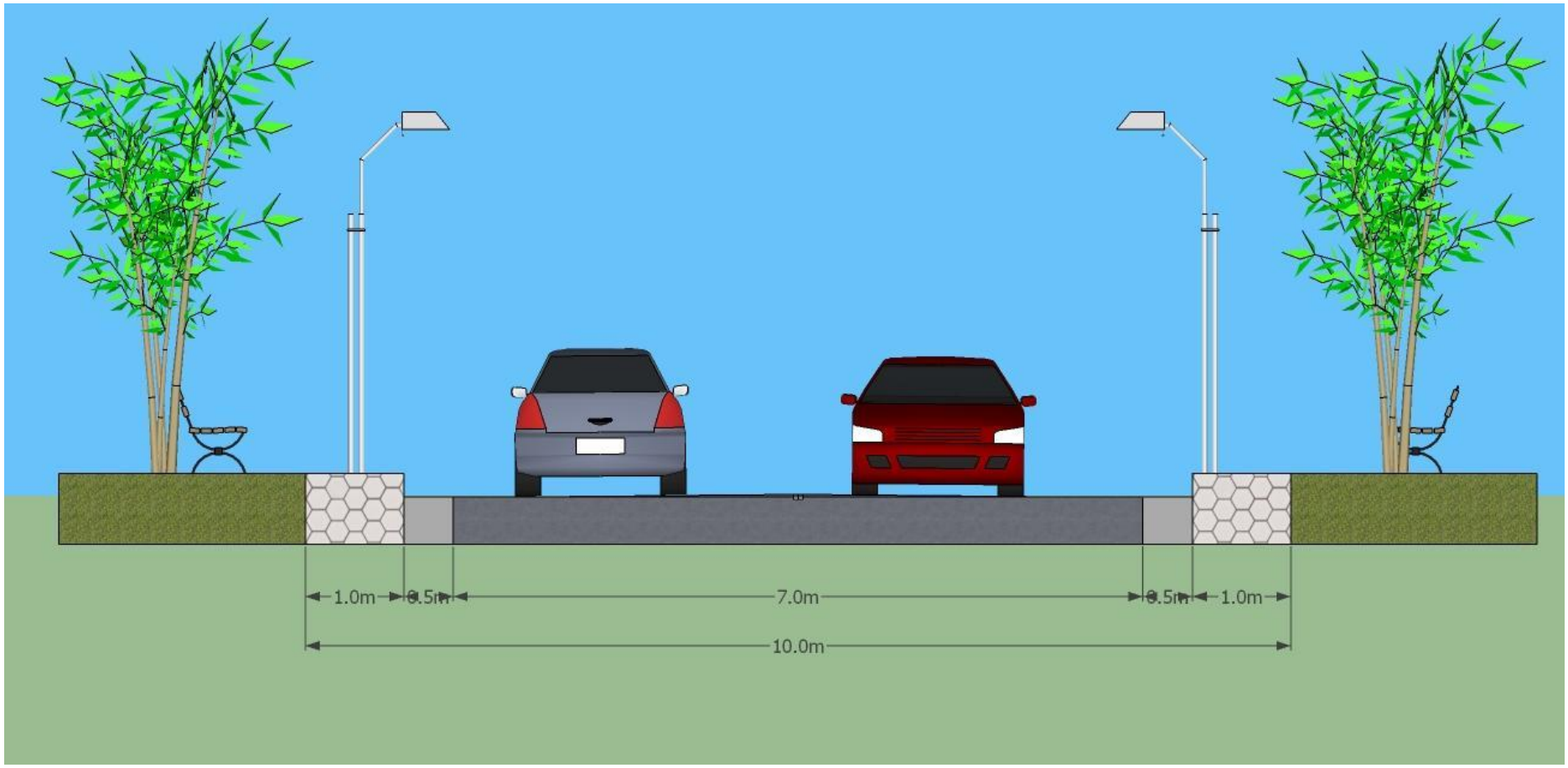
ROAD CROSS SECTIONS



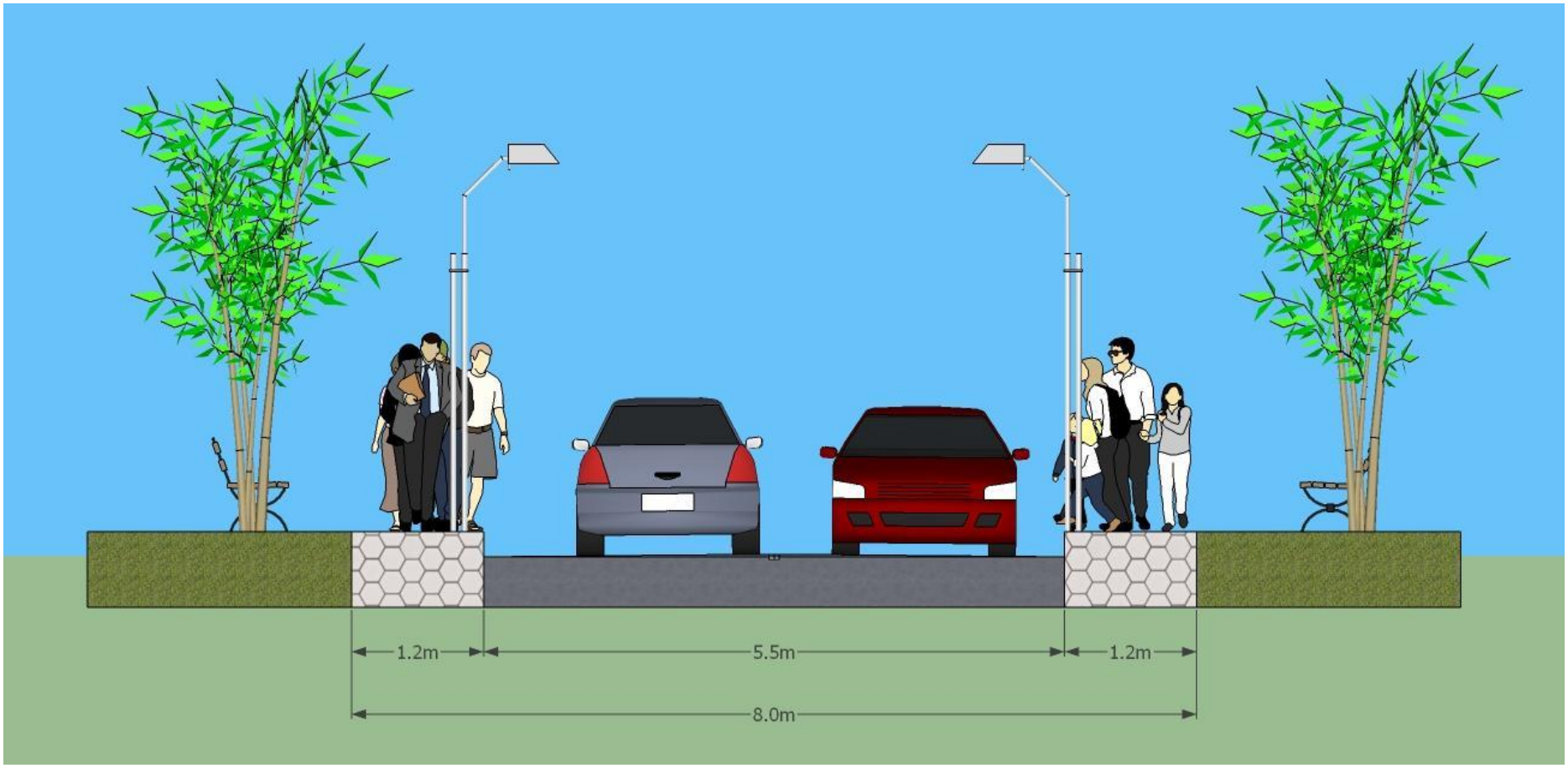
Typical Cross Section of Class A Road



Typical Cross Section of Class B Road



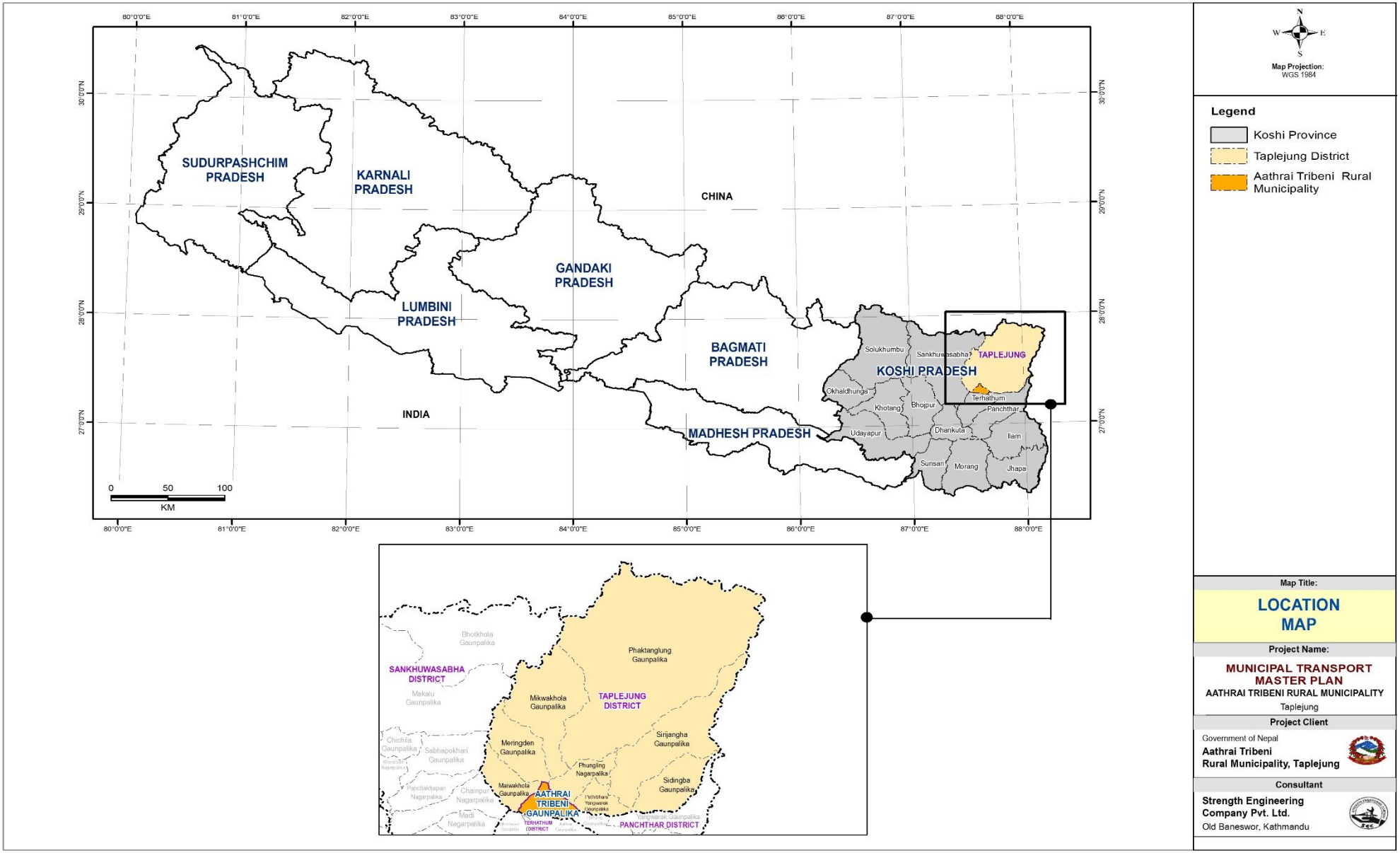
Typical Cross Section of Class C Road



Typical Cross Section of Class D Road

ANNEX I-B

MAPS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Aathrai Tribeni Rural Municipality
Bhotkhola Gaunpalika
Phaktanglung Gaunpalika
SANKHUWASABHA DISTRICT
Makalu Gaunpalika
Mikwakhola Gaunpalika
TAPLEJUNG DISTRICT
Chichila Gaunpalika
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Chainpur Nagarpalika
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Madi Nagarpalika
TERHATHUM DISTRICT
PANCHTHAR DISTRICT
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LOCATION MAP
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AATHRAI TRIBENI RURAL MUNICIPALITY
Taplejung
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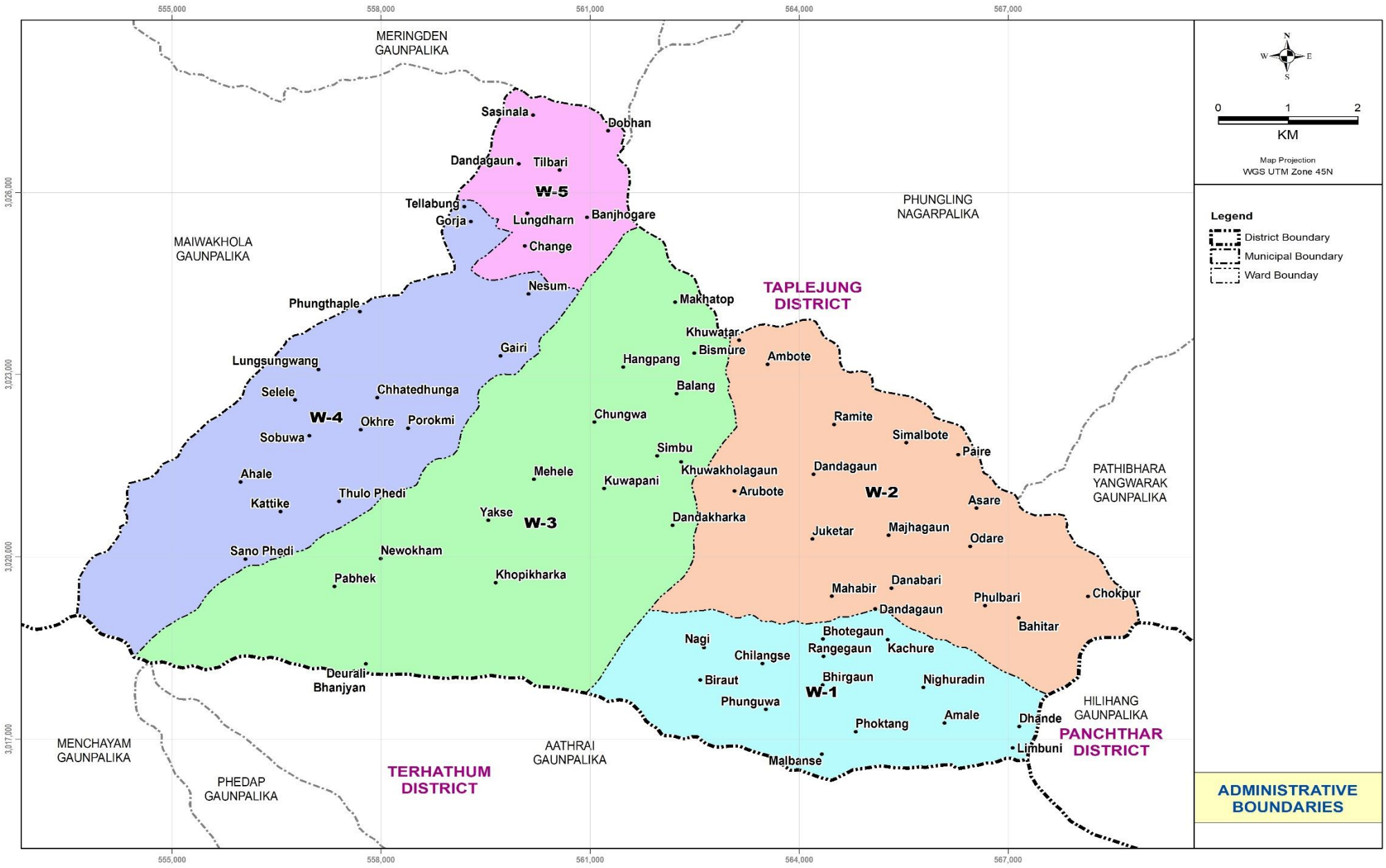
Old Baneswor, Kathmandu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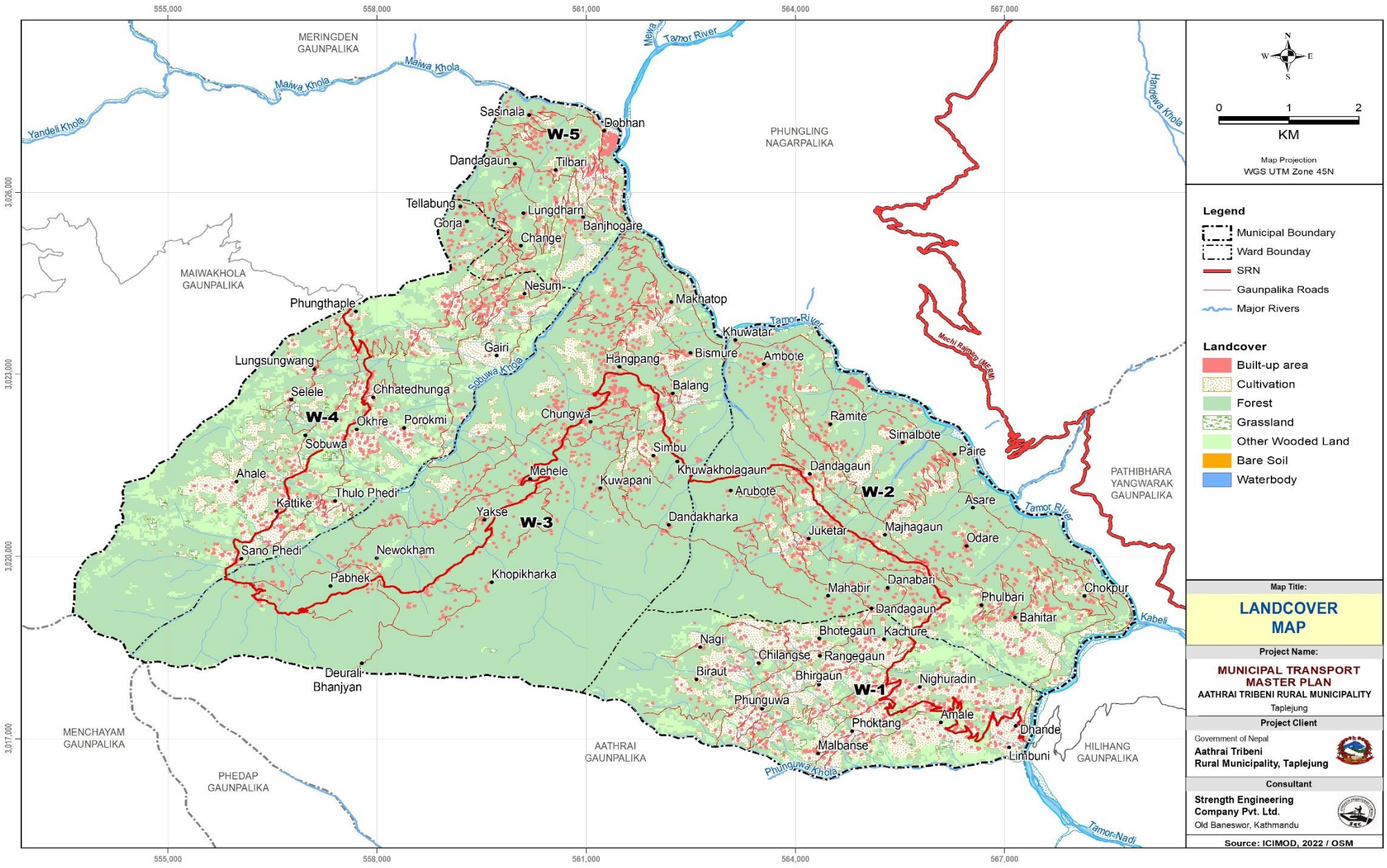
ADMINISTRATIVE BOUNDARIES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Mewa
Handewa Khola
Sobuwa Khola
Phunguwa Khola
Kabeli
Tamor-Nadi
Mechi Rajmarg (MERN)
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W-4
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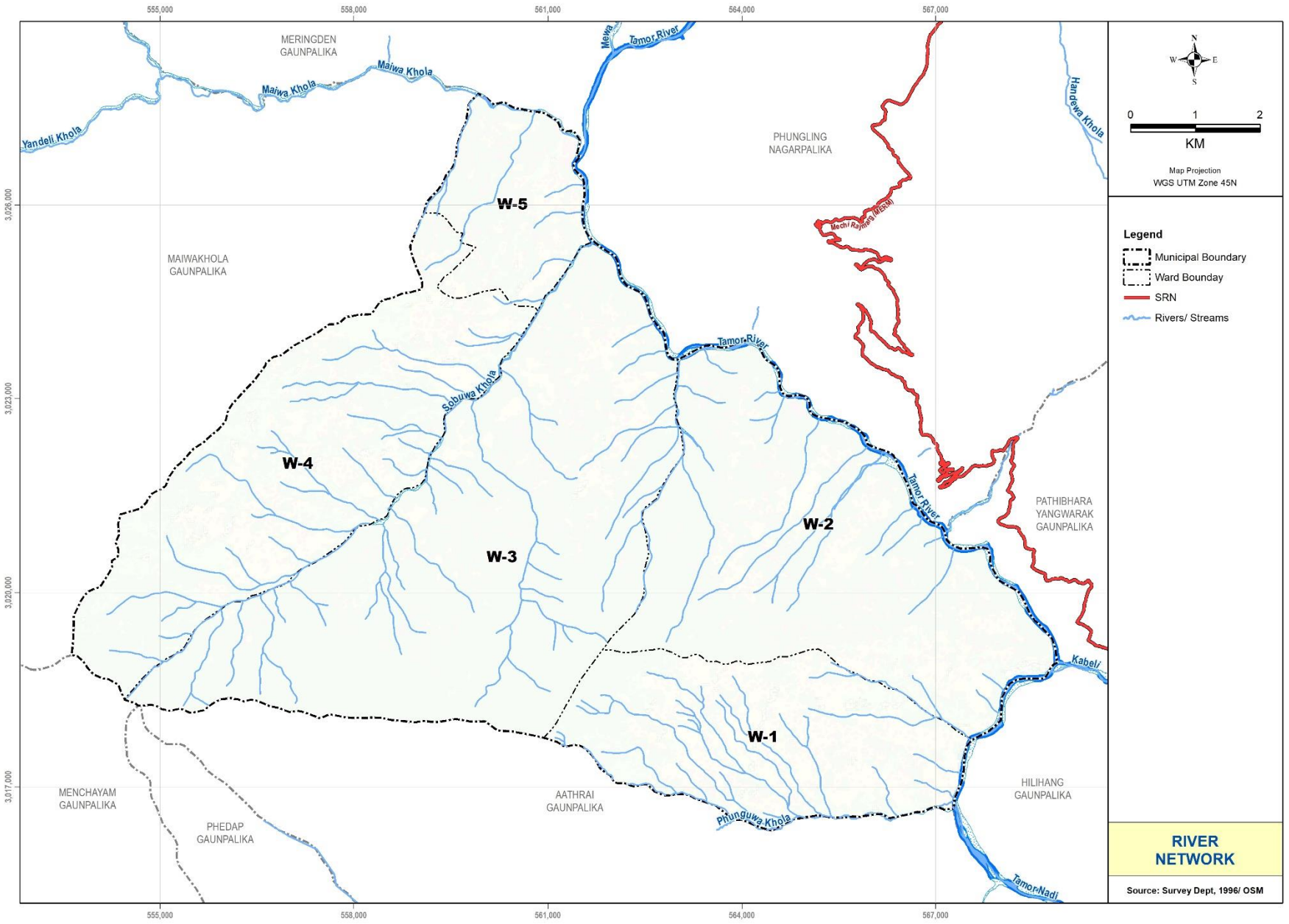
Sasinala
Dobhan
Dandagaun
Tilbari
Tellabung
Lungdharn
Gorja
Banjhogare
Change
Nesum
Phungthaple
Makhatop
Khuwatar
Gairi
Lungsungwang
Hangpang
Bismure
Ambote
Selele
Chhatedhunga
Balang
Okhre
Porokmi
Chungwa
Ramite
Simalbote
Sobuwa
Simbu
Paire
Ahale
Mehele
Khuwakholagaun
Dandagaun
Kuwapani
Arubote
Thulo Phedi
Kattike
Yakse
Dandakharka
Asare
Juketar
Majhagaun
Odare
Sano Phedi
Newokham
Pabhek
Khopikharka
Mahabir
Danabari
Chokpur
Phulbari
Dandagaun
Bahitar
Bhotegaun
Kachure
Nagi
Chilangse
Rangegaun
Birauta
Bhirgaun
Nighuradin
Phunguwa
Amale
Phoktang
Dhande
Malbanse
Limbuni
Deurali Bhanjyan
0
1
2
KM
Map Projection
WGS UTM Zone 45N
Legend
Municipal Boundary
Ward Bounday
SRN
Gaunpalika Roads
Major Rivers
Landcover
Built-up area
Cultivation
Forest
Grassland
Other Wooded Land
Bare Soil
Waterbody
Map Title:
LANDCOVER MAP
Project Name:
MUNICIPAL TRANSPORT MASTER PLAN
AATHRAI TRIBENI RURAL MUNICIPALITY
Taplejung
Project Client
Government of Nepal
Aathrai Tribeni Rural Municipality, Taplejung
Consultant
Strength Engineering Company Pvt. Ltd.
Old Baneswor, Kathmandu
