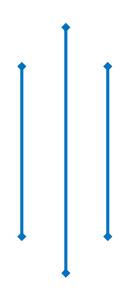


Rapti Rural Municipality Office of the Rural Municipal Executive

Masuriya, Dang Province No. 5, Nepal

Preparation of Rural Municipality Transport Master Plan (RMTMP)

(Final Report)



SUBMITTED BY:

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सडक यातायात गुरुयोजना

मेरो भनाई

मानव सभ्यता विकासको सुरुवात सँगै मानविय सुविधाहरुको विकासलाई प्राथमिकता दिएको पाइन्छ। सायद यस अर्थमा मानविय सुविधा र सुखको विकास नै मानव सभ्यता विकासको एक अभिन्न अंग हो। आधारभूत भौतिक विकासका पूर्वाधारहरुद्वारा प्राप्त हुने मानविय सुविधाहरु मध्ये सडक यातायातको विकास समग्र विकासका आयामहरु मध्ये एक अपरिहार्य आयाम हो भन्ने कुरा निर्विवाद छ। यसर्थ यस गाउँपालिकाले विकासका योजना तर्जुमा गर्ने सन्दर्भमा सडक यातायात गुरुयोजना निर्माणलाई समग्र विकासका योजनाहरु मध्ये प्राथमिकतामा राखी यो गुरुयोजना तयार पारिएको हो।

नेपाल जस्तो भौगोलिक विषमता भएको देशमा यातायातका वैकल्पिक माध्यमहरु जस्तै जल परिवहन, रोपवे वा हवाई यातायातका सम्भावनहरु न्यून तथा बढी खर्चिला भएका कारण सडक यातायातलाई प्राथमिकतामा राख्नुपर्ने हुन्छ। यद्यपी, भौगोलिक संरचना र बजेटका कारण सडक यातायातको पर्याप्त विकास गर्ने कार्य समेत कठिन र खर्चिलो नै छ। यस अवस्थामा सडक यातायातको योजनाबद्ध विकास नगरी अगाडि बढ्दा त्यो भन्नै खर्चिलो, अव्यवहारिक र असंगठित हुन जाने भएकोले यसलाई योजनाबद्ध र दिगो तरिकाले अगाडि बढाई कालान्तरमा समग्र गाउँपालिकाको योजनाबद्ध विकासमा समेत सहयोग होस् भन्ने हेतुले यो सडक यातायात गुरुयोजना निर्माण गरिएको छ।

यो गुरुयोजना निर्माणका ऋममा गाउँपालिकालाई सहयोग गर्नुहुने उपाध्यक्षज्यू, प्रमुख प्रशासिकय अधिकृत, सम्पूर्ण वडा अध्यक्षज्यूहरु, समग्र गाउँ कार्यपालिकाका सदस्यहरु, वडा सिचवहरु तथा सम्पूर्ण कर्मचारीहरु, प्राविधिकहरु, सम्पूर्ण सरोकारवालाहरु र परामर्श सेवा प्रदान गरी सडक गुरुयोजना निर्माण कार्य सम्पन्न गर्ने परामर्शदाता बजार विकास केन्द्र प्रा.लि., काठमाडौंलाई हार्दिक धन्यवाद ज्ञापन गर्न चाहन्छु।

नुमानन्द सुवेदी अध्यक्ष

भनाई

आधारभूत तथा दैनिक मानविय कृयाकलाप संचालनमा आवत-जावतको अहम् भूमिका हुन्छ । आवत-जावतमा सुगमता र सहजता बृद्धि हुँदा समुदाय बीचको सम्पर्क र समन्वयमा अभिवृद्धि हुन्छ । यसले प्रत्यक्ष रुपमा आर्थिक तथा सामाजिक कारोबार बृद्धि गर्न मद्दत पुऱ्याउँछ । तसर्थ आवत-जावतलाई सुगम र सहज बनाउन वैज्ञानिक सडक यातायात योजना निर्माण गर्नु अनिवार्य हुन्छ । अन्यथा अवैज्ञानिक तवरले विकसित भएको सडक सञ्जालले सहजताको विपरित जटिलता थप्ने गर्दछ ।

बृहद् ऐतिहासिक तथा राजनैतिक परिवर्तन पश्चात संविधानले हामीलाई मौलिक हक तथा जनता केन्द्रित शासन व्यवस्थाको प्रत्याभूति गरेको सन्दर्भमा, यस गाउँपालिका एक स्वायत्त स्थानीय सरकार समेत भएकोले, गाउँपालिकाको वस्तुगत अवस्थालाई मध्यनजर गरी यहाँका प्राथमिकतालाई निर्धारण गर्ने कार्य स्वयं गाउँपालिकाले नै गर्नुपर्ने हुँदा सम्पूर्ण विकासको आधारभूत पूर्वाधारको रुपमा रहने सडक यातायातको दिगो विकास नै समग्र विकासको पूर्व सर्त भएकोले यस गाउँपालिकाले सडक यातायात गुरुयोजना निर्माणलाई प्राथमिकता दिएको हो । यो गुरुयोजना अन्य विकास निर्माणको समेत कोशेढुङ्गा सावित हुनेछ भन्ने मैले विश्वास लिएकी छु ।

अन्तमा यस गुरुयोजना निर्माणमा सहयोग पुऱ्याउनु हुने अध्यक्षज्यू, प्रमुख प्रशासिकय अधिकृतज्यू, सम्पूर्ण वडा अध्यक्षज्यूहरु, सिचव तथा सम्पूर्ण कर्मचारीहरु, प्राविधिकहरु, गाउँपालिकाबासीहरु तथा परोक्षरुपमा सहयोग पुऱ्याउने सम्पूर्ण महानुभावहरुमा म धन्यवाद दिन चाहन्छु। साथै प्राविधिक पक्षको जिम्मेवारी लिई यो योजना तयार पार्ने परामर्शदाता बजार विकास केन्द्र प्रा.लि.लाई समेत धन्यवाद दिन चाहन्छु।

जगदम्बा कुमारी चौधरी

उपाध्यक्ष

मेरो भन्तु

करिब सात दशक लामो राजनैतिक संक्रमण पार गर्दे नेपाल राजनैतिक तथा सामाजिक हिसाबले एक नयाँ युगमा प्रवेश गरेको छ । संघिय लोकतान्त्रिक गणतन्त्रात्मक शासन व्यवस्थाको पूर्ण कार्यान्वयनको यस ऐतिहासिक घडीमा आइपुग्दा स्थानिय सरकारहरुले संविधानले प्रदान गरेका अधिकारहरुको उपयोग गरिरहेका छन् । यसै सन्दर्भमा नेपालको संविधानको अनुसूची ८ र स्थानिय सरकार सञ्चालन ऐन २०७४ को भाग ३ को उपदफा २ को (ट) ले स्थानिय सडक, ग्रामीण सडक तथा कृषि सडक निर्माण सम्बन्धी योजना तर्जुमा गर्ने कार्यको अधिकार स्थानिय सरकारलाई प्रदान गरेकोले विकासको प्राथमिक पूर्वाधारको रुपमा रहेको सडकको गुरुयोजना निर्माण कार्यले यस गाउँपालिकामा अन्य विकासका क्रियाकलापहरु अगाडि बढाउन मार्ग प्रसस्त गर्नेहँदा यो सडक यातायात ग्रुयोजना निर्माण गरिएको हो ।

यस गाउँपालिका, देशकै प्रमुख, पूर्व-पिश्चम राजमार्गसँग निकट रहेको भित्री मधेशको गाउँपालिका साथै दाङ देउखुरी उपत्यकाको प्रवेशद्वार भएको र आगामी दिनहरुमा गाउँपालिकामा व्यवस्थित आवासको विकास, शहरीकरण, उद्योगको विकास र अन्य सबै प्रकारका विकासको प्रसस्त सम्भावनाहरु रहेकोले समयमै समग्र विकासको आधारिशलाको रुपमा रहेको सडकको विकास गर्नु अपिरहार्य छ । तसर्थ, गाउँपालिकाले यो सडक यातायात गुरुयोजना तयार गर्ने निर्णय गरेको हो । यो सडक यातायात गुरुयोजनाले आगामी दिनहरुमा गाउँपालिकाको व्यवस्थित र वैज्ञानिक विकासमा दिर्घकालिन रुपमा सहयोग पुऱ्याउने छ भन्ने विश्वास लिएको छु ।

यस गुरुयोजना निर्माणमा प्रत्यक्ष वा परोक्ष रुपमा सहयोग पुऱ्याउनु हुने गाउँपालिका अध्यक्षज्यू, उपाध्यक्षज्यू, सम्पूर्ण वडाअध्यक्षज्यूहरु, गाउँपालिकाबासीहरु, सम्पूर्ण प्राविधिक तथा कर्मचारी साथीहरुप्रति म हार्दिक धन्यवाद दिन चाहन्छु । साथै, यो गुरुयोजना तयार पार्ने पराशर्मदाता बजार विकास केन्द्र प्रा.लि., काठमाडौंलाई समेत धन्यवाद दिन चाहन्छु ।

जगत प्रसाद भुसाल प्रमुख प्रशासिकय अधिकृत

DECLARATION LETTER

We hereby declare that we have conducted the study for Rural Municipality Transport Plan (RMTMP) of Rapti Rural Municipality professionally using MoFALD guidelines and other acceptable standard methodologies. To the best of our knowledge, study findings are correct. Rural Municipality Transport Master Plan has been prepared as per standard Engineering tools, norms and practices. Inventory of all the roads has been prepared. The visionary city development plan has been addressed in developing the road hierarchy network and has been approved by the RMRCC and municipality along with the prioritization criteria. We would like to assure you that the RMTMP is reliable, practicable and adequate to the overall development of municipality transport system. We shall be accountable for any misleading information in any part of this report in respective area of study.