Source: ICIMOD, 2022 / OSM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MERINGDEN GAUNPALIKA
MAIWAKHOLA GAUNPALIKA
PHUNGLING NAGARPALIKA
PATHIBHARA YANGWARAK GAUNPALIKA
HILIHANG GAUNPALIKA
AATHRAI GAUNPALIKA
MENCHAYAM GAUNPALIKA
PHEDAP GAUNPALIKA
Maiwa Khola
Yandeli Khola
Mewa
Tamor River
Hardewa Khola
Mechi Rajmarg (MECHI)
Sobuwa Khola
Kabeli
Phunguwa Khola
Tamor Nadi
W-1
W-2
W-3
W-4
W-5
N
W
E
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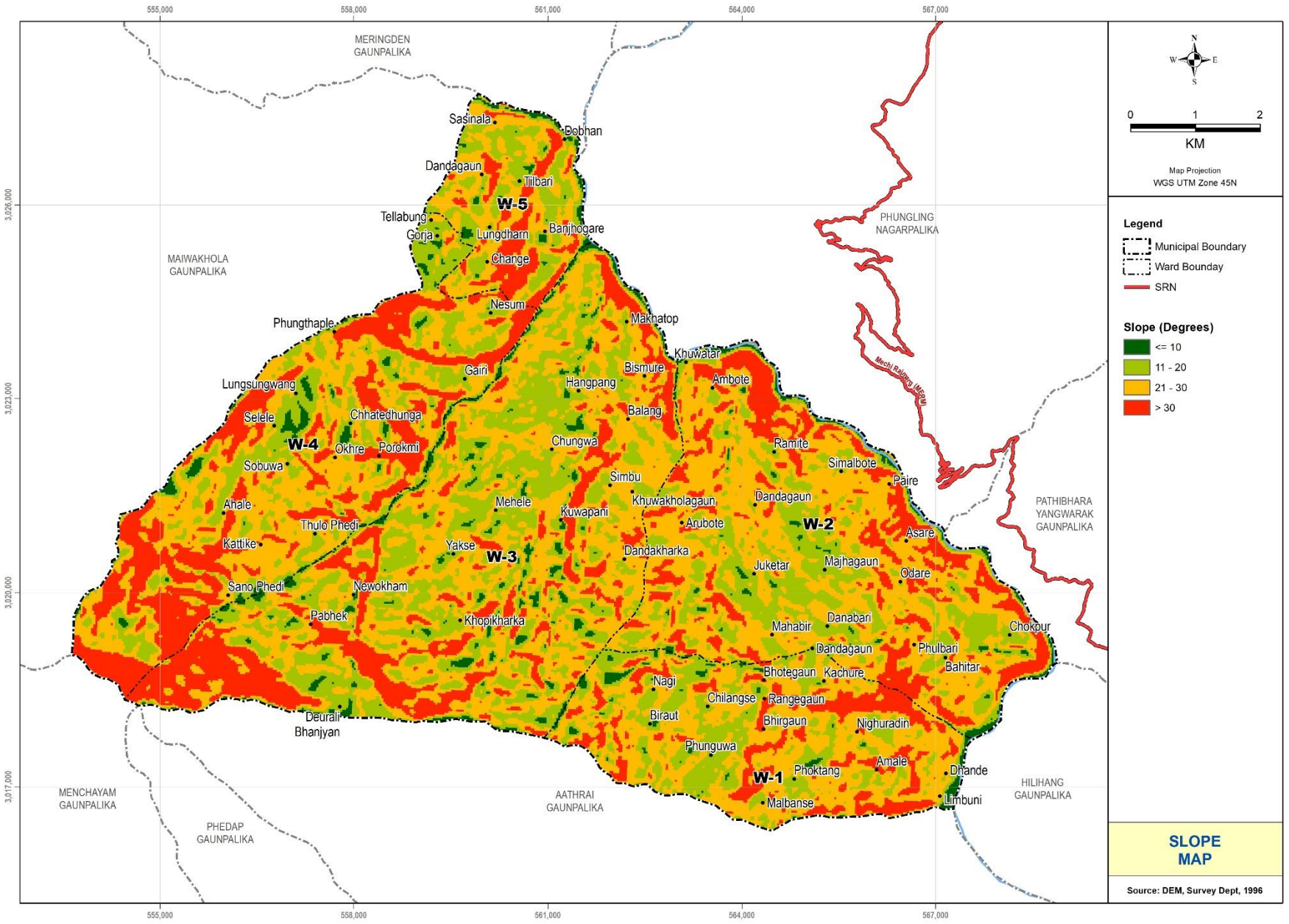
KM
Map Projection
WGS UTM Zone 45N
Legend
Municipal Boundary
Ward Bounday
SRN
Rivers/ Streams
RIVER NETWORK
Source: Survey Dept, 1996/ OSM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PHUNGLING NAGARPALIKA
PATHIBHARA YANGWARAK GAUNPALIKA
HILIHANG GAUNPALIKA
AATHRAI GAUNPALIKA
MENCHAYAM GAUNPALIKA
PHEDAP GAUNPALIKA
Mechi Rajmarg (MRW)
W-1
W-2
W-3
W-4
W-5
Sasinala
Dobhan
Dandagaun
Tilbari
Tellabung
Gorja
Lungdharn
Banjhogare
Change
Nesum
Phungthaple
Makhatop
Khuwatar
Bismure
Ambote
Gairi
Hangpang
Lungsungwang
Balang
Selele
Chhatedhunga
Okhre
Porokmi
Chungwa
Ramite
Sobuwa
Simalbote
Simbu
Paire
Ahale
Mehele
Khuwakholagaun
Dandagaun
Kuwapani
Thulo Phedi
Arubote
Asare
Kattike
Yakse
Dandakharka
Majhagaun
Juketar
Odare
Sano Phedi
Newokham
Pabhek
Khopikharka
Mahabir
Danabari
Chokpur
Dandagaun
Phulbari
Bahitar
Bhotegaun
Kachure
Nagi
Chilangse
Rangegaun
Biraut
Bhirgaun
Nighuradin
Deurali Bhanjyan
Phunguwa
Amale
Phoktang
Dhande
Malbanse
Limbuni
N
W
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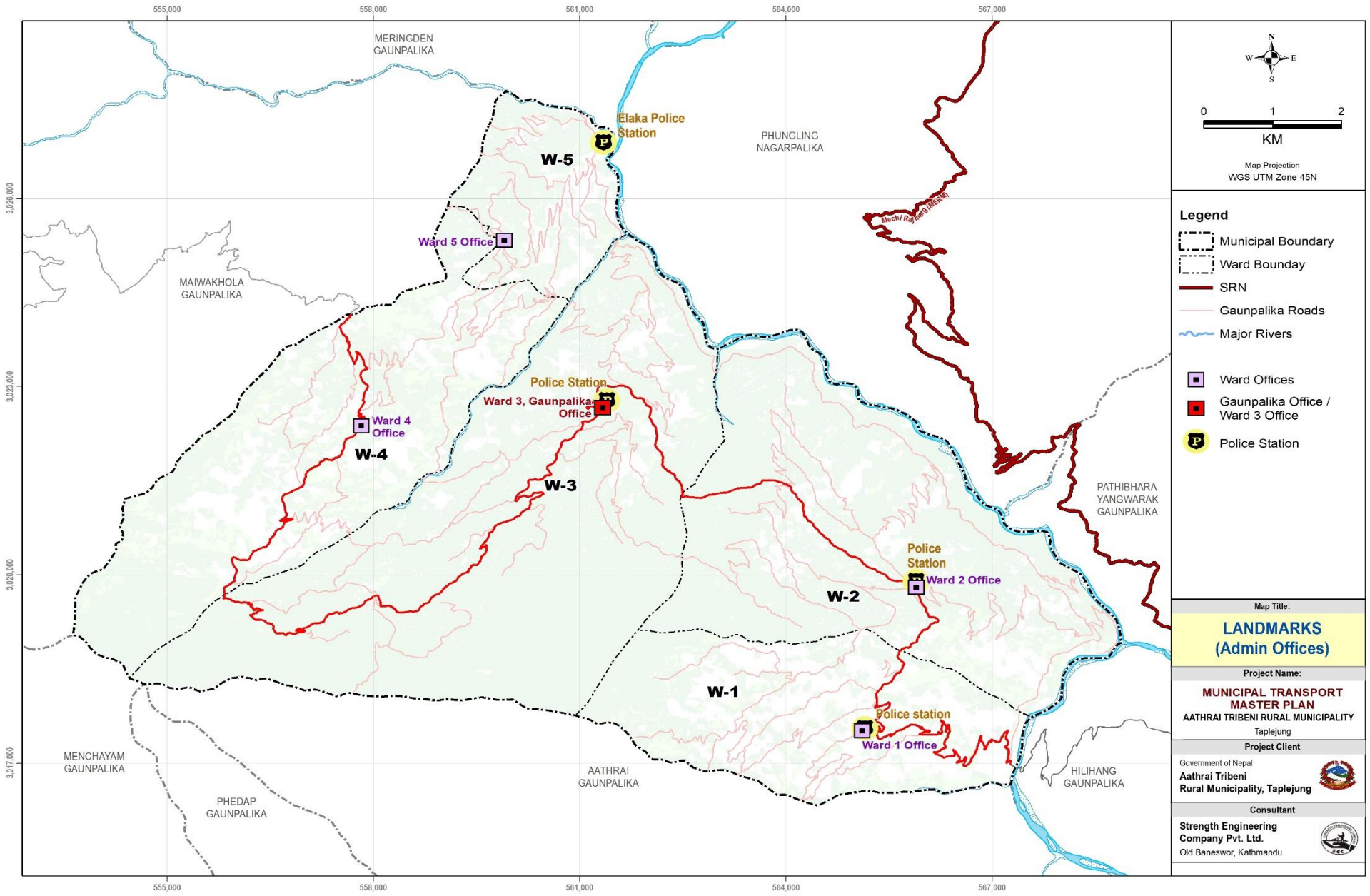
KM
Map Projection
WGS UTM Zone 45N
Legend
Municipal Boundary
Ward Bounday
SRN
Slope (Degrees)
<= 10
11 - 20
21 - 30
> 30
SLOPE MAP
Source: DEM, Survey Dept, 1996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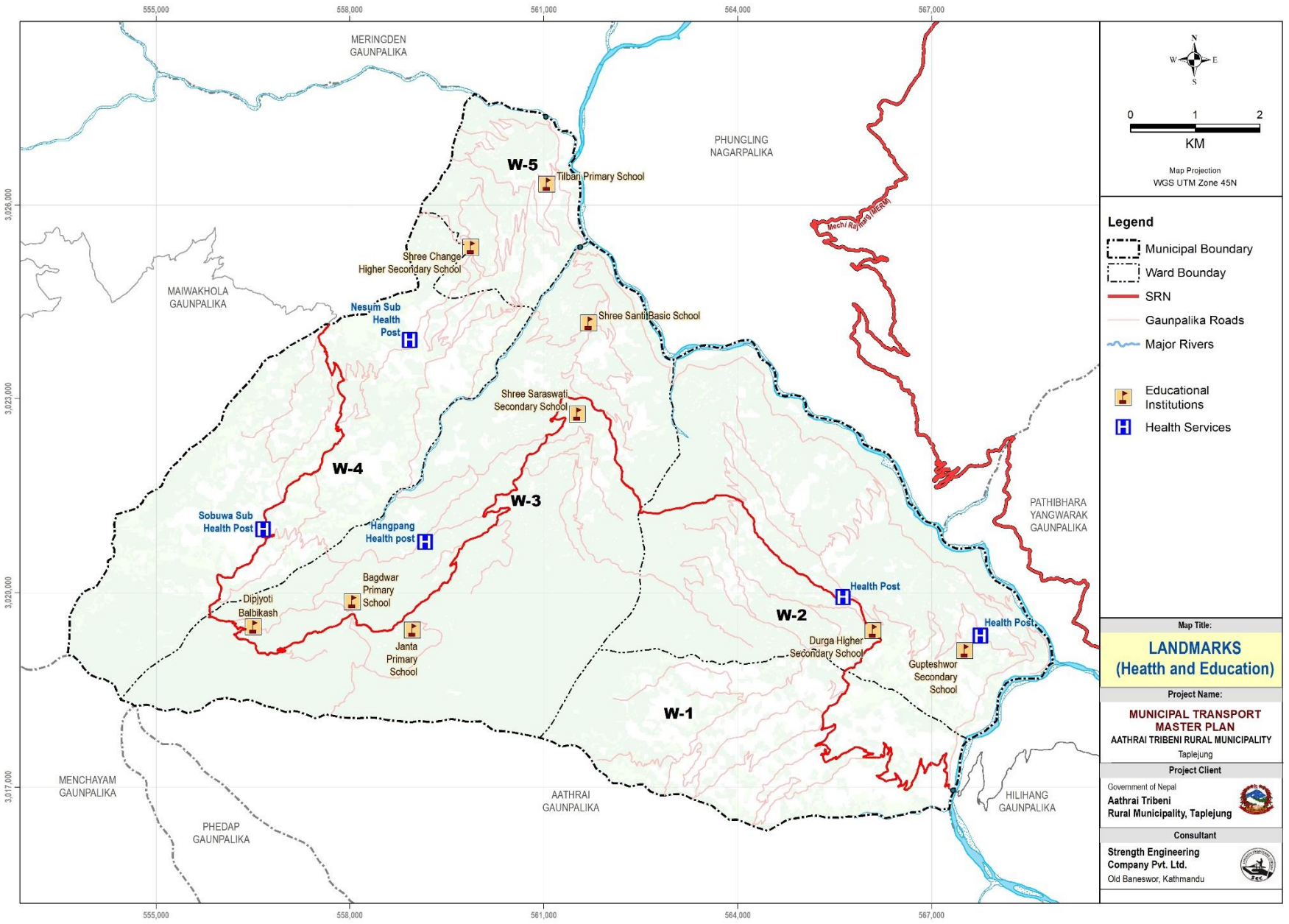
PATHIBHARA YANGWARAK GAUNPALIKA
MENCHAYAM GAUNPALIKA
PHEDAP GAUNPALIKA
AATHRAI GAUNPALIKA
HILIHANG GAUNPALIKA
Elaka Police Station
W-5
Ward 5 Office
Police Station
Ward 3, Gaunpalika Office
Ward 4 Office
W-4
W-3
Police Station
Ward 2 Office
W-2
W-1
Police station
Ward 1 Office
Mechi Rajmarg (MERM)
N
W
E
S
0 1 2
KM
Map Projection
WGS UTM Zone 45N
Legend
Municipal Boundary
Ward Bounday
SRN
Gaunpalika Roads
Major Rivers
Ward Offices
Gaunpalika Office / Ward 3 Office
Police Station
Map Title:
LANDMARKS (Admin Offices)
Project Name:
MUNICIPAL TRANSPORT MASTER PLAN
AATHRAI TRIBENI RURAL MUNICIPALITY
Taplejung
Project Client
Government of Nepal
Aathrai Tribeni Rural Municipality, Taplejung