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Acronyms/Abbreviations

DDC District Development Committee

DTMP District Transport Master Plan

GIS Geographic Information System

GPS Global Positioning System

IDPM Indicative Development Potential Map

MIM Municipality Road Inventory Map

MRCC Municipality Road Coordination Committee

NMT Non- Motorized Transport

RMTMP Rural Municipal 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

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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Executive Summary

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

The Rapti Rural Municipality was established by merging the existing Sishaniya, Hansipur (1-2), and Lalmatiya village development committees (VDCs) having a total of 161.07square km. The center of the Rural Municipality is established in the former Lalmatiya VDC. After merging the three VDCs population it had a total population of 40,763 according to 2011 Nepal census. The population density of Rapti is 253 person/sq. km. Rapti Rural Municipality has altogether 9 wards.

RMTMP started with the setup of Rural Municipal Road Coordination Committee (RMRCC) and the collection of demand and inventory of road within the Rapti Rural Municipality. For the collection of existing road infrastructure data, GPS survey was used and total length of road surveyed was 247.10 km, out of which 7.78 km is blacktopped, 109.91 km is gravelled, and remaining 129.51 km of road is earthen which is including the national highway and feeder roads within the rural municipality. The ward wise distribution of road network within rural municipality is as follows:

Ward No.:	Blacktopped	Earthen	Gravelled	Sub-Total
1	4.89	12.01	12.40	29.30
2		5.01	20.98	25.99
3	0.94	10.93	19.35	31.22
4	1.84	9.78	11.72	23.33
5		33.64	6.67	40.31
6		5.70	9.81	15.52
7		6.67	13.83	20.50
8		5.46	15.15	20.61
9		40.32		40.32
Total	7.68	129.51	109.91	247.10

Visionary city development and Indicative Development Potential Plan is prepared showing 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. This rural municipality may be developed as the agriculture, industry-business and tourism potential is developed

This study formulated the road hierarchy for the various roads namely Class A, B, C and D. Class C and D basically deals with access while Class A and B basically deal with mobility and accessibility to higher services. The minimum right of way, setback, pavement width and footpath width provisions for the different classes of roads are recommended as follows:-

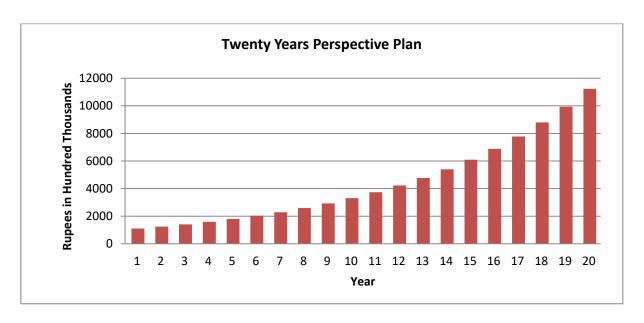
SN	Class of Road	Minimum RoW(m)	Setback(m)	Pavement(m)
1	A	20	2.5	11
2	В	15	2.5	9
3	С	10	2	7
4	D	6	1.5	5

The total lengths of Class A, B, and C roads are summarized as shown in the table below.

Road Class	Road surface (km)					
Roau Class	Blacktopped	Gravel	Earthen	New Track	Sub-Total	
A		22.18	46.13	2.92	71.23	
В	0.7	17.7	27.7		46.1	
C	2.32	44.95	27.32	0.46	75.05	
D	4.53	22.22	27.63	5.48	59.86	
Total	7.55	107.05	128.78	8.86	252.24	

This rural municipality is supported by East-West Highway and Rapti highway section within this rural municipality. According to the District Transport Master Plan (DTMP) of Dang District, three roads of total length 51.72 km of this municipality are listed as district road core networks (DRCN).

For the long term vision, for the development of the entire road network to all weather condition there is need of 891.4 Crore of budget is for the period of twenty years.for this long term vision the implementation plan is prepared as given under:



For the short term five year implementation plan, all the rural municipal roads are prioritized based on the criteria as presented in the chapter 1 of this report. Then with the projected budget of five year, Class A, B and

C roads are planned for intermediate lane, and Class D for single lane. For the five year period, based on the capacity of rural municipality and to provide minimum accessibility condition total of 71.34 Crore of NRs is estimated which is distributed as under:

Year	Projected Budget (in Hundred Thousand)					
1 ear	Construction	Construction Maintenance				
1	770	330	1,100			
2	870	373	1,243			
3	984	422	1,406			
4	1,112	477	1,589			
5	1,257	539	1,796			
Total	4,993	2,141	7,134			

From the above estimated budget, the following interventions in different road hierarchy is planned:

Class	Length in Km				
Class	New track	Gravelling	Blacktop		
A	2.92	49.04	3.05		
В	2.45	24.50	8.35		
C	0.46	26.71	1.81		
D	4.53	11.71	2.91		
Sub total	10.36	111.97	16.12		

नेपालीमा सारांश

नेपाल जस्तो विकासोन्मुख देशमा गाउँपालिकाहरु बिकासको दृष्टिकोण बाट पछाडी छन् त्यसमाथि सडक को विकाशको पक्ष बाट झनै पछाडी छन् । देशभरी छिरएर रहेका गाउँपालिकहरुको संख्या ४६० रहेको अवस्थामा ती केन्द्रहरुमा यातायातलाई प्रभावकारी र सुलभ रुपमा संचालन गराउनु निशर्त पिहलो आवश्यकता हो । सडक र यातायात सम्पूर्ण पुर्वाधारहरुको लागी चाहिने पुर्वाधार हो । यसले जनतासमक्ष विभिन्न सेवा तथा सुविधाको पहुँचलाई सुनिश्चित गर्छ । वर्तमान पिरप्रेक्ष्यमा ग्रामिण यातायात प्रणालीलाई एिककृत रुपमा संचालन गर्नुको सट्टा पारम्परिक रुपमा दुके योजनाहरु मार्फत अगाडी बढाइएको छ । राप्ति जस्तो गाउँपालिका मा यातायातका पुर्वाधारहरुलाइ आवास, बजार, कृषि, पर्यटन र अन्य सामाजिक आर्थिक लगायतका क्षेत्रमा टेवापुग्ने गरी विकास गर्नु आवश्यक देखिन्छ । गाउँपालिका को जनसंख्या वर्तमान माग र भविष्यमा आउनसक्ने मागलाई मध्यनजर गरेर राप्ति गाउँपालिका को ग्रामिण यातायात गुरुयोजना बनाउनु अहिलेको आवश्यकता हो,जसले एउटा उचित संरचनामा रहेर तहगतरुपमा निर्णय गर्न सहयोग प्न्याउछ ।

राप्ति गाउँपालिका प्रदेश नं ५, दाङ जिल्लामा अबस्थित गाउँपालिका हो । यस गाउँपालिका को स्थापना नेपाल सरकारको निर्णय अनुसार मिति २०७३ साल फागुन २९ गते तत्कालिन सिसहनिया गा वि स ,लालमिटया गा वि स र हंसपुर गा वि स को वडा न १ र २ समाबेस गिर घोषणा भएको हो । भौगोलिक रुपमा २७°४८'५८.३३" देखि २७°५५'५४.७४" अक्षॉश तथा ८२°३५'४८.९५" देखि ८२°४९'१०.५४" देशान्तर सम्म तथा समुन्द्री सतह बाट २६२ मिटर देखि ११८० मिटर को उचाई सम्म फैलिएको यस गाउँपालिका को कुल क्षेत्रफल १६१.०७ वर्ग किलोमिटर रहेको छ भने हाल गाउँपालिकामा ९ वडा रहेका छन् । त्यसैगरी राप्ति गाउँपालिकाको कुल घरधुरी संख्या ८०५५ रहेको छ भने कुल जनसंख्या ४०७६४ रहेको छ । राप्ति गाउँपालिकाको जनघनत्व १६१ व्यक्ति प्रतिवर्ग कि.मि रहेको छ ।