Consultant
Strength Engineering Company Pvt. Ltd.
Old Baneswor, Kathmandu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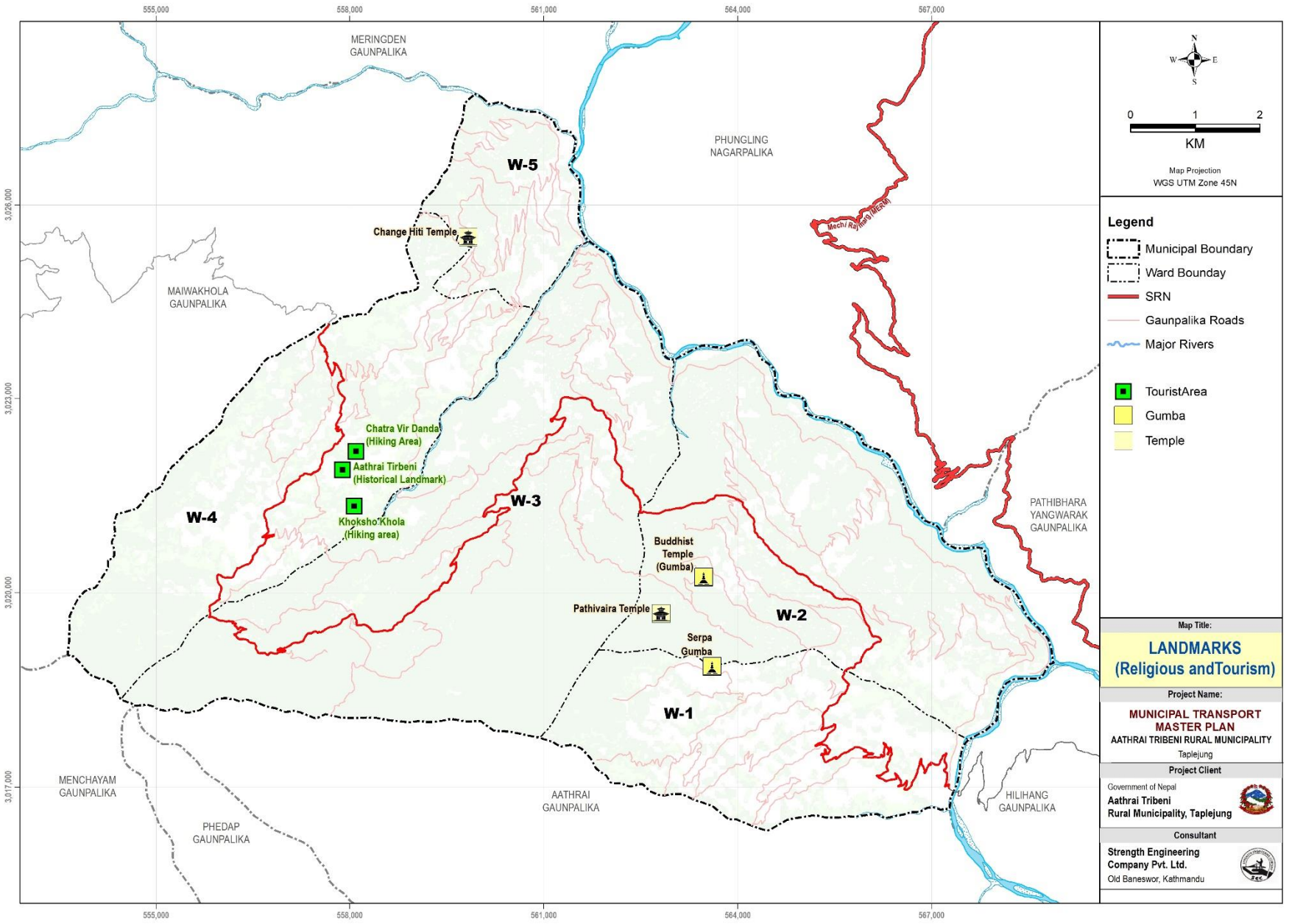
PHUNGLING NAGARPALIKA
PATHIBHARA YANGWARAK GAUNPALIKA
MENCHAYAM GAUNPALIKA
PHEDAP GAUNPALIKA
AATHRAI GAUNPALIKA
HILIHANG GAUNPALIKA
W-1
W-2
W-3
W-4
W-5
Tilbari Primary School
Shree Changer Higher Secondary School
Nesum Sub Health Post
Shree Santi Basic School
Shree Saraswati Secondary School
Sobuwa Sub Health Post
Hangpang Health post
Bagdwar Primary School
Dipjyoti Balbikash
Janta Primary School
Health Post
Durga Higher Secondary School
Health Post
Gupteshwor Secondary School
Mechi Rajmarg (MERM)
N
W
E
S
0
1
2
KM
Map Projection
WGS UTM Zone 45N
Legend
Municipal Boundary
Ward Bounday
SRN
Gaunpalika Roads
Major Rivers
Educational Institutions
Health Services
Map Title:
LANDMARKS (Heatth and Education)
Project Name:
MUNICIPAL TRANSPORT MASTER PLAN
AATHRAI TRIBENI RURAL MUNICIPALITY
Taplejung
Project Client
Government of Nepal
Aathrai Tribeni Rural Municipality, Taplejung
Consultant
Strength Engineering Company Pvt. Ltd.
Old Baneswor, Kathmandu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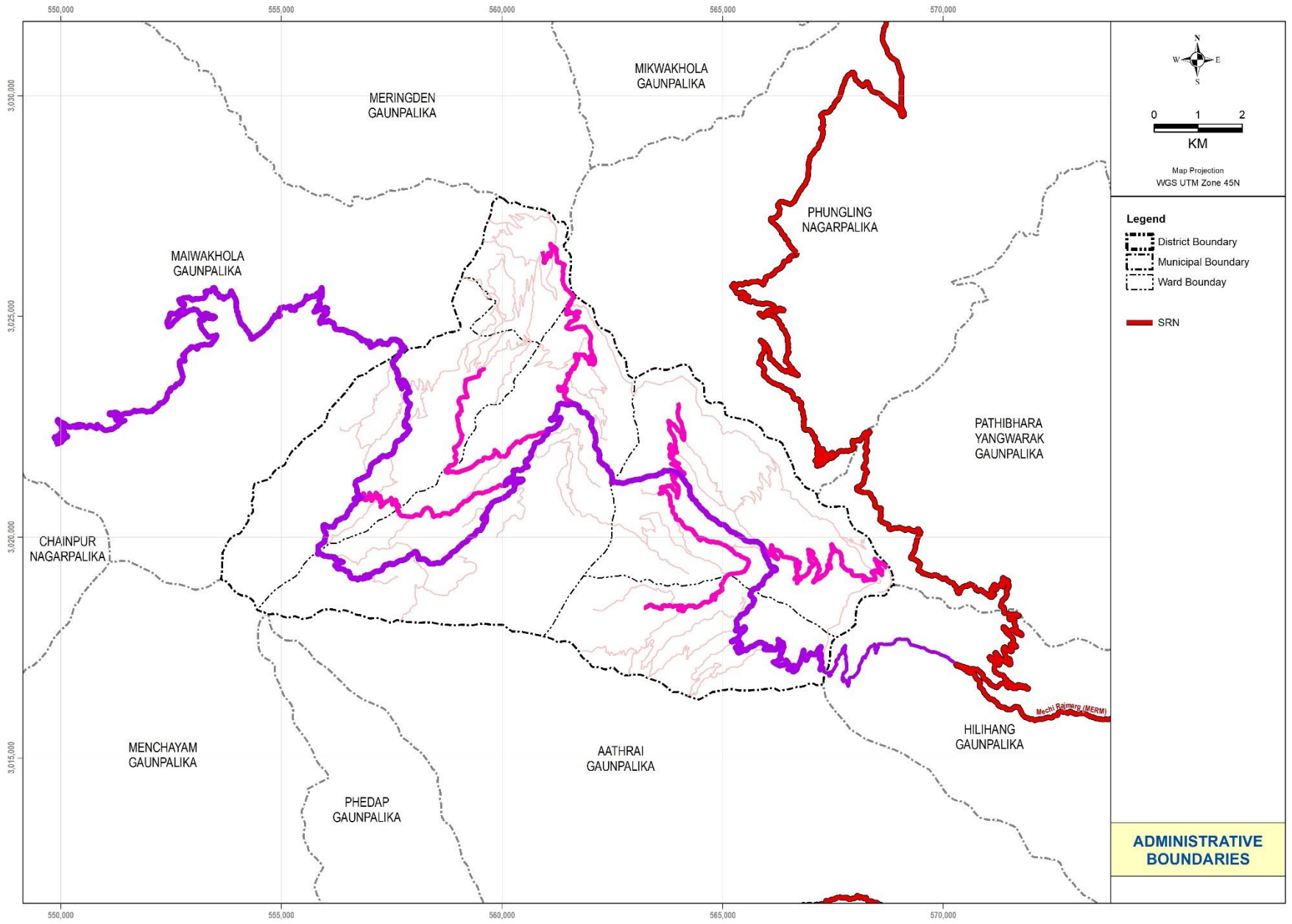
MERINGDEN GAUNPALIKA
PHUNGLING NAGARPALIKA
MAIWAKHOLA GAUNPALIKA
PATHIBHARA YANGWARAK GAUNPALIKA
MENCHAYAM GAUNPALIKA
PHEDAP GAUNPALIKA
AATHRAI GAUNPALIKA
HILIHANG GAUNPALIKA
W-1
W-2
W-3
W-4
W-5
Change Hiti Temple
Chatra Vir Danda (Hiking Area)
Aathrai Tirbeni (Historical Landmark)
Khoksho Khola (Hiking area)
Buddhist Temple (Gumba)
Pathivaira Temple
Serpa Gumba
Mechi Rajmarg (MERM)
N
W
E
S
0
1
2
KM
Map Projection
WGS UTM Zone 45N
Legend
Municipal Boundary
Ward Bounday
SRN
Gaunpalika Roads
Major Rivers
TouristArea
Gumba
Temple
Map Title:
LANDMARKS (Religious andTourism)
Project Name:
MUNICIPAL TRANSPORT MASTER PLAN
AATHRAI TRIBENI RURAL MUNICIPALITY
Taplejung
Project Client
Government of Nepal
Aathrai Tribeni Rural Municipality, Taplejung
Consultant
Strength Engineering Company Pvt. Ltd.
Old Baneswor, Kathmandu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MAIWAKHOLA GAUNPALIKA
PATHIBHARA YANGWARAK GAUNPALIKA
CHAINPUR NAGARPALIKA
Mechi Rajmarg (MERM)
HILIHANG GAUNPALIKA
MENCHAYAM GAUNPALIKA
AATHRAI GAUNPALIKA
PHEDAP GAUNPALIKA
N
W
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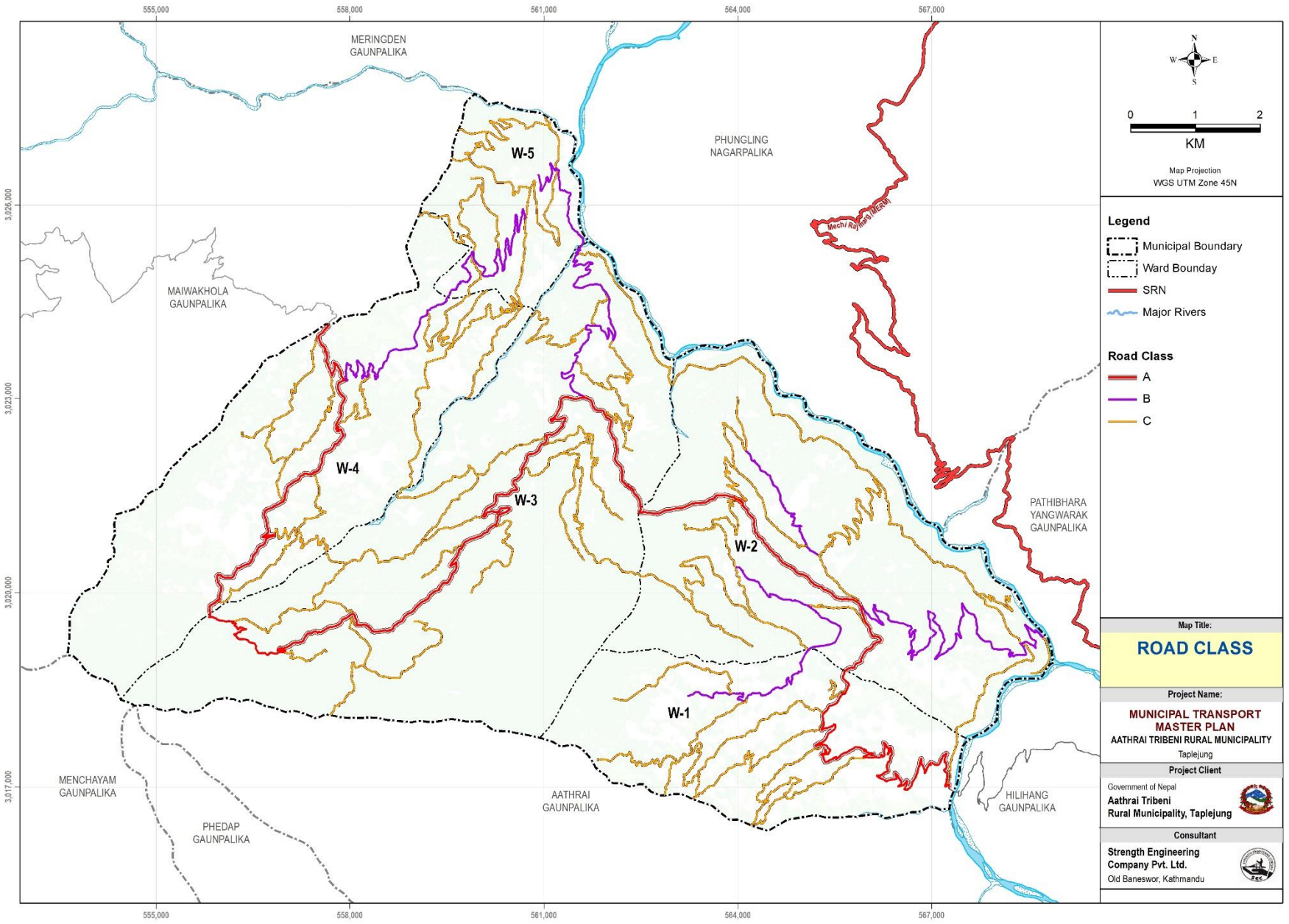
KM
Map Projection
WGS UTM Zone 45N
Legend
District Boundary
Municipal Boundary
Ward Bounday
SRN
ADMINISTRATIVE BOUNDARIES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PATHIBHARA YANGWARAK GAUNPALIKA
MENCHAYAM GAUNPALIKA
PHEDAP GAUNPALIKA
AATHRAI GAUNPALIKA
HILIHANG GAUNPALIKA
W-1
W-2
W-3
W-4
W-5
Mechi Rajmarg (MERM)
N
W
E
S
0
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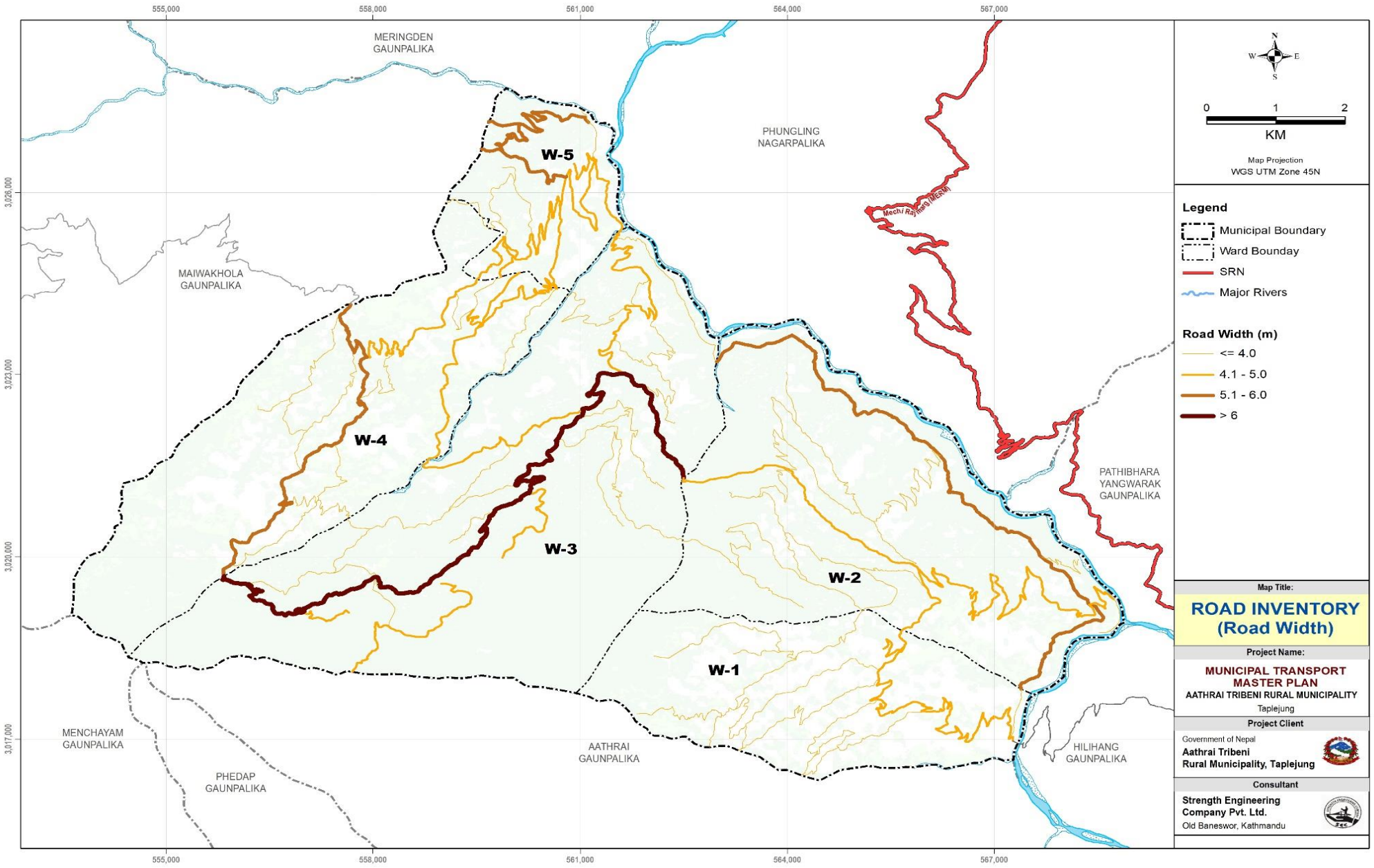
2
KM
Map Projection
WGS UTM Zone 45N
Legend
Municipal Boundary
Ward Bounday
SRN
Major Rivers
Road Class
A
B
C
Map Title:
ROAD CLASS
Project Name:
MUNICIPAL TRANSPORT MASTER PLAN
AATHRAI TRIBENI RURAL MUNICIPALITY
Taplejung
Project Client
Government of Nepal
Aathrai Tribeni Rural Municipality, Taplejung
Consultant
Strength Engineering Company Pvt. Ltd.
Old Baneswor, Kathmandu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PHUNGLING NAGARPALIKA
MAIWAKHOLA GAUNPALIKA
PATHIBHARA YANGWARAK GAUNPALIKA
MENCHAYAM GAUNPALIKA
PHEDAP GAUNPALIKA
AATHRAI GAUNPALIKA
HILIHANG GAUNPALIKA
W-1
W-2
W-3
W-4
W-5
Mechi Rajmarg (MERM)
N
W
E
S
0
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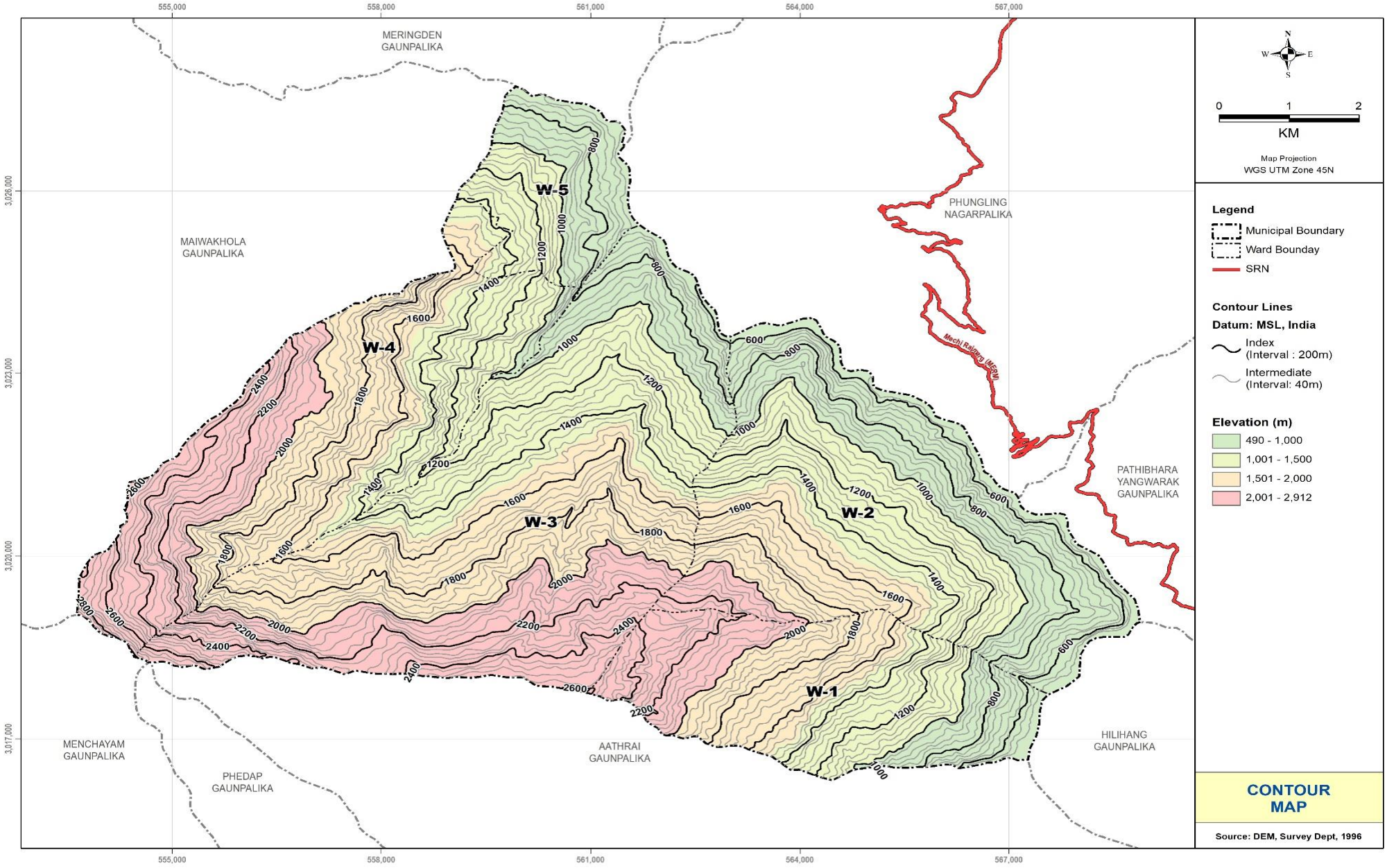
2
KM
Map Projection
WGS UTM Zone 45N
Legend
Municipal Boundary
Ward Bounday
SRN
Major Rivers
Road Width (m)
<= 4.0
4.1 - 5.0
5.1 - 6.0
> 6
Map Title:
ROAD INVENTORY (Road Width)
Project Name:
MUNICIPAL TRANSPORT MASTER PLAN
AATHRAI TRIBENI RURAL MUNICIPALITY
Taplejung
Project Client
Government of Nepal
Aathrai Tribeni Rural Municipality, Taplejung
Consultant
Strength Engineering Company Pvt. Ltd.
Old Baneswor, Kathmandu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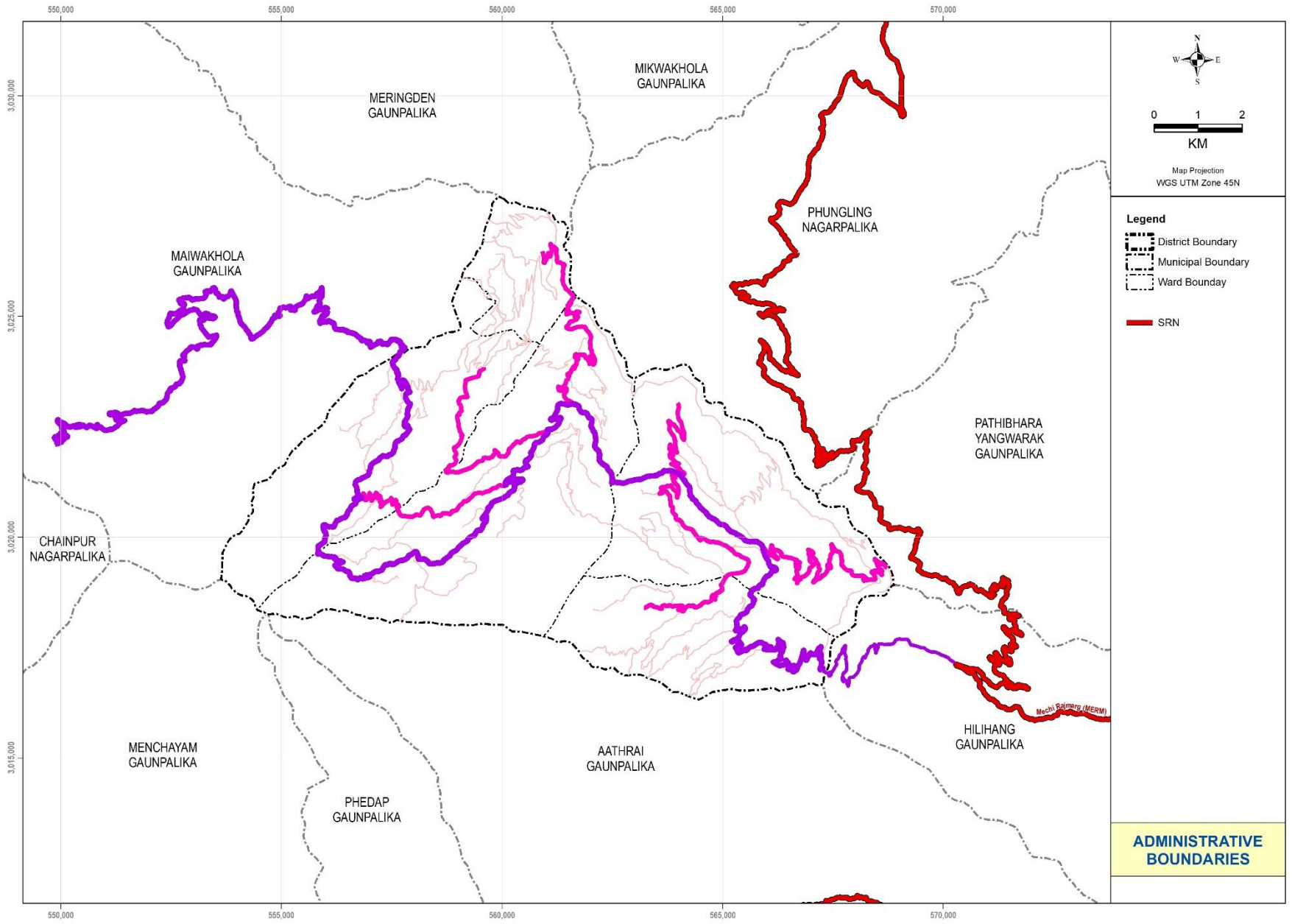
MERINGDEN GAUNPALIKA
MAIWAKHOLA GAUNPALIKA
PHUNGLING NAGARPALIKA
PATHIBHARA YANGWARAK GAUNPALIKA
HILIHANG GAUNPALIKA
AATHRAI GAUNPALIKA
MENCHAYAM GAUNPALIKA
PHEDAP GAUNPALIKA
Mechi Rajmarg (NS6W)
W-1
W-2
W-3
W-4
W-5
N
W
E
S
0
1
2
KM
Map Projection
WGS UTM Zone 45N
Legend
Municipal Boundary
Ward Bounday
SRN
Contour Lines
Datum: MSL, India
Index (Interval : 200m)
Intermediate (Interval: 40m)
Elevation (m)
490 - 1,000
1,001 - 1,500
1,501 - 2,000
2,001 - 2,912
CONTOUR MAP
Source: DEM, Survey Dept, 1996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MERINGDEN GAUNPALIKA
MIKWAKHOLA GAUNPALIKA
PHUNGLING NAGARPALIKA
MAIWAKHOLA GAUNPALIKA
PATHIBHARA YANGWARAK GAUNPALIKA
CHAINPUR NAGARPALIKA
MENCHAYAM GAUNPALIKA
PHEDAP GAUNPALIKA
AATHRAI GAUNPALIKA
HILIHANG GAUNPALIKA
Mechi Rajmarg (MERM)
N
W
E
S
0 1 2
KM
Map Projection
WGS UTM Zone 45N
Legend
District Boundary
Municipal Boundary
Ward Bounday
SRN
ADMINISTRATIVE BOUNDARIES