स्थलगत सर्वेक्षण अनुसार यस गाउँपालिकामा हाल भएको सडकहरुको कुल लम्बाइ लगभग २४७.१ कि.मि रहेको पाइएको छ । जसमध्ये करिव १०९.९१ कि.मि सडक ग्राभेल, १२९.५१ कि.मि सडक धुले अवस्था र ७.७८ कि.मि सडक Blacktop रहेको पाइयो । गाउँपालिका सडक समन्वय समिति (RMRCC) को निर्णय अनुसार क-वर्गको सडकको न्युनतम क्षेत्राधिकार २० मिटर,ख-वर्गको १५ मिटर,ग-वर्गको १० मिटर र घ-वर्गका ६ मिटर रहने निर्णय गरिएको छ । "क" वर्गको सडक ३ वटा, "ख" वर्गको सडक १५ वटा र "ग" वर्गका सडक ६९ र "घ" वर्गका सडक १४६ वटा रहेको छ भने लम्बाई कमशः ७९.२३ किमि, ४६.१ किमि, ७५.०६ किमि र ५९.८६ कि.मी. रहेको छ । सडकको वर्ग अनुसारको क्षेत्राधिकार र सेटब्याक निम्न तालिकामा प्रस्तुत गरिएको छ :

क.स.	सडकको वर्ग	न्युनतम RoW (m)	सेटब्याक (m)	सडक चौडाइ	सडकपेटिको चौडाइ
٩	क	२०	ર.પ્ર	१४	१.५/१.५ दुवैतर्फ
२	ख	१४	ર.પ્ર	9	१.५/१.५ दुवैतर्फ
₹	ग	90	२	G	१/१ दुवैतर्फ
x	घ	Ę	ዓ.ሂ	ሂ	

सडकको वर्ग अन्सारको लम्वाई र स्तर निम्न तालिकामा प्रस्त्त गरिएको छ:

सडकको वर्ग	धुले सडक	ग्राभेल सडक	Blacktop	नयाँ ट्रयाक	जम्मा लम्वाई कि.मी.
क	४६.१३	२२.१८		२.९२	७१.२३
ख	રહ.હ	૧૭,૭	0.9		४६.१
ग	२७.३२	४४.९५	२.३२	०.४६	७४.०५
घ	२७.६३	२२.२२	४.५३	४.४८	५९.८६

गाउँपालिका सडक समन्वय सिमिति कै बैठकबाट सडकहरुको निर्माण र मर्मत संभार गर्ने प्राथिमकता आधारहरु चयन गरिएको छ भने शहरी विकास योजनालाई पनि अन्तिम रुप दिईएको छ ।

सडकहरुको निर्माण र मर्मत संभार गर्न आर्थिक विश्लेषण गर्दा यस ग्रामिण यातायात गुरुयोजनाले समेटेको सबै सडकको निर्माण तथा मर्मत संभार २० वर्ष भित्र पुरा हने दुरगामी लक्ष्य राखि करिब रु. ८ अर्ब ९१ करोडको विस्तृत आर्थिक योजना प्रस्तुत गरेको छ

ग्रामिण यातायत गुरुयोजनाले राखेको ५ वर्षको लक्ष्य अनुसार करिव रु ७१ करोड ३४ लाखको सम्भावित लागतलाई निर्माणमा ७० प्रतिशत र मर्मत संभारमा ३० प्रतिशत विभाजन गरिएको छ । निर्माणतर्फको रकमलाई पनि "क" वर्गलाइ ४० प्रतिशत "ख" वर्गलाइ ३० प्रतिशत "ग" वर्गलाइ २० प्रतिशत र "घ" "वर्गलाइ १० प्रतिशत रकम छुट्याइ निम्नानुसारका सडकको काम सम्पन्न गर्ने लक्ष्य राखिएको छ । गाउँपालिका स्तरमा श्रोत साधनको किम ले गर्दा सबै सडकहरु लाई एकै पटक निर्माण गर्न असम्भव हुने हुदाँ सडकहरु लाई प्राथिमकता निर्धारण गरीएको छ र यसै अनुसार कार्यन्वयनको योजना तयार गरीएको छ । त्यसमा पनि अपुग हुने बजेट विभिन्न बाहिरी श्रोत बाट जुटाउनु पर्ने हुन्छ ।

सडकको वर्ग	ग्राभेल सडक	Blacktop	नयाँ ट्रयाक
क	४९.०४	३.०५	२.९२
ख	२४.५	८.३ ४	ર. ૪૪
ग	२६.७१	9.59	०.४६
घ	૧૧ .૭૧	२.९१	४.५३

Chapter 1: Introduction

1.1 Background

Life in organized human settlements, which are mostly referred to as communities, is only possible if people have mobility in daily basis. Residential area is spatially separated from workplaces, major shopping is concentrated in identifiable centers, and larger entertainment and relaxation facilities are found at specific locations. They have to have accessibility.

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

Haphazard development of settlement in the urban area is a great problem which we learned from the past earthquake. From disaster risk management and reducing the problem of congestion we should go for planned development. Construction of roads after the settlement is made or extension of road only after the congestion problem creates different types of problem in the society which we are closely observing from different metropolitan cities. In this regard, formulation of Rural Municipal Transport Master Plan was initiated for assessing the present road and transport infrastructures and facilities within the Rural Municipality and the surrounding Municipalities. So as to be presented as proper rural municipality or a city, it must have a very good mobility and accessibility by public or private means of transportation.

1.2 Objective of RMTMP

The prime objective of this study is to prepare the Rural Municipality Transport Master Plan (RMTMP) for Rapti 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 RMTMP are mentioned below:

- 1. Prepare the Rural municipality Inventory Map (MIM) of all road networks.
- 2. Identify the major road networks linking the Rural Municipality with the surrounding areas.
- 3. Prepare Indicative Development Potential Map (IDPM).
- 4. Finalize visionary city development plan if Comprehensive Town Development Plan is not prepared.
- 5. Collection of demands for new/rehabilitation transport linkages from Municipalities/settlements based on city development plan.

- 6. Analyze 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 RMTMP period.
- 11. Prepare a five years Rural Municipality Transport Master Plan (RMTMP).

1.3 Scope and Limitation of RMTMP

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

a. Accessibility data Collection and Analysis.

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

b. Analyze Mobility status of the rural municipality

The consultant will also conduct mobility study, incorporated in the O-D survey. This is important especially because the road network in capital has provided access to majority of the population. The question then arises on how -efficiently, economically and safely the goods and passengers are transported, which is indicated by mobility.

c. Access the condition of public transportation

The consultant will collect data on different public transportation routes and their operation characteristics, which operate within the municipal area and to other adjoining area.

d. Access safety status and issues

The consultant shall also access the road safety status and issues. For this, roadside condition survey during road inventory survey and other accident data will be reviewed. Possible interventions to make the roads safer will be proposed and recommended.

e. Prepare the Indicative Rural Municipality Development Potential Map (IDPM)

The consultant shall prepare IDPM using topographical base maps and digitized GIS maps. In the IDPM, the consultant shall identify potential areas for development and prioritize through ranking. The consultant shall validate the IDPM from the MRCC and Rural municipality.

f. Prepare Rural Municipality Inventory Map (RMIM) of existing roads within Rural municipality.

The consultant will prepare the Rural Municipality Inventory Map linking to strategic road networks such as national highways, district core road network, main trails and bridges. This shall be done by walkover surveys using enumerators. The inventory map shall include 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

The consultant shall collect data regarding the construction, maintenance or rehabilitation of roads according to the existing condition and demand. The consultant will also seek to collect these data through ward meeting or community level discussion. The demand data shall be collected in priority order for each ward. The roadside condition of all the linkages will be noted during the road inventory survey.

h. Scoring criteria

The consultant shall develop scoring criteria to screen and prioritize all interventions potential interventions for proper allocation of limited budget. Scoring and prioritization criteria shall be checked with all linkages and interventions and approved by the rural municipality.

i. Road classification and Nomenclature

The consultant shall use metric system of nomenclature and apply 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 shall be used to prepare a perspective plan of interventions of services and facilities. All the identified interventions shall be screened and rated on the basis of approved criteria and forwarded to Rural municipality council meetings. The final perspective plan shall be shown in GIS maps.

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

The consultant shall collect information on the resources that can be spent on the construction or rehabilitation of transportation infrastructures by the rural municipality. The consultant may also carry out studies to project the resources to fund the transport infrastructures for the next five years. From the total projected resources, the consultant shall discuss with the rural municipality to find out the

- appropriate proportion to be spent on ongoing roads and new interventions proposed. The projected resources should be able to cope with the total number of roads and new interventions proposed.
- 1. Prepare Rural Municipal Transport Master Plan (RMTMP) of Rural municipality The consultant shall prepare Rural Municipal Transport Master Plan (RMTMP) for Rural municipality with due consideration to the existing situation of: vehicular parking, travel routes, modes of transport, etc and propose for future rural urban growth. The consultant shall prepare 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.
- m. Prepare framework for medium term and long-term planning
 The consultant shall also forecast the demand for medium term (10 years) and long
 term (20 years) and recommend a framework to guide future interventions and
 planning processes. The long-term plan shall consider the proposed East-West
 Railway and other major transport sector interventions in the long term.

1.4 Approach and Methodology

Rural roads are supposed to provide both access and mobility to all possible and potential areas. RMTMP will help to assist the planning of such roads to fulfil the stated objectives. 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 methodology.

- 1.4.1. Approach: Rural Municipal Transport Master Plan has been prepared using participatory bottom-up approach and differs from conventional practices of trickle down approach. Techno-Political interface has been incorporated in the planning process, where active participation from representatives of political parties, line agencies, rural municipality officials is crucial. The Rural Municipal Road Coordination Committee (RMRCC) has been constituted as authorized legislative body of rural municipality. This body, comprising all political parties' representatives and concerned technical officials, helps in necessary policy decisions during the RMTMP preparation and implementation process.
- 1.4.2. Methodological Framework: The study started with preliminary planning or desk study where basic background of rural municipality is studied with help of secondary data including census data, GIS data. The study got acceleration with formation of RMRCC and inspection report. Various field surveys were carried

out with objective of collecting primary data on transportation network, trip characteristics and service facilities. Along with the primary data, demands for various transportation projects (construction/upgrading/maintenance) were obtained from each ward. Also, potential areas/locations for various facilities were also identified based on interaction with local people and MRCC. The scoring criteria for prioritizing road network was identified based on ToR and will be approved by rural municipality. Then, the hierarchy of roads will be purposed and perspective plan of various interventions will be purposed and analysed based on available fund and finally physical and financial implementation plan of prioritized roads for RMTMP period. After analysis, the study will come up with potential roads, that need immediate intervention and roads that need to be given consideration for effective future planning.

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

Secondary Data Collection

Any sorts of data that were collected from secondary sources are called secondary data. These data were collected from annual report published by district level offices and consultation with various concerned stakeholders. Rural Municipal Road Coordination Committee (RMRCC), 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 socioeconomic assessment of the Rural 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 rural 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, DDC, municipality etc. Digitized topographic maps, administrative map of rural municipality, strategic road network map prepared by DoR, etc. were some other secondary data that were used during the study.

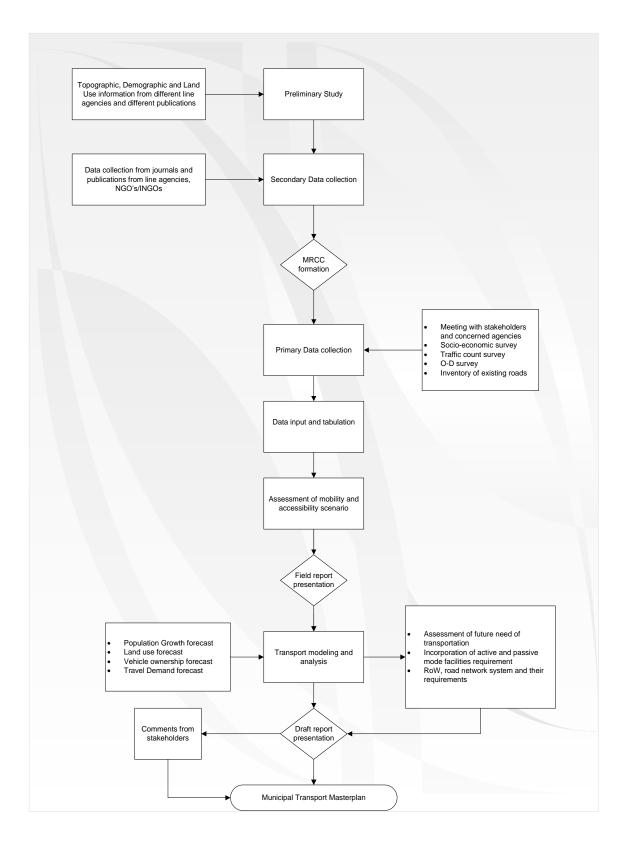


Figure 1: Methodological framework

Primary Data Collection:

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

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

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

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

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

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

Classified vehicle counts have been 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 five locations 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 highlights the services provided by public transportation and location of various services and facilities. It was carried out by directly interviewing the route operators.

Data Processing, Analysis and Presentation of Reports

Data collected at field were first entered at MS office tools (MS excel and Word) and GIS database. All the complete and reliable sets of data were transformed into useable information and the present scenario of rural 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 RMTMP and RMTPP time period. Various transportation models were used for interpretation and forecasting. And, finally various intervention was purposed and their economic analysis were also performed.

Preparation of Visionary city development plan

A creative description of future, the vision guides our decisions, helps us set direction and encourages us to align our priorities as we work to make Gaupalika, the city we want it to become in the year 2093/94 is the visionary city development plan. This will be finalised by

the rural municipality. Based on this vision, the rural urban transportation planning is to be done.

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, VDC centres, security offices and large settlements, important historic and religious places. Finally, it indicates the grading of various markets of the district thus providing the basis of network planning.

Digital Name Coding

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

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

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

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

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

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 is prepared. Existing population within the zone of influence, present road demand, future potential route, accessibility situation, land use pattern, environmental and social safeguard, proximity to the market/service centres, religious and tourism places were taken as the indicators for prioritization. The scoring criteria will be finalized after rigorous study and approval from Rural Municipality and RMRCC.

Table 1: Scoring criteria for prioritization

S.N	Scoring Criteria	Scoring Unit	Score
1	Link providing service to large settlement areas/population	Population served/km	30
2	Link providing service to existing · Market center Agriculture · Tourist attraction areas/ Religious Site · Animal husbandry/ Industries	No of areas	20
3	Link providing service to the existing service centres such as health centres, education centres (schools/campuses), offices (rural municipality office/Government office, etc.), linkages with other wards and municipalities.	Number of different service sector	20
4	Priority of ward	Ranking of priority from 1 to 5	20
5	Link providing service to the areas recognised by the rural municipality as areas for special consideration, such as areas inhabited by backward and poor ethnic groups/communities, isolated remote areas, historic sites, religious sites etc	Connection to the settlement of such criteria	10
	·	Sub Total	100

Chapter 2: Review of Existing Infrastructure Situation

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

2.1 Income and Vehicle ownership

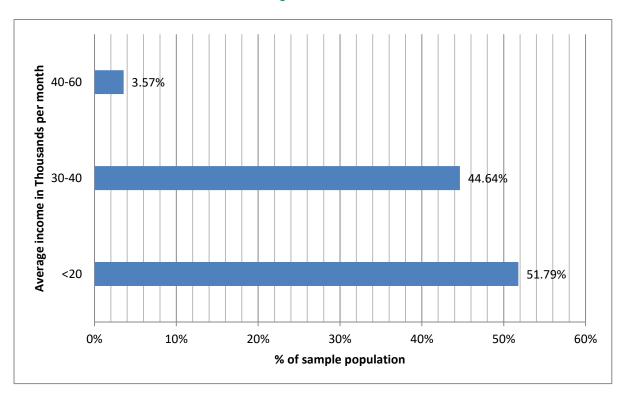


Figure 2: Income status from sample population

Annual or monthly earning of each household has significant role in the trip characteristics and finally on the overall planning aspects of the locality. Higher the income, people tends to live luxurious life i.e. tends to have their own vehicle and so on. The income characteristics are aggregated in household level, which revealed that more than 50% are at low income status (monthly income less than NRs. 20,000) and just a few (3.57%) have income level more than 40,000. Income level also affects vehicle ownership pattern. Most of the people with House Hold income less than 20,000 own cycle and as income increases ownership of motorbike increases.

Vehicle ownership has a great role in trip making. Higher the number of personalized vehicles, higher will be the number of shopping and social/recreational trips. Cycle ownership proportion was found to be too high i.e.86%. Around 13.45% household owned bike. This proportion is expected to rise in future as income level increases.