ANNEX I-C

MINUTES

मिती २०८१-११-२०

आज मिती २०८१-११-२० गतेका दिन आठराई त्रिवेणी गाउँपालिका ताप्लेजुङ को यातायात गुरु योजना (MTMP) निर्माणको सिलसिलामा यसै गाउँपालिका अन्तर्गत वडा नं -०१ को वडा कार्यालयमा यसै वडाका वडा अध्यक्ष श्री रामप्रसाद पाठक ज्यू को अध्यक्षतामा बैठक बसि वडा निम्न प्रस्तावहरुमा छलफल गरियो।

उपस्थिती	हस्ताक्षर
१) श्री रामप्रसाद पाठक वडा अध्यक्ष	
२) श्री चेतन बहादुर घिमीरिया	
३) श्री हर्कराज पोमु (का.स.)	

प्रस्ताव नं -१ वडा भित्रका सबै सडकहरुको पहिचान सम्बन्धमा।

प्रस्ताव नं -१ माथि छलफल गर्दा यस वडा नं १ भित्रका मुख्य तथा शाखा सडक हरुको पहिचान गरि स्थलगत अध्ययन गर्ने निर्णय गरियो।

मिती २०८१-११-२६

आज मिति २०८१-११-२६ गतेका दिन यस आठराई त्रिवेणी गाउँपालिका ताप्लेजुङ को यातायात गुरु योजना (MTMP) निर्माणको सिलसिलामा यसै गाउँपालिका अन्तर्गत वडा नं -२ को वडा कार्यालयमा यसै वडाको वडा अध्यक्ष श्री टेकिन्द्र सेन्दाङ ज्यू को अध्यक्षतामा बैठक बसि निम्न प्रस्ताव उपर छलफल गरियो ।

उपस्थिति | हस्ताक्षर

१) श्री टेकिन्द्र सेन्दाङ वडा अध्यक्ष
२) श्री बासुदेव अधिकारी सब-इन्जिनियर
३) श्री मनिसा बुढामगर वडा सचिव
४) श्री सारदा कुमारी लिम्बु वडा सदस्य -
५) श्री आपृता लिं.लिं. वडा सदस्य -

प्रस्ताव नं -१ - वडा भित्र रहेका सडक हरुको पहिचान गर्ने सम्बन्धमा ।

प्रस्ताव नं -१ माथि छलफल गर्दा वडा नं -०२ भित्र रहेका मुख्य तथा शाखा सडक हरुको पहिचान गरि स्थलगत अध्ययन गर्ने निर्णय गरियो ।

२०८१।११।२६

मिती २०८१-११-२१

आज मिती २०८१-११-२१ गतेका दिन यस आठराई त्रिवेणी ताप्लेजुङ को यातायात गुरु योजना (MTMT) निर्माणको सिलसिलामा यसै पालिका अन्तर्गत वडा नं ३ को वडा कार्यालयमा यसै वडाका वडा अध्यक्ष श्री सुर्यमान याक्सो ज्यू को अध्यक्षतामा बैठक बसि निम्न प्रस्तावमा छलफल गरियो ।