2.2 Trip Purpose and Mode:

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

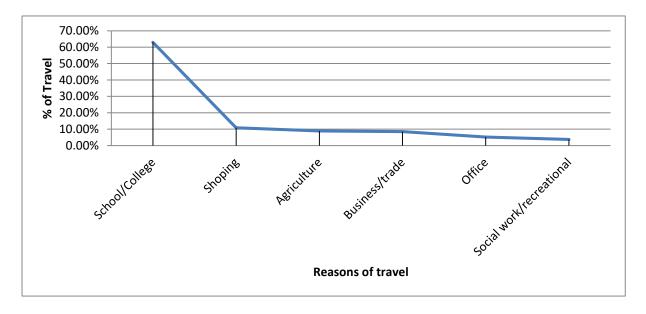


Figure 3: Trip purpose of sample data

Based on the respondents, educational trips covers about 61%, agricultural trip covers about 10% and other type of trips contribute less than half of the total trips. Summarizing, more than half trips are compulsory trips, whose timing can't be altered. These trips are basically done during morning or evening peak time, whereas timing of other trips can differs.

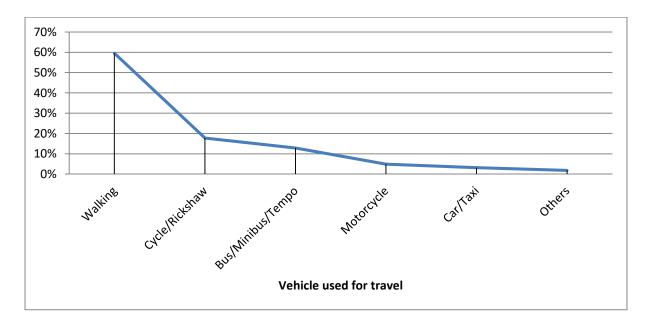


Figure 4: Mode Share

Different means of transport are used for different trips. Based on sample, walking, and Cycling were found to be the most dominant modes as highlighted in above figure. Plain terrain favours the use of non-motorized travel (NMT) mode, which includes walking, cycling, rickshaw, cart, etc. In other words they are termed as *active transport mode*. More than 75% of the trips are active mode user.

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

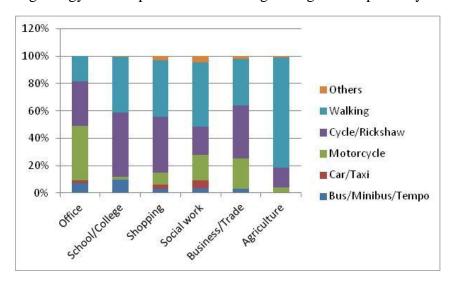


Figure 5: Use of Vehicles for different purposes

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

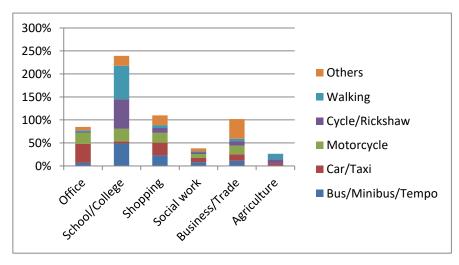


Figure 6 Mode share for different purposes

2.3 Origin and Destination Study:

Trip, simply called journey is the process of going from one place to another with some purpose. Thus, trip is characterized by origin (starting point) and destination (ending point). To be more precise, trips are characterized by trip production and trip attraction. Home end is always trip production and the location which attract the produced trips for various causes (job, shopping, and entertainment) are attraction end of trips. Most of the trips are home based trips with different destination. Out of 1158 respondent surveyed 756 respondent make trips for some purpose. Trip chaining, going at various destination points in the form of chain in a single day, was rarely found in the study area.

2.4 Transportation

a. Road inventory

For the collection of existing road infrastructure data, GPS survey was used and total length of road surveyed was 247.10 Km, out of which 7.78 Km is blacktopped, 109.91 Km is gravelled, and remaining 129.51 Km of road is earthen.

Table 2: Existing Road condition based on Surface Type (in Km)

Ward No.:	Blacktopped	Earthen	Gravelled	Sub-Total
1	4.89	12.01	12.40	29.30
2		5.01	20.98	25.99
3	0.94	10.93	19.35	31.22
4	1.84	9.78	11.72	23.33
5		33.64	6.67	40.31
6		5.70	9.81	15.52
7		6.67	13.83	20.50
8		5.46	15.15	20.61
9		40.32		40.32
Total	7.68	129.51	109.91	247.10

Based on the data collected, it can be seen that the road density per 1000 population is 6.06 km per 1000 population and 1.53 km per square kilometre of area. This value is high as compared to national statistics such as 1.91 km per 1000 population and 0.344 km per square kilometre.

Table 3: Road Density ward wise

Ward	Population	Road (Km)	Area (Sq. Km)	Road Per Sq. Km	Road per 1000 Population
1	5663	29.30	22.66	1.29	5.17
2	5098	25.99	23.78	1.09	5.10
3	5371	31.22	8.96	3.48	5.81
4	5257	23.33	15.72	1.48	4.44
5	5159	40.31	42.08	0.96	7.81
6	4550	15.52	8.93	1.74	3.41
7	4031	20.50	8.24	2.49	5.09
8	3930	20.61	9.14	2.25	5.24
9	1705	40.32	21.56	1.87	23.65
Total	40764	247.10	161.07	1.53	6.06

In this road inventory survey, it was found that the roads of this rural municipality are narrow and their width is insufficient to cross two vehicles from opposite direction at a time. Also, the actual width of feeder road and district roads is very small in comparison to their right of way. This rural municipality is supported by one National Highway, East-West Mahendra Highway.

According to the District Transport Master Plan (DTMP) of Dang District, three roads of total length 51.72 Km of this municipality are listed as district road core networks (DRCN).

These District Roads were under the responsibility of the District Development Committee and now they are under the responsibility of Rural Municipality itself.

b. Road Priority

From the ward level workshop, the most demanding five roads for each ward are collected and these roads will be used for the road priority and while developing road hierarchy.

Table 4: Priority road length based on order of priority (in Km)

Word No		Cub Total				
Ward No	Priority 1	Priority 2	Priority 3	Priority 4	Priority 5	Sub Total
1	1.72	0.87	1.18	2.55	0.52	6.85
2	2.54	2.66	1.08	2.62	1.05	9.96
3	0.78	5.35	2.28	1.28	1.07	10.76
4	1.97	8.06	1.66	3.16	1.17	16.04
5	5.85	11.86	4.43	1.49	3.88	27.52
6	3.00	1.31	2.49	1.96	1.48	10.24
7	3.94	2.50	1.82	1.17	0.70	10.13
8	2.37	2.42	1.50	1.23	1.54	9.06
9	10.53	11.63	3.19	3.11	2.63	31.10
Total	32.71	46.68	19.62	18.57	14.06	131.65

 Table 5: Priority Road length based on intervention required

Ward No	Upgrading (Km)	New Construction (Km)	Sub-Total
1	6.06	0.79	6.85
2	9.71	0.25	9.96
3	9.83	0.93	10.76
4	16.04		16.04
5	27.52		27.52
6	8.03	2.21	10.24
7	10.13		10.13
8	8.76	0.30	9.06
9	31.10		31.10
Total	127.18	4.47	131.65

Table 6: Priority Road list

Ward No	Road Name	Priority
1	Bhungbhunge chowk to hnuman mandir najik jane road	1
1	mini micro buspark Purano nagar bikas samiti ko chowk road	1
1	Khanal guest house batauli chauraha dip boarding hudai dip marga jodne sadak	2
1	Bidhalaye marg	3
1	Bp ringroad	4
1	Mukta kamaiya Chowk to Nava Prativa Chowk	5
2	Lalmatiya paschim chowk aadarsha prabi hudai parganna pul	1
2	Tundikhel chowk to lalmatiya paschim chowk	1
2	Baraha rukh chowk to tundikhel chowk	1
2	Harse tal to harde dada chowk	1
2	Harse dada chowk to baraha rukh chowk	1
2	Lalmatiya paschim chowk aadarsha prabi hudai parganna pul	1
2	Lalmatiya purbi chowk to pasu birda aashram road	2
2	Road South of Maruwathan	2
2	Lalmatiya purbi chowk to punyepur	2
2	Lalmatiya purbi chowk to pasu birda aashram road	2
2	Barakhutti chowk to bagge pati pauwa	3
2	Barakhutti chowk to ward office	3
2	Rcc bridge parganna to rcc culvert	3
2	Kates nala satmare tol chowk ramnagar chowk hudai punyepur road	4
2	Kates nala satmare tol chowk harse dada chowk sadak	4
2	baraha rukh chowk hudai kalika chowk sadak	5
2	Kalika chowk to ramnagar chowk sadak	5
3	Ghantadev saba jane chowk milan chowk hudai karamdai jane bato	1
3	Kathaha bridge bata badka pul basantapur jane chowk hudai khola jane road	2
3	Basantapur bhanpur sadak	2

3	karamdi khola to gauri chowk road	3
3	Karamdi khola to gauri chowk road Karamdi khola masuriya badka galli chowk cilnic bhawan chowk	4
3	clinic bhawan chowk to badarmatiya	5
3	Clinic bhawan malla randan ko ghar hudai acharya tole samma road road	5
	Acharya road	5
3	ward no 4 office to shiva mandir road	1
		_
4	Shiva mandir to bhanpur road	1
4	sundarpur road (sri narayan chowk rcc bridge hudai club ghar road)	2 2
4	Way to Ward no.: 9 (North)	
4	rcc bridge janajyoti nimab to pipari khola	3
4	Maurighat mabi chowk ratri prabi shiva mandir to 8 no ward boundary	4
4	Damodar road	4
4	Ward 3 to ward 4 South	4
4	narendra smirti chowk hudai lalit chowk	5
4	Suspension Bridge hudai majheni gadh road	5
5	Nutan bal uddhan to balkalyan aadharbhut School	1
5	bal kalyan to kalapani chowk	1
5	kalapani chowk to judpani road	1
5	jogyan ghar to singhe khola road	1
5	Dodhai chowk to dohai chowk	1
5	pipal dada chowk janta aadharbhut jane road	2
5	Kamal road chowk to dolaikhola sadak	2
5	janta aadharbhut to banglachuli gaupalika simana sadak	2
5	pargatinagar chowk sarbodaye mabi hudai damodar road	2
5	bal kalyan aadharbhut to dodhai kulo intake	3
5	bal kalyan aadharbhut to bhulke sadak	3
5	Lathuwa chowk nutan bal uddhan hudai singhe khola sadak	4
5	Lathuwa chowk to dolai khola road	4
5	karange chitrikot hudai lamahi nagarpalika sadak	5
6	Kirshi road	1
6	Hanseswor prabi to lathawa road	2
6	Chaubato purba grapur chowk hudai rapti nadi	3
6	Chaubato to paharuwa	3
6	Manjhi kula majheria hudai paschim road	4
6	Sagrapur to bhagwanpur road paschin	5
7	Tinkune jeetpur milam chowk hudau paschim road	1
7	Sisaniya mahadeva sadak	2
7	school chowk aananpur chowk hat bajar	3
7	Martin school hudai sagrapur chowk road	4
7	Kirshi road	4
7	Chaubato health heart hudai mini airport road	5
8	Bijauri chowk dolai khola piparkhurri chowk to Janajyoti Aadharbhut School road	1
8	Bijaura chowk - rcc culvert - Masan Ghat	1

8	Pipari chowk health heart hudai jeetpur sadak	2
8	Pipari chowk to dolai khola road	2
8	Pipari chowk to pipari thati bato	2
8	Pipra khola milan chowk kohalwa chowk hudai bhahiswar khola road	3
8	Amen chaudhari ko ghar bata buddha nagar chowk(kirshi sadak)	4
8	Shaheb chowk to ganeshman chowk hudai paschim sisaniya chowk	5
9	Simle bawari gau to 2 no ward boundary	1
9	Banglachuli 7 jabune hudai ghoskhola sadak	1
9	Chauni tol chowk bata West ward no 4	2
9	Chauni tol to wada no 2 purbi road	2
9	Rupakot aadharbhut hudai char sale sadak	3
9	Lamokhola jane chowk to badrachi devi school raod hudai lamakhola jane bato	4
9	Beore khet jane road	5

c. Traffic condition

This rural municipality possess mixed traffic. The traffic in East-West Highway is very high. Traffic condition in other roads of municipality is nominal in hilly areas, whereas terai region posses normal traffic. Public vehicles are easily available in highway but they are barely seen on other areas. Due to low number of public vehicles, motorcycle number is increasing rapidly within the municipality. For the goods transportation purpose, large and small trucks are being used and for the transportation of construction materials such as sand, stone and gravel, tractors and trippers are being used.

As per the traffic count survey at different locations there is higher percentage of cycle followed by motorcycle. The traffic count stations and the respective average hourly traffic and passenger car unit (PCU) is given in the table below. Details of traffic at different locations is included in annex of Volume II of this report.

Table 7: Traffic count stations and PCU

SN	Traffic Count Station	Average Hourly traffic	PCU
1	Badki Sisaniya	45	31
2	Lalmatiya Paschim chowk	86	73
3	Kates Nala	61	38
4	Kates Nala	42	23
5	aapkholi chowk	81	48
6	Pragatinagar chowk	57	28
7	Kalapani chowk	30	21
8	Shivamandir	70	36
9	Srinarayan chowk	97	49
10	Narendra Chowk	43	22
11	Pipari chowk	44	27
12	Pipari chowk	60	41

2.5 Visionary city development plan

The vision of this Rapti Rural Municipality is to develop an environment friendly and clean city by fostering its cultural and religious history and importance with modern urban facilities. For this the main visionary city development plan of the rural municipality is to develop/preserve the following:

- 1. Tourism
- 2. Agriculture
- 3. Industries

1. Tourism

This rural municipality has high potential for tourism. This rural municipality has different cultural heritages and touristic destinations. Some of them are as follows:

Ward	Touristi Destinations
1	Khadkeswori area
1	Siddheswori temple area
2	Harshe Danda religious forest and touristic area
1 and 2	Sanighosh and Bagasoti Homesty with Magar Culture
3	Basantapur Temple area
4 and 9	Bhadrakshi devi Temple area and Liwasw area
5	Khauraha Baba area
6	Bagarapur Homesty(Tharu cultural area)

There is potential for rafting in Rapti river within this rural municipality. Also, this rural municipality is the gateway to swargadwari area of Pyuthan. Thus, the Rapti Rural municipality bears a huge potential to develop its economy and uplift the living standards of local peoples, but this needs proper planning and management of touristic areas and routes to those places.

2. Agriculture

This rural municipality has landscape and climate favourable for agriculture and animal husbandry. There is high fertile land in the plain area of south part and hill area with sufficient grazing land and grass land for animal husbandary and fruits. To cash in such potential of agriculture the method of agriculture must be transformed into modern agriculture system. The availability of proper irrigation facility and market is the key to success in agriculture, which is possible in this rural municipality with proper planning approach.

3. Trade and Business

This rural municipality possess a huge potential to develop itself as a industrial hub of province no.: 5. The east west Mahendra Highway passess right through the middle of this rural municipality, which provides ease in transportation of raw materials and produced goods can easily reach to suitable market. Also, the landscape southern part of this rural municipality is suitable for large scale industries. Similarly small to medium scale industries can be developed in northern part of rural municipality.

Chapter 3: Indicative Development Potential Map

3.1 Location

Rapti Rural Municipality lies in Dang district of Province number 5. In Falgun 29, 2073, the government of Nepal implemented a new local administrative structure consisting of 744 local units. With this implementation of the new local administrative structure, VDCs have been replaced with the municipal and rural municipal councils.



Figure 7: Local Levels of Dang District

The Rapti Rural Municipality was established by merging the existing Sishaniya, Hansipur (1-2), and Lalmatiya village development committees (VDCs) having a total of 161.07square km. It lies within latitude 27°48′58.33" to 27°55′54.74" and longitude of 82°35′48.95" to 82°49′10.54" and 262m of lowest altitude to 1180m of highest altitude. The center of the Rural Municipality is established in the former Lalmatiya VDC. After merging the three VDCs population it had a total population of 40,763 according to 2011 Nepal census. The population density of Rapti is 253 person/sq. km. Rapti Rural Municipality has altogether 9 wards.

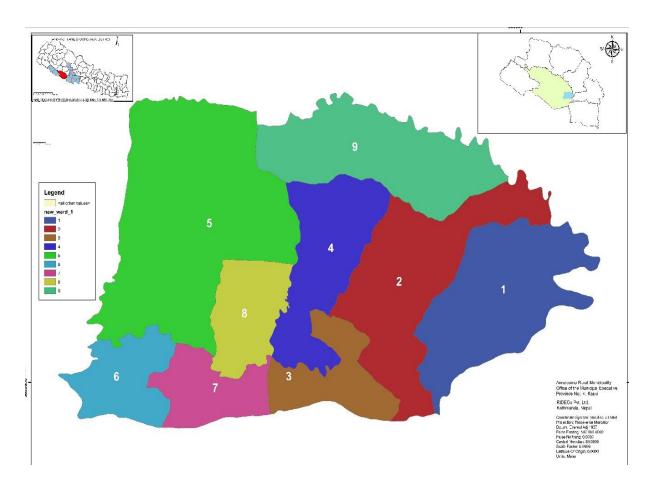


Figure 8: Location and ward division of Rapti Rural Municipality

Table 8: Formation of wards of Rapti Rural Municipality

Ward	Previous Wards	Area (Sq. Km)
1	Lalmatiya-3	22.66
2	Lalmatiya-4,7	23.78
3	Lalmatiya-1,2,8	8.96
4	Lalmatiya-5,6,9	15.72
5	Sishaniya-5,7	42.08
6	Sishaniya-8,9	8.93
7	Sishaniya-1,2,3	8.24
8	Sishaniya-4,6	9.14
9	Hansipur-1,2	21.56
	Total	161.07

3.2 Socio-demographic

Population of this municipality in the year of 2068 was 40,764 out of which 19,463 are male and 21301 are female. The population of this municipality ward wise is as follows:

Table 9: Population of Rapti Rural municipality

Ward No.	Household	Total Population	Male	Female	Area (Sq. Km)
1	1318	5663	2693	2970	22.66
2	1055	5098	2449	2649	23.78
3	1057	5371	2642	2729	8.96
4	1045	5257	2452	2805	15.72
5	1018	5159	2432	2727	42.08
6	732	4550	2189	2361	8.93
7	753	4031	1953	2078	8.24
8	756	3930	1874	2056	9.14
9	321	1705	779	926	21.56
Total	8055	40764	19463	21301	161.07

(Source: National Population Census 2068, CBS Nepal)

The population density of this municipality is 253.08 persons per square kilometre. The rate of increment of population yearly is increasing as people of this Rural Municipality tend to migrate from other places in search of opportunities and better infrastructure facilities

3.3 Landuse condition

Being a rural area of Mahabharat range almost 47% of the land is covered with forest area and nearly 27% of the land is used for agriculture. The detail land use pattern of Rapti Rural Municiplity is shown in table below.