उपस्थितीहरु — हस्ताक्षर

१) श्री सुर्यमान याक्सो वडा अध्यक्ष
२) श्री सविता गुरुङ
३) श्री सन्जु तेह्रहाङ
४) श्री भाल बहादुर लिम्बु

प्रस्ताव १ वडा भित्रका सबै सडक हरुको पहिचान सम्बन्धमा ।

प्रस्ताव नं १ माथि छलफल गर्दा वडा नं ३ भित्र भएका सबै मुख्य तथा शाखा सडक हरुको पहिचान गरि स्थलगत अध्ययन गर्ने निर्णय गरियो ।

मिति २०८१-११-२२

आज मिति २०८१-११-२२ गतेका दिन यस आठराई त्रिवेणी गाँउपालिका ताप्लेजुङ को यातायात गुरु योजना (MTMP) निर्माणको सिलसिलामा यस पालिका अन्तर्गत वडा नं ०४ को वडा कार्यालयमा यस वडाका वडा अध्यक्ष श्री अर्जुन लिम्बु ज्यू को अध्यक्षतामा बैठक बसी निम्न प्रस्ताव हरुमा छलफल गरियो ।

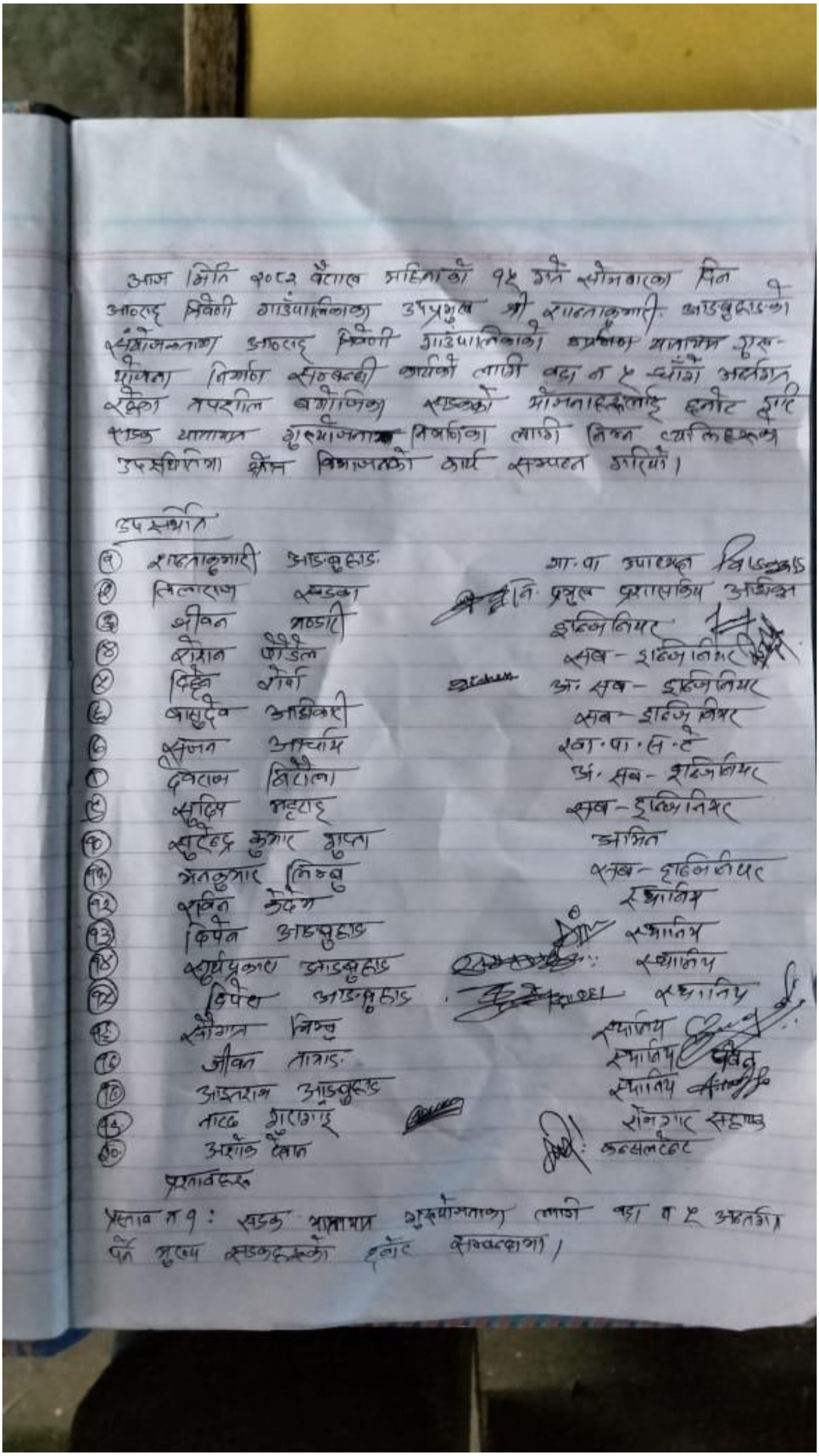
उपस्थितीहरु :- हस्ताक्षर

१) श्री अर्जुन लिम्बु वडा अध्यक्ष [signature] २०८१।११।२२
२) श्री सुन्दर राम लिम्बु वडा सदस्य [signature]
३) श्री नेत्र प्रसाद बराल शिक्षक [illegible] मा.वि. [signature]
४) श्री [illegible] प्रसाद लिम्बु वडा सचिव [signature]

प्रस्ताव नं १ :- वडा भित्रका सडक आयोजना हरुको पहिचान सम्बन्धमा ।

प्रस्ताव नं १ माथि छलफल गर्दा यस वडा नं ०४ भित्र रहेका मुख्य तथा शाखा सडकहरुको पहिचान गरि आवश्यकता अनुसार स्थलगत अध्ययन गरियो ।

[signature] २०८१।११।२२



आज मिति २०८२ वैशाख महिनाको १५ गते सोमबारका दिन आठराई त्रिवेणी गाउँपालिकाका उपप्रमुख श्री शान्ताकुमारी आङबुहाङको संयोजकत्वमा आठराई त्रिवेणी गाउँपालिकाको ग्रामीण यातायात गुरु-योजना निर्माण सम्बन्धी कार्यको लागि वडा नं ५ भित्र अवस्थित रहेका तपसील बमोजिमका सडकको योजनाहरूलाई छनौट गरी सडक यातायात गुरुयोजना निर्माणका लागि निम्न व्यक्तिहरूको उपस्थितिमा [illegible] बैठकको कार्य सम्पन्न गरियो।

उपस्थिति

१	शान्ताकुमारी आङबुहाङ	गा.पा उपाध्यक्ष
२	तिलाराम खड्का	नि. प्रमुख प्रशासकीय अधिकृत
३	जीवन भण्डारी	इन्जिनियर
४	रोशन पौडेल	सब-इन्जिनियर
५	दिक्षु [illegible]	अ. सब-इन्जिनियर
६	बासुदेव अधिकारी	सब-इन्जिनियर
७	सृजन आचार्य	[illegible]
८	देवराज [illegible]	अ. सब-इन्जिनियर
९	सुदिप भट्टराई	सब-इन्जिनियर
१०	सुरेन्द्र कुमार गुप्ता	अमिन
११	मनकुमार लिम्बु	सब-इन्जिनियर
१२	रविन केदेम	स्थानीय
१३	किपेन आङसुहाङ	स्थानीय
१४	सूर्यप्रकाश आङबुहाङ	स्थानीय
१५	दिपेश आङबुहाङ	स्थानीय
१६	सौगात लिम्बु	स्थानीय
१७	जीवन तामाङ	स्थानीय
१८	आइतराज आङबुहाङ	स्थानीय
१९	नारद गुरागाई	सीनियर सहायक
२०	अशोक [illegible]	कन्सल्टेन्ट

प्रस्तावहरू

प्रस्ताव नं १: सडक यातायात गुरुयोजनाका लागि वडा नं ५ अन्तर्गत पर्ने मुख्य सडकहरूको छनौट सम्बन्धमा।

ANNEX I-D

PHOTOGRAPHS


Preparation of Rural Municipal Transport Master Plan
(RMTMP)
Of
Aatharai Tribeni Rural Municipality
ग्रामीण यातायात गुरूयोजना तर्जुमा
प्रारम्भिक कार्यशाला गोष्ठी
2081/11/13
Presented by :
Strength Engineering Company Pvt. Ltd.
Baneshwor, Kathmandu


ROW & Carriage Way


Thank you !!!


Thank you !!!


Thank you !!!

ANNEX I-E

Road Priority

MUNICIPAL ROAD

Rank	Municipal Road Code	Name of Road	Population per km (15-20)	Annual Production equivalent to NRs/ km (5-10)	people to be directly benefited by new growth or service centres expressed as persons per km year Anticipated number of (5-15)	areas for special consideration, such as areas inhabited by backward and poor ethnic groups/communities, isolated remote areas, historic sites, religious sites etc (10-15)	Anticipated annual financial turn-over from developing the sites expressed as NRs/ km (10-20)	Estimated annual transaction in these centres equivalent to NRs/km (15-20)	Direct link with another linkage (5-10)	Population served by these service centres expressed as persons per km per year (15-20)	Total Score	Marks Obtained
1	M10105A01	Limbuni -Juketar-Hanpang-Pabhek-Sano Phedi -Kattike-Sobuwa-Lungsungwang-Phungthaple-Sanghu	20	10	15	13	19	20	10	19	126	100.00
2	M10105B01	Juketar-Nagi Danda	17	6	12	11	14	15	7	17	99	78.57
3	M10105	Ward 2-Danaban-Chokpur	17	6	12	12	14	15	6	17	99	78.57
4	M10105	Dandagaun - Ambote	17	6	12	12	13	15	7	17	99	78.57
5	M10105	Paalika-Sobuwakhola Dobhan	17	6	12	12	14	15	6	17	99	78.57
6	M10105	Paalika-Charaane	17	6	12	12	14	15	6	17	99	78.57

7	M10105	Kattike - Mehele	17	6	12	12	14	15	6	17	99	78.57
8	M10105	Dobhan-Sobuwa W4-W5	17	6	12	11	14	15	7	17	99	78.57
9	M1010503C	Khari Vir -Khaltea-Phunguwa	17	6	12	12	13	16	6	17	99	78.57
10	M1010504C	Krishi Sadak	17	6	12	11	14	15	7	17	99	78.57
11	M1010506C	Paalika-Kachure	14	9	10	10	12	12	2	5	75	59.9
12	M1010507C	Phunguwa	13	5	10	10	11	12	4	8	73	57.93
13	M1010509C	Phunguwa khola-Malla raj Pomu Ghar-Bheralo vir(Part I)	12	5	9	10	10	15	4	7	72	56
14	M1010511C	Sukamerwori-vadaue-yuwa-Dhungasaagu	13	5	9	10	10	17	5	7	75	59.9
15	M1010512C	Ward1- Malbanse	12	5	10	11	9	17	5	7	75	59
16	M1010513C	Arubote-Dandagaun	10	5	10	10	8	15	9	7	74	55
17	M1010514C	Arubote-Juketar-Mahabir-Dandagaun	10	6	9	9	8	14	8	6	70	54
18	M10105	Ward 2 office-Ramite-Ambote- Tamor Corridor	14	9	10	10	12	12	2	5	75	59.9
19	M1010517C	Hangpang Mulchowk-Dandakharka-Mahabir-Dandagaau-Nagi Danda	13	5	10	10	11	12	4	8	73	57.93
20	M1010518C	Juketar-Nagi Danda	12	5	9	10	10	15	4	7	72	56
21	M1010519C	Juketar-Ward Offce 2	13	5	9	10	10	17	5	7	75	59.9
22	M1010520C	Kaabeli Mandir-Corridor	12	5	10	11	9	17	5	7	75	59
23	M10105	Pathivara Temple	10	5	10	10	8	15	9	7	74	55
24	M10105	Ward 2 Office -Paire	14	9	10	10	12	12	2	5	75	59.9
25	M10105	Paalika-Pamgra jhamal-Khuwakhola-ward 2	13	5	10	10	11	12	4	8	73	57.93
26	M10105	Bagdwar Primary School	12	5	9	10	10	15	4	7	72	56