Table 10: Land Use Condition

Category	Percentage Area
Barren Land	0.47
Building	0.39
Bush	13.12
Cultivation	26.93
Forest	45.19
Grass	4.30
Orchard	0.08
Pond	0.03
River	2.18
Road	0.94
Sand	4.40
Waterbody	1.95
Total	100

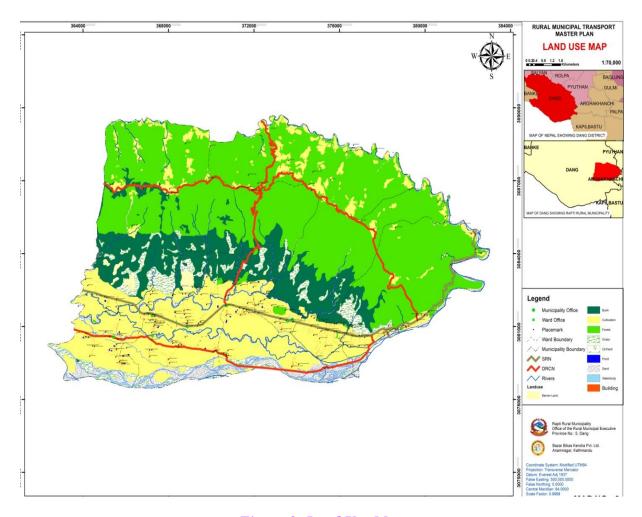


Figure 9: Land Use Map

3.4 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 agrobased 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 rural municipality as the basis of network planning.

Existing/potential areas are defined as:

- Existing/potential areas for development of small and large industries.
- Area with service centers such as hospital, post office, telecommunication, school, campus, security offices, Bus Park, sport and recreational centers etc.
- > Potential areas for tourism development.
- > Area with large settlements.
- Area with important historic and religious places.
- > Areas with extensive high value cash crops
- > Areas with extensive horticulture.
- Areas with extensive livestock farming.

Chapter 4: Rural Municipality Road Network Planning

The Rural Municipal Transport Master Plan (RMTMP) that covers the next five years is prepared based on the projected financial requirement to fulfil the perspective plan. Year-wise targets are prepared for the different roads and intervention types.

4.1 Road Classification

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

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

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

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

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

Based on various literature, the recommended right of way of ToR doesn't seems to be justifiable one as there is necessity of arterial road within the municipality. Also, the road space needs to be distributed to all road users equally with provision of green belt, cycle track thus there need to be a provision for green belt cycle track and footpath. After proper study the RoW of 14, 10, 8 and 6m is recommended for class A, B, C and D road respectively.

Т	of City Crity	Cuitoui	RO		OW based on Road Hierarchy (m)			
туре	e of City	Criteria		Expressway	Arterial	Sub arteria	al Collector	Local
Sub ci	ity	10,000-40	,000	-	-	30	20	10
City		40,000- 10	0,000	-	50	30	20	10
Sub M	letro City	100,000-30	0,000	50	30	20	10	10
Ref: Planning Norms and Standard 2015, GoN, DUDBC								
			ROW	based on Roa	ad Hierarchy	(m)		
Expressway Arteri		al	Sub arterial		Collector	Local		
- 50-60)	3	30-40	20-30	10-20		
		Ref:	Nepal	Urban Road	Standard 20	068 (draft)	•	
	Sta	ndard Cycle		cle Track	Footpath (Minimum)		Median Strip	
	NURS 20	068 draft 2 m o		n both side	2 m on both side		5 m	
	NRS 207	2070 2 m or		n both side	1.5 m on both side		5 m	

Table 11: Comparison of Criterion of Road hierarchy

Criteria	Class A	Class B	Class C	Class D
Purpose	Mobility	Mobility and control access	Access and mobility	Access
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	Connect local trips to higher level roads
	High network coverage	Support through movement of traffic	Access to property	direct access to property
	Segregated NMT facilities and Bus lay- bys	Segregated NMT facilities and Bus laybys	Segregated NMT facilities	Local NMT movement
	Complete access to public transport	High access to Public transport	Limited access to public transport	
Maintenance Responsibility	Municipality	Municipality	Municipality & Community	Community
Design Speed (Kmph)	40	30	25	25

Minimum	20	15	10	6*
Right of				
Way(m)				
Extra width at	3	2.5	1.5	1
curve (m)				
Setback	2.5	2.5	2	1.5
distance (m)				
Access Control	Applicable	Applicable	Not Applicable	Not Applicable
Public	Local Public	Local Public transport	No public	No public
transport	transport		transportation	transportation
services				

Class A Roads

All major roads which connect one or more major Growth Centres (market, tourism Centre, industry, etc.) or several Wards with high network coverage, connected directly or through the National Strategic Road Network or district road falls on the road class A. The proposed right of way for this class of road is 20 m which includes footpath, greenery, and the carriageway as shown below in the cross section.

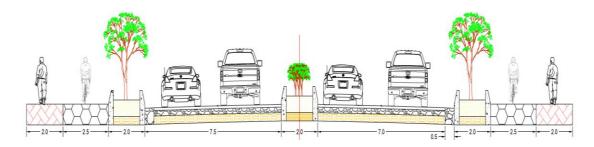


Figure 10: Typical section for Class A road in Plain

Class B road

All roads which connect to a major road network and other roads of similar hierarchy with a road connecting major Growth Centre of the same or neighbouring wards which provide access between Class A and class C road falls on the category of class B. The right of way of this class road is 15m.

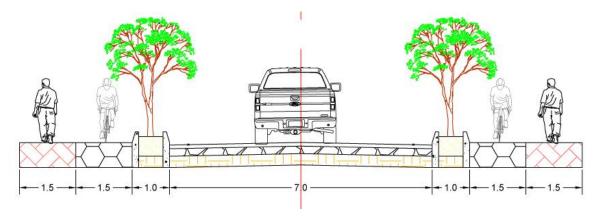


Figure 11: Typical section for Class B road in Plain

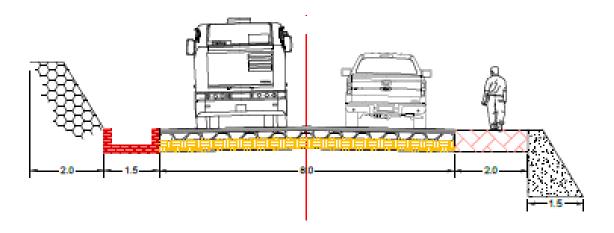


Figure 12: Typical section for Class B road with footpath in hill

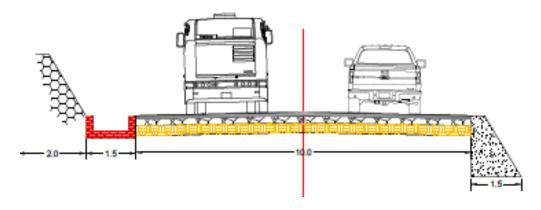


Figure 13: Typical section for Class B road without footpath in hill

Class C Roads

All roads which provide connection to higher order roads with all agricultural roads which connect a farm with a mini-market Centre or agro-based production Centre and means for mobility of local trips are understood as road class C. For this the proposed right of way for class C roads is 10m.