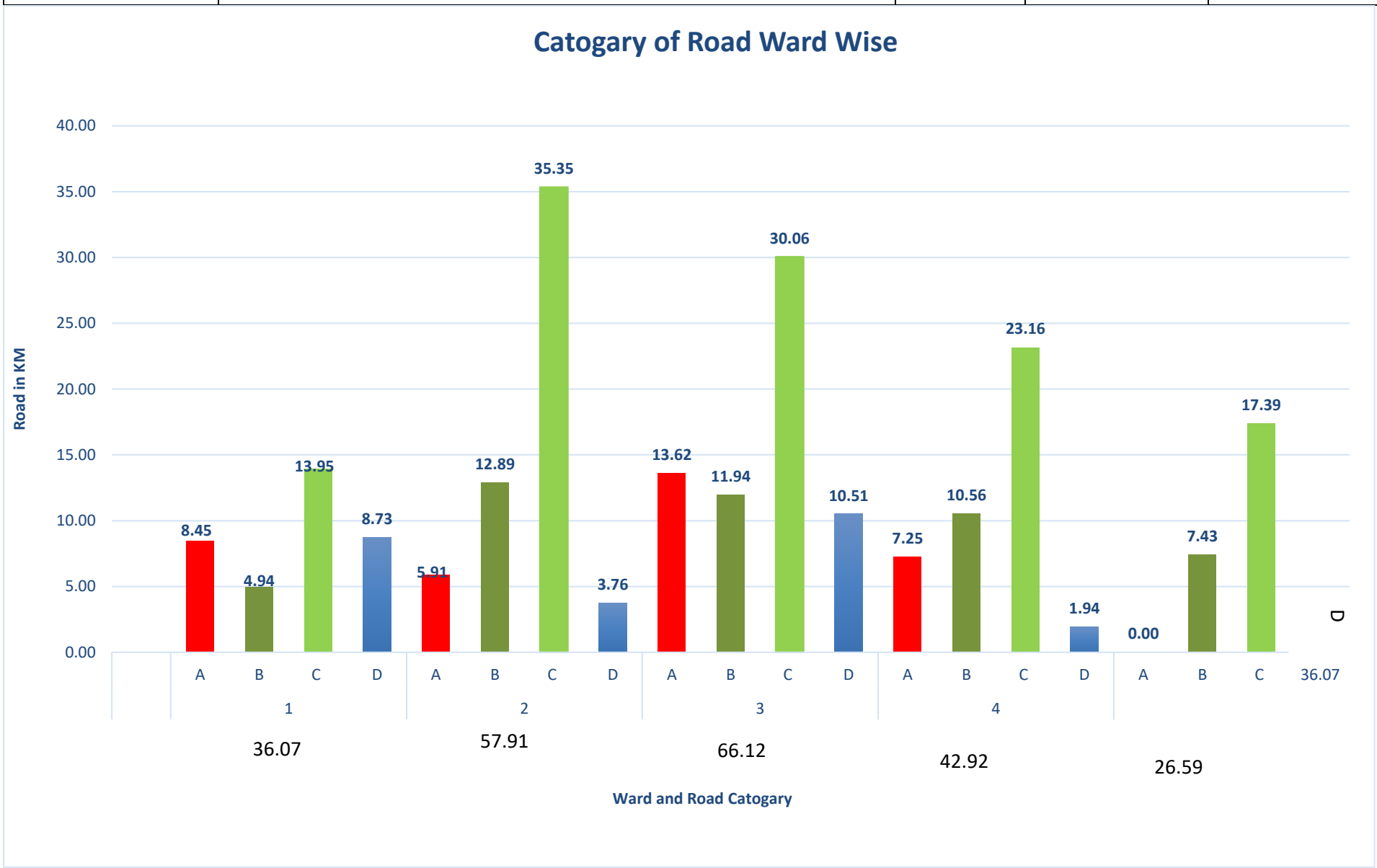
27	M10105	Chungwa Road	13	5	9	10	10	17	5	7	75	59.9
28	M10105	Daurali Bhanjyan-ShyamChowk	12	5	10	11	9	17	5	7	75	59
29	M10105	Dhungea-Osalea-Titeani	10	5	10	10	8	15	9	7	74	55
30	M10105	Kalika Primary School-Chuwo Khola-Tar Gaau-DandaKharka	10	6	9	9	8	14	8	6	70	54
31	M10105	Kanxi Chowk-Makarjung ko ghar-thultar	14	9	10	10	12	12	2	5	75	59.9
32	M10105	Tek Raj ko Ghar -Bhangtar -Tityane	13	5	10	10	11	12	4	8	73	57.93
33	M10105	Ward 3 office-Balang-Bismure-Khuwa (Kirshi Sadak)	12	5	9	10	10	15	4	7	72	56
34	M10105	Charaane Chowk-Nesum-HealthPost Road	13	5	9	10	10	17	5	7	75	59.9
35	M10105	Gufaa-Bhuja-gojar-Lungsungwang-Selele	12	5	10	11	9	17	5	7	75	59
36	M10105	Kamal Danda-Lungsungwang-Bhandari Danda-Okhre Road	10	5	10	10	8	15	9	7	74	55
37	M10105	Lungsungwang-Devi Than-Kattike-Poudel Gaau-Mijar Gaau Road	10	6	9	9	8	14	8	6	70	54
38	M10105	Nesum	14	9	10	10	12	12	2	5	75	59.9
39	M10105	Nesum-Banjhogare-Sobuwa Dovan Ghat	13	5	10	10	11	12	4	8	73	57.93
40	M10105	Sobuwa-Selele	12	5	9	10	10	15	4	7	72	56
41	M10105	Sobuwa-selele-Phungthaple	14	9	10	10	12	12	2	5	75	59.9
42	M10105	Ward 5-Tellabung	13	5	10	10	11	12	4	8	73	57.93
43	M10105	Dandagaun-Sasinala Road	12	5	9	10	10	15	4	7	72	56
44	M10105	Dobhan-Sasinala	13	5	9	10	10	17	5	7	75	59.9
45	M10105	Nesum-Banjhogare-Sobuwa Dovan Ghat	12	5	10	11	9	17	5	7	75	59
46	M10105	Nesum-Change-Ward5	10	5	10	10	8	15	9	7	74	55
47	M10105	Ward 5-Tellabung	10	6	9	9	8	14	8	6	70	54
48	M10105	Ward5-Dandagaun	14	9	10	10	12	12	2	5	75	59.9
49	M10105	Ward5-Lungdharn-Dandagaun	13	5	10	10	11	12	4	8	73	57.93
50	M1010501C	Banpale-Gaire gaau-Phoktang	12	5	9	10	10	15	4	7	72	56

51	M1010505C	Oli Danda-Bhota Tar-Dhodra	13	5	9	10	10	17	5	7	75	59.9
52	M1010508C	Phunguwa Khola-Janakalyan School-Paalikaa	12	5	10	11	9	17	5	7	75	59
53	M10105010C	Phunguwa to Pathivara mati jangule	10	5	10	10	8	15	9	7	74	55
54	M10105	Maata/Mitlaa-Corridor	10	6	9	9	8	14	8	6	70	54
55	M10105	Tamor Corridor -Ambote-Majhagaun-Ward 2 office	10	6	9	9	8	14	8	6	70	54
56	M10105	Connector of paalika road and Khuwo khola road	17	8	14	12	12	13	7	17	46	39
57	M10105	Paalika -Sirjaag Secondary School-Mill-Kanchi Chowk	16	8	13	13	11	14	8	17	55	38
58	M10105	Pabhek-Newokham-Sobuwa Khola	5	6	5	5	5	5	7	7	50	31
59	M10105	Shree Santi Basic School-Micherigha-Krishi Sadak	5	6	5	5	5	5	7	7	50	31
60	M10105	Gai Thun-Chuwaa Khola-Thuti-Sobuwa Khola	5	6	5	5	5	5	7	7	50	31
61	M10105	Gaurab Sadak -Simbu	5	6	5	5	5	5	7	7	50	31
62	M10105	Health Post-Paalika-Charaane	5	6	5	5	5	5	7	7	50	31
63	M10105	Sobuwa Khola-Gairi-Nesum	5	6	5	5	5	5	7	7	50	31
64	M10105	Ward5- Lungdarn-Dandagaun	5	6	5	5	5	5	7	7	50	31
65	M10105A01	Limbuni -Juketar-Hanpang-Pabhek-Sano Phedi -Kattike-Sobuwa-Lungsungwang-Phungthaple-Sanghu	5	6	5	5	5	5	7	7	50	31
66	M10105B01	Juketar-Nagi Danda	5	6	5	5	5	5	7	7	50	31

Length of Road and Category According to Ward

Ward	Category	Total Length	Total length (km) of road ward(KM)	Total Rural Municipality
1	A	8.45	36.07	229.62
	B	4.94		
	C	13.95		
	D	8.73		
2	A	5.91	57.91	
	B	12.89		
	C	35.35		
	D	3.76		
3	A	13.62	66.12	
	B	11.94		
	C	30.06		
	D	10.51		
4	A	7.25	42.92	
	B	10.56		
	C	23.16		
	D	1.94		
5	A	0.00	26.59	
	B	7.43		
	C	17.39		

	D	1.8		


Catogary of Road Ward Wise
Road in KM
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
8.45
4.94
13.95
8.73
5.91
12.89
35.35
3.76
13.62
11.94
30.06
10.51
7.25
10.56
23.16
1.94
0.00
7.43
17.39
36.07
A B C D A B C D A B C D A B C D A B C
1 2 3 4
36.07
57.91
66.12
42.92
26.59
Ward and Road Catogary

ANNEX I-E

Traffic Count

	Motorised																										
	Truck						Bus						Car Jeep Taxi		Utility/Pick up		Auto Rickshaw		Tractor		Power Trailer		Motor Cycle		Total		
Type	3 or more Axle		2 axle		Mini		Large		Mini		Micro						3 Wheelers		All								
Time	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a+b
8:00-8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	3	4	4	5	9
8:15-8:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	2	3	4	3	7
8:30-8:45	0	0	0	0	0	1	0	0	0	0	0	0	1	1	1	1	0	0	0	1	0	0	4	7	6	11	17
8:45-9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	7	4	9	4	13
9:00-9:15	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	1	1	0	0	4	8	6	11	17
9:15-9:30	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	11	9	13	10	23
9:30-9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	15	8	16	10	26
9:45-10:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	10	11	10	13	23
10-10:15	0	0	1	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	14	8	18	8	26
10:15-10:30	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	18	13	20	15	35
10:30-10:45	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	14	11	16	11	27
10:45-11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	16	10	17	12	29
11:00-11:15	0	0	0	0	1	0	0	0	1	1	0	0	1	1	1	0	0	0	1	0	0	0	9	8	14	10	24
11:15-11:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	1	0	0	0	14	7	17	8	25
11:30-11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	1	0	0	11	9	12	12	24
11:45-12:00	0	0	0	1	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	12	8	15	9	24
12:00-12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	9	7	9	16
12:15-12:30	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	1	0	0	1	1	0	0	8	13	12	16	28
12:30-12:45	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	11	8	12	10	22
12:45-1:00	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	8	11	10	12	22
1:00-1:15	0	0	1	0	1	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	6	10	9	12	21
1:15-1:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	7	8	9	8	17

1:30-1:45	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	0	10	12	10	15	25
1:45-2:00	0	0	0	0	0	0	0	0	1	1	0	0	2	0	1	1	0	0	0	0	0	0	13	9	17	11	28
2:00-2:15	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	9	8	12	8	20
2:15-2:30	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	11	11	11	14	25
2:30-2:45	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	1	0	0	0	16	10	19	11	30
2:45-3:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	14	12	16	13	29
3:00-3:15	0	0	1	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	1	0	0	19	8	21	11	32
3:15-3:30	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	13	7	16	7	23
3:30-3:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	11	8	11	9	20
3:45-4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	1	0	0	8	6	9	9	18
4:00- 4:15	0	0	0	0	0	1	0	0	1	0	0	0	1	0	1	1	0	0	1	0	0	0	13	9	17	11	28
4:15-4:30	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	10	11	11	14	25
4:30-4:45	0	0	0	0	1	0	0	0	1	0	0	0	0	2	0	1	0	0	1	0	0	0	14	12	17	15	32
5:45-5:00	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	1	0	0	17	9	20	10	30
5:00-5:15	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	21	10	23	12	35
5:15-5:30	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	16	9	17	10	27
5:30-5:45	0	0	0	0	1	0	0	0	1	1	0	0	0	0	1	1	0	0	0	1	0	0	14	15	17	18	35
5:45-6:00	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	17	14	19	14	33
Sub Total	0	0	4	3	7	5	0	0	10	8	0	0	26	17	20	18	0	0	15	13	0	0	457	367	970		
Total (a+b)	0		7		12		0		18		0		43		38		0		28		0		824		970		
Composition %	0		0.72		1.24		0		1.86		0		4.43		3.92		0		2.89		0		84.95		100		
PCU Factor	4		3		1.5		3		2.5		1.5		1		1		0.75		1.5		1.5		0.5				
PCU of counted hour	0		21		18		0		45		0		43		38		0		42		0		412		619		

Table 3 Classification factors of Road

सांराश

व्यक्ति , सामान र सेवाको आवत-जावत भनदा धेरै माथि आठाराई त्रिवेणी गाँउपालिका यातयात यस्तो आधारभुत पुर्वाधार हो जस्ले आठाराई त्रिवेणी गाँउपालिकाको सहरी रुप आर्थिक समुन्नति माथि प्रभाव पार्छ र यो वातावरणीय , आर्थिक सामाजिक दिगोपनाको मुख्य कारक पनि हो । नगर यातायात गुरुयोजना रणनैतिक दस्तावेज हो जस्ले नगरपालिकाको यातायात सनसत था कार्यक्रम तर्जुमा गरि नगरपालिकाको आगामी २० वर्ष र पछाडिको यातयातको मागलाई संवोधन गर्छ । सम्भाव्य विकासका क्षेत्रहरु र दुरगामि बिकास योजनामा आधारित भएर तयार पारिएको यस दस्तावेजले नगरपालिकाको विकास र समुन्नति प्रतिविम्वित गर्छ । आठराई त्रिवेणी गाँउपालिका पुर्वि नेपालको मेचि अञ्चल अन्तरगत ताप्लेजुङ जिल्लाको दक्षिणपश्चिम भागमा छ । यस क्षेत्रलाई मेची राजमार्गले सेवा दिदै आएको छ । फुङलिङ नगरपालिका संग यस्को सिमाना तमुर नदीले छुट्टिएको छ ।

२८५४ घरधुरिमा १२२९६ जनसङख्या वसोवास गर्दै आएका यस नगरपालिकाको कुल क्षेत्रफल , क्षेत्र वर्ग कि. मि. रहेकको छ । साविकका गा. वि. स. हरु फुङलिङ , पाथीभरा , याङवरक , हिलिहाङ, अठराई मैवाखोला जोडेर बनाईएको यस नगरपालिकाको अधिकांश भु-भाग ६९.९१%जंगलले ओगटेको छ । ३.४% बस्ति क्षेत्रले ओगटेको यस भु-भाग १८% जमिन क्षेत्र रहेको छ । व्यवसाय यस नगरपालिकाको मुख्य पेशा हो यसवाहेक सेवा र कृर्षि अरु प्रमुख पेशा हुन् । आधा भन्दा धेरै घरधुरिमा साईकल र मोटरसाईकल छन् । आप्नो गन्तव्यमा पुग्न ९१% माजिस हिड्ने गर्छन् र १५-१०% मानिस साईकल र मोटरसाईकल प्रयोग गर्छन् । यात्राको प्रमुख उदेश्य पठन-पाठन र सामान किनबेच रहेको छ ।

दुरगामि सहरी विकास योजना र सम्भावित विकास क्षेत्रहरु योजनाका लागि महत्वपुर्ण पाटाहरु हुन् । यो क्षेत्र प्राकृतिक र धार्मिक सम्पदाले भरिपुर्ण छ । सिख ओली मन्दिर यस क्षेत्रको ख्यातिप्राप्त मन्लिर हो भने मौलाकालिका मर्नदर देशभरिमा प्रख्यात मन्दिर हो । बियर उद्वोग, मासु , प्रशोधन उद्वोग र तभहतष्तभि उद्वोग यस क्षेत्रको मुख्य उद्वोग यस क्षेत्रको मुख्य उद्वोग हुन् । कृषिजन्य उत्पादन जस्तै तरकारी उत्पादन यस क्षेत्रका विशेसता हुन्

सम्भावित भु-उपयोग परिवर्तन र दुरगामी सहरी विकास योजनामा आधारित यस योजनाले ऋउतत का निम्न सडकहरु प्रस्ताव गरिएको छ :

वर्ग	लम्बाई (कि. मि.)	५ वर्षमा बनाउन लागिएको सडकको लमबाई (कि. मि.)
क	३५.२	३५.२
ख	४७.८	४६.८७
ग	११८.३	४६.८७

सबै सडकलाई नगर सडक समन्वय समितिबाट पारित प्राथामिकिकरण आधारहरु प्रयोग गरेर अंकगणितिय हिसाबमा प्राथामिकिकरण गरिएको छ । खर्च बजेट १०% प्रति वर्ष बढ्ने र प्रस्तावित संरचनाहरु २० वर्षम ाबनेर सकिने हिसाबले आगामी पाँच बर्षको खर्च बजेट तयार पारिएको छ । खर्च बजेट तयार पारिएको छ । खर्च बजेट निर्माण र स्तररोनतिक लागि ७०% छुट्याईएको छ भने ३०% मर्मत सम्भारका लागि छुट्याईएको छ ।

रुरुयोजना कार्यन्वयन प्रकिया हो र यसलाई सकृय सार्बजनिक सहभागिताको आबश्यकता पर्दछ । यस किसिमका योजना प्रथम पटक बनेर यस नगरपालिकाको यातयात गुरुयोजना प्रत्यक पाँच- पाँच बर्षमा अध्याबधि गरिने भएता पनि हाल नगरपालिकाको भु-उपयोग योजना , ढल तथा नाला संजाल योजना , बिस्तृत सहर विकास योजना तयार नभईसकेको हुनाले , सो योजनाहरु तयार भएपछी पुनरावलोकन गरि आबश्यक परिमार्जन गर्नुपर्ने हुन्छ ।

यातायात जोड्ने मार्गको नाम	वडा नं	वर्ग	सडकको दायित्व (मिटर)	लम्बाइ (कि.मि.)	सतह	वर्तमान चौडाइ (मिटर)	पभार्ण चौडाइ (मिटर)	सेटब्याक (मिटर)	लम्बाइ (कि.मि.)				सडकको अवस्था (अपग्रेड र मर्मत आवश्यक)
									ब्ल्याक	ग्राभल	माटो	नयाँ	
लिम्बुनी -जुकेटार-हाङ्पाङ-पाभेक-सानो फेदी-कट्टिके-सोबुवा-लुङ्सुङ्वाङ-फुङथप्ले-साङ्घु	१,२,३,४	क	१२	३५.२२	माटो	४.५		३			३५.२२		
जुकेटार-नागी डाँडा	१,२	ख	१०	४.९४	माटो	४		२			४.९४		
वडा २-दनबन-चोकपुर	२	ख	१०	८.९१	माटो	४.५		२			८.९१		
डाँडागाउँ - अम्बोटे	२	ख	१०	३.९९	माटो	४		२			३.९९		
Xपालिका-सोबुवाखोला डोभान	३,५	ख	१०	८.२८	माटो	४.२५		२			८.२८		
पालिका-चराने	३,४	ख	१०	७.१४	माटो	५		२			७.१४		
कत्तिके - मेहेले	३,४	ख	१०	५.६१	माटो	३.५		२			५.६१		
डोभान-सोबुवा वडा४-वडा५	४,५	ख	१०	८.८७	माटो	५		२			८.८७		
खरी भीर -खाल्टिया-फुङुवा	१	ग	८	३.०६	माटो	४		१.५			३.०६		
कृषि सडक	१,२,३,५	ग	८	१५.३६	माटो	३		१.५			०.८५		
पालिका-कचुरे	१	ग	८	०.८७	माटो	४.२५		१.५			०.८७		
फुङुवा	१	ग	८	१.५८	माटो	३.७५		१.५			१.५८		
फुङुवा खोला-मल्ल राज पोमु घर-भेरालो भीर (भाग I)	१	ग	८	२.४९	माटो	३.७५		१.५			२.४९		

सुकमेरवोरी-वडाउए-युवा-ढुङ्गासागु	१	ग	८	३.३१	माटो	४		१.५			३.३१		
वडा १- मालबनसे	१	ग	८	१.७९	माटो	४		१.५			१.७९		
अरुबोटे-डाँडागाउँ	२	ग	८	१.७१	माटो	३.५		१.५			१.७१		
अरुबोटे-जुकेटार-महावीर-डाँडागाउँ	२	ग	८	२.४४	माटो	४		१.५			२.४४		
वडा २ कार्यालय-रामीटे-अम्बोटे- तमोर क्योरिडोर	२	ग	८	१.८	माटो	४		१.५			१.८		
हाङ्पाङ मुलचोक-डाँडाखर्क-महावीर-दाँडागाउँ-नागी डाँडा	२	ग	८	५.२७	माटो	३.२		१.५			५.२७		
जुकेटार-नागी डाँडा	२	ग	८	२.७७	माटो	४		१.५			२.७७		
जुकेटार-वडा कार्यालय २	२	ग	८	१.१८	माटो	३		१.५			१.१८		
काबेली मन्दिर-क्योरिडोर	२	ग	८	०.८१	माटो	२.७५		१.५			०.८१		
पाथिभरा मन्दिर	२	ग	८	१.३२	माटो	३.५		१.५			१.३२		
वडा २ कार्यालय -पैरे	२	ग	८	५.५१	माटो	४		१.५			५.५१		
पालिका-पाम्प्रा झमल-खुवाखोला-वडा २	३	ग	८	४.२४	माटो	३		१.५			४.२४		
बाग्द्वार प्राथमिक विद्यालय	३	ग	८	१.११	माटो	३.७५		१.५			१.११		
चाँगे सडक	३	ग	८	१.८१	माटो	३		१.५			१.८१		
दौराली भञ्ज्याङ-श्यामचोक	३	ग	८	३.६३	माटो	४.५		१.५			३.६३		
ढुङ्गे-ओसलेया-टिटियानी	३	ग	८	०.९८	माटो	४.५		१.५			०.९८		
कालिका प्राथमिक विद्यालय-चुवा खोला-टार गाउँ-दण्डखर्क	३	ग	८	२.१५	माटो	४.५		१.५			२.१५		

कान्छी चोक-मकरजुङको घर-थुलटार	३	ग	८	२.३९	माटो	३.७५		१.५			२.३९		
टेक राज को घर-भाङटार-टिटियाने	३	ग	८	१.०२	माटो	३		१.५			१.०२		
वडा ३ कार्यालय-बलाङ-बिस्मुरे-खुवा (कृषि सडक)	३	ग	८	३.५८	माटो	४		१.५			३.५८		
चराने चोक-नेसुम-स्वास्थ्य चौकी सडक	४	ग	८	१.९७	माटो	२.७५		१.५			१.९७		
गुफा-भुजा-गोजर-लुङ्सुङ्वाङ-सेलेले	४	ग	८	२.५७	माटो	३.२		१.५			२.५७		
कमल डाँडा-लुङ्सुङ्वाङ-भण्डारी डाँडा-ओखे सडक	४	ग	८	१.८९	माटो	३.७५		१.५			१.८९		
लुङ्सुङ्वाङ-देवी थान-कट्टिके-पौडेल गाउँ-मिजर गाउँ सडक	४	ग	८	३.३६	माटो	३.७५		१.५			३.३६		
नेसुम	४	ग	८	३.०१	माटो	४.७५		१.५			३.०१		
नेसुम-बनझोगरे-सोबुवा डोभान घाट	४	ग	८	०.१२	माटो	४.७५		१.५			०.१२		
सोबुवा-सेलेले	४	ग	८	१.७३	माटो	४		१.५			१.७३		
सोबुवा-सेलेले-फुङथप्ले	४	ग	८	१.९७	माटो	३.७५		१.५			१.९७		
वडा ५-तेब्लाबुङ	४	ग	८	०.५१	माटो	३.५		१.५			०.५१		
डाँडागाउँ-ससिनाला सडक	५	ग	८	१.२६	ब्ल्याक टप	६		१.५			१.२६		
दोभान -ससिनाला	५	ग	८	२.८७	माटो	६		१.५			२.८७		
नेसुम-बनझोगरे-सोबुवा डोभान घाट	५	ग	८	५.१४	माटो	४.७५		१.५			५.१४		
नेसुम- चाँगे-वडा ५	५	ग	८	०.८	माटो	४.२		१.५			०.८		
वडा ५-टेलाबुङ	५	ग	८	१.१	माटो	३.५		१.५			१.१		

वडा ५-डाडाँगाउँ	५	ग	८	१.३१	माटो	४		१.५			१.३१		
वडा ५-लुङधार्न-डाडाँगाउँ	५	ग	८	१.७७	माटो	५.७५		१.५			१.७७		
फुङुवा देखि पाथिवरा माटी जंगुले	१	घ	८	२.०४	माटो	३		१.५			२.०४		
फुङुवा खोला-जनकल्याण स्कूल-पालिका	१	घ	८	२.४	माटो	४		१.५			२.४		
ओली डाँडा-भोटा टार-ढोड्रा	१	घ	८	२.६	माटो	३.७५		१.५			२.६		
बान्पाले-गैरे गाउँ-फोक्ताङ	१	घ	८	१.६८	माटो	४		१.५			१.६८		
माता/मिट्ला-क्योरिडोर	२	घ	८	१.३४	माटो	३.२५		१.५			१.३४		
तमोर क्योरिडोर -अम्बोटे-मझगाउँ-वडा २ कार्यालय	२	घ	८	२.४२	माटो	३.७५		१.५			२.४२		
पालिका सडक र खुवा खोला सडक जोड्ने	३	घ	८	०.९	माटो	४		१.५			०.९		
पालिका -सिर्जाग माध्यमिक विद्यालय-मिल-कान्छी चोक	३	घ	८	१.९५	माटो	३.२५		१.५			१.९५		
गाई थुन-चुवा खोला-थुटी-सोबुवा खोला	३	घ	८	२.४९	माटो	४		१.५			२.४९		
गौरव सडक -सिम्बु	३	घ	८	१.९	माटो	३		१.५			१.९		
स्वास्थ्य चौकी-पालिका-चराने	३	घ	८	१.५२	माटो	३.२५		१.५			१.५२		
पाभेक-नेवोखाम-सोबुवा खोला	३	घ	८	१.०१	माटो	४		१.५			१.०१		
श्री शान्ति बेसिक स्कूल-मिचेरिघा-कृषि सडक	३	घ	८	०.७३	माटो	३		१.५			०.७३		
सोबुवा खोला-गैरी-नेसुम	४	घ	८	१.९४	माटो	४		१.५			१.९४		
सोबुवाखोला- डोभान	५	घ	८	१.४५	माटो	४		१.५			१.४५		

क.सं.	कार्यक्रम	५ वर्षको जम्मा	आठराई त्रिवेणी गा.पा	आठराई त्रिवेणी गा.पा बजिट कार्य प्रर्तिशत	केन्द्र सरकार	केन्द्र सरकार बजिट कार्य प्रर्तिशत	प्रदेश सरकार	प्रदेश सरकार बजिट कार्य प्रर्तिशत
क)	**पूर्वाधार विकास योजना सडक**	**255**	**89**	**35**			**166**	**65**
१	क वर्ग	141	25	18			116	82
२	ख वर्ग	96	19	20	77	80	-	
३	ग र घ वर्ग	19	19	100	-			

आज मिति २०८१ साल फाल्गुण १३ गते मंगलवारका दिन यस **आठराई त्रिवेणी गाउँपालिकाको ग्रामीण यातायात गुरु योजना निर्माण सम्बन्धी** योजना तयारी अभिमुखीकरण गोष्ठी यस गाउँपालिकाको अध्यक्ष श्री **दिपेन्द्र पोमु** ज्यूको अध्यक्षतामा कार्यपालिका सदस्य ज्यूहरु, कर्मचारी ज्यूहरु, वडाका जनप्रतिनिधि एवम् कर्मचारी ज्यूहरु, राजनीतिक दलका प्रतिनिधि ज्यूहरु, निजी क्षेत्र एवम् सम्बन्धित सरोकारवाला व्यक्तित्व ज्यूहरुको तपशिल बमोजिमको उपस्थितिमा सम्पन्न भयो ।

उपस्थितिको विवरण

क.स	सहभागीको नाम	पद	स्थायी ठेगाना	सम्पर्क नं	हस्ताक्षर
१.	श्री दिपेन्द्र पोमु	अध्यक्ष			
२.	श्री शान्ता कुमारी आङबुहाङ	उपाध्यक्ष	आ.पा.वि.-२	[illegible]	
३.	श्री राम प्रसाद पाठक	१ नं. वडाध्यक्ष	[illegible]	९८५४६४६२९६	
४.	श्री टेकिन्द्र सेन्दाङ	२ नं. वडाध्यक्ष			
५.	श्री सुर्यमान यक्सो	३ नं. वडाध्यक्ष			
६.	श्री अर्जुन लिम्बु	४ नं. वडाध्यक्ष	आ.पा.वि.	९८२९९९२२२२	
७.	श्री लक्ष्मण राई	५ नं. वडाध्यक्ष			
८.	श्री विष्णु कुमारी तामाङ	कार्यपालिका सदस्य		९८५२२२२२२	
९.	श्री मन कुमार नेपाली	कार्यपालिका सदस्य			
१०.	श्री सारदा कुमारी विमली	कार्यपालिका सदस्य			
११.	श्री सीता बराईली	कार्यपालिका सदस्य	आ.पा.वि.	९७१४३५४४५७	
१२.	श्री शान्ता गुरुङ	कार्यपालिका सदस्य			

क.स	सहभागीको नाम	पद	स्थायी ठेगाना	सम्पर्क नं	हस्ताक्षर
१३.	श्री सन्तोष राई	कार्यपालिका सदस्य	आ.त्रि. ५	[illegible]	
१४.	टिका राज खड्का	प्रशासन तथा योजना शाखा	आ.त्रि.गा.पा.	[illegible]	
१५.	शान्त कु. लाउजुहाङ		आ.त्रि - ४	९८६२४००३४०	
१६.	खिता लिम्बु	महिला, बालबालिका शाखा	आ.त्रि.गा.पा.	[illegible]	
१७.	सुनजोग लिम्बु		आठराई त्रिवेणी	[illegible]	
१८.	लेखनाथ भट्टराई		आ.त्रि. [illegible]	[illegible]	
१९.	शंकर भट्टराई		—,,—	[illegible]	
२०.	बिना आङबहाङ		आ.त्रि. : ३	९८४०९६३२८०	
२१.	प्रविन पोमु	शिक्षक	आ.त्रि. -१,	९८४२६३६६४२	
२२.	नेत्र प्रसाद भण्डारी	शिक्षक	आ.त्रि. : ४	९८४४६१८४२१	
२३.	प्रियंका राई	उ.वि.प	[illegible]	[illegible]	
२४.	योगेन्द्र विष्ट	नि.मा.वि.	आ.त्रि. [illegible]	[illegible]	
२५.	जीवन कुमार थोक्सर	शिक्षक	श्री शान्ति आ.वि.	[illegible]	
२६	रिदिम शेर्पा	[illegible]	सूर्योदय-१	९८४२९६३४०६	