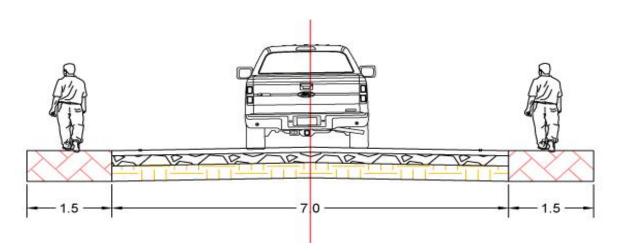


Figure 14: Typical section for Class C road with footpath in Plain

Class D Roads

All other small roads present inside the rural municipality lie under class D roads. Such roads provide service to very small population and are for mobility inside a small area. The proposed right of way for class D roads is 6 m

4.2 List Of Rural municipality Roads Class A

There are 3 municipal roads of class A of total length 71.23Km out of which 22.18Km is gravlled, 46.13 Km is earthen and 2.92 Km of track needs to be opened. Detail of inventory of Class A roads is illustrated in table below:

Table 12: List of Municipal roads A

S.No.:	Road Code	Road Name	Description
1	A01	Tundikhel-Lalmatiya Paschim Chowk- Khururiya-bhanpur- Jeetpur-Pathhar Gadhwa- Dodhai Chowk-Kalapani Chowk-Sahid Smarak Park-Tundikhel-Mahendra Hwy	This road passes through Ward 1,Ward 2,Ward 3,Ward 4,Ward 5,Ward 6,Ward 7,Ward 8, and it serves approximately 3150 population. The road has total length of 33.6 Km. Out of which 11.11 Km of road is earthen, 19.57 Km of road is gravelled, none of the section is blacktopped and 2.92 Km of track is yet to be opened.
3	A02	Aapkholi chowk-Sanighos -Chaupari-Chhauni tole- Karange road	This road passes through Ward 1,Ward 2,Ward 4,Ward 5,Ward 9, and it serves approximately 1125 population. The road has total length of 22.89 Km. Out of which 22.89 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
4	A03	Shree Narayan Chowk- Club Ghar Chowk-Chauni Tole Chowk-Simle bawari Gaun road	This road passes through Ward 4, Ward 8, Ward 9, and it serves approximately 1890 population. The road has total length of 13.32 Km. Out of which 12.23 Km of road is earthen, 1.08 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.

4.3 List of Rural municipality Roads Class B

There are 15 municipal roads of class B of total length 46.10 km out of which 0.7 km is blacktopped, 17.70 Km is gravel, and 27.70 Km is earthen. The detail of road inventory of Class B roads is illustrated in table below:

Table 13: List of Rural municipality roads of Class B

Road Code	Road Name	Description
B01	Noau Name	Description
DUI	Bhakte Chowk- Ramnagar Chowk road	This road passes through Ward 2, Ward 3, and it serves approximately 270 population. The road has total length of 1.93 Km. Out of which none of the section is earthen, 1.93 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
B02	Tundikhel Lalmatiya purbi chowk to punyepur road	This road passes through Ward 2,Ward 3, and it serves approximately 23 population. The road has total length of 0.51 Km. Out of which none of the section is earthen, 0.51 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
B03	Traffic Chowk- Chaptare-Ramnagar Chowk-Maruwathan	This road passes through Ward 1,Ward 2, and it serves approximately 293 population. The road has total length of 2.42 Km. Out of which none of the section is earthen, 2.42 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
B04	Traffic chowk to bhalukhola road	This road passes through Ward 1,Ward 5, and it serves approximately 113 population. The road has total length of 1.36 Km. Out of which 0.16 Km of road is earthen, 1.2 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
B05	Rapti samudhayek rapti green park hudai hanumangadhi road to tinkune Ringroad	This road passes through Ward 1, and it serves approximately 135 population. The road has total length of 2.01 Km. Out of which 2.01 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
B06	Durga himali marg Upto Rapti River	This road passes through Ward 1, and it serves approximately 180 population. The road has total length of 0.7 Km. Out of which none of the section is earthen, 0.7 Km of road is blacktopped and construction of new track is not required.
B07	mini micro buspark Purano nagar bikas samiti ko chowk road	This road passes through Ward 1, and it serves approximately 158 population. The road has total length of 1.2 Km. Out of which none of the section is earthen, 1.2 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
B08	Arnanhanpur chowk to Jeetpur - Mahendra Hwy	This road passes through Ward 7,Ward 8, and it serves approximately 180 population. The road has total length of 2.45 Km. Out of which none of the section is earthen, 2.45 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
B09	Sisahaniya Milan chowk Rapti road	This road passes through Ward 5,Ward 7, and it serves approximately 495 population. The road has total length of 2.5 Km. Out of which none of the section is earthen, 2.5 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.

B10	Bal kalya Aadharbhut - Dodhai Canal-Chaubato	This road passes through Ward 5,Ward 6, and it serves approximately 270 population. The road has total length of 2.08 Km. Out of which none of the section is earthen, 2.08 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
B11	Majheria Gulmaura chowk to west road	This road passes through Ward 6, and it serves approximately 135 population. The road has total length of 0.99 Km. Out of which none of the section is earthen, 0.99 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
B12	Paharuwa south to Lathuwa South Road	This road passes through Ward 5, Ward 6, and it serves approximately 23 population. The road has total length of 0.69 Km. Out of which 0.69 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
B13	Milan dada to South road	This road passes through Ward 8, and it serves approximately 45 population. The road has total length of 0.34 Km. Out of which 0.34 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
B14	Kalapani Chowk-Pipal dada chowk-Karange tole-Banglachuli Gaunpalika road	This road passes through Ward 5, and it serves approximately 720 population. The road has total length of 10.94 Km. Out of which 10.53 Km of road is earthen, 0.41 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
B15	BP chowk -Sanighos Khola-Ghumaune Gaun- Simle Bawari Gaun road	This road passes through Ward 1,Ward 2,Ward 9, and it serves approximately 1350 population. The road has total length of 15.98 Km. Out of which 13.97 Km of road is earthen, 2.01 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.

4.4 List Of Ward Roads of Class C

The following is the list of ward roads of class C. Total length of Class c road is 75.05 Km out of which 2.32 Km is blacktopped, 44.95 Km is gravelled, 27.32 Km is earthen and 0.46 Km is proposed new track.

Table 14: List of ward roads Class C

Code	Road Name	Description
C01	Nahar road (Southern)	This road passes through Ward 1, Ward 2, Ward 3, Ward 7, and it serves approximately 90 population. The road has total length of 10.8 Km. Out of which none of the section is earthen, 10.8 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.

C02	Nahar road (Upper)	This road passes through Ward 1, Ward 2, and it serves approximately 180 population. The road has total length of 2.28 Km. Out of which none of the section is earthen, 2.28 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C03	Khanal guest house batauli chauraha dip boarding hudai dip marga jodne sadak	This road passes through Ward 1, and it serves approximately 68 population. The road has total length of 0.87 Km. Out of which 0.87 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
C04	Naba Pratibha chowk to chaptare chaupari sadak	This road passes through Ward 1, and it serves approximately 158 population. The road has total length of 0.48 Km. Out of which none of the section is earthen, 0.48 Km of road is blacktopped and construction of new track is not required.
C05	Baraha Rukh Chowk- Kalika chowk - Ramnagar chowk sadak	This road passes through Ward 2, and it serves approximately 135 population. The road has total length of 1.05 Km. Out of which none of the section is earthen, 1.05 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C06	Ambeswori mandir kathaha bich galli sadak	This road passes through Ward 2, and it serves approximately 248 population. The road has total length of 0.72 Km. Out of which none of the section is earthen, 0.72 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C07	Barakhutti chowk -Bagge Pati Pauwa- Baraha Rukh Thati	This road passes through Ward 2, and it serves approximately 225 population. The road has total length of 1.83 Km. Out of which none of the section is earthen, 1.83 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C08	Bichgalli Campus chowk road	This road passes through Ward 2, and it serves approximately 68 population. The road has total length of 0.59 Km. Out of which none of the section is earthen, 0.59 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C09	School Chowk to Nava Prativa Chowk road	This road passes through Ward 1, and it serves approximately 54 population. The road has total length of 0.4 Km. Out of which 0.4 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
C10	Kates nala satmare tole Chowk- Harse Dada Chowk-Ekata Tole Chowk	This road passes through Ward 1, Ward 2, and it serves approximately 270 population. The road has total length of 1.85 Km. Out of which none of the section is earthen, 1.85 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.

~	DI C TANAN AND AND	TTTL: 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
C11	Ploting 7 (W.No. 2) Bararukh chowk to north	This road passes through Ward 2, and it serves approximately 81 population. The road has total length of 0.37 Km. Out of which none of the section is earthen, 0.37 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C12	Harse tal to harde dada chowk(p1)	This road passes through Ward 1, Ward 2, and it serves approximately 158 population. The road has total length of 0.5 Km. Out of which none of the section is earthen, 0.5 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C13	Ploting 8 (W.No. 2) Harse danda chowk to east	This road passes through Ward 2, and it serves approximately 90 population. The road has total length of 0.32 Km. Out of which 0.32 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
C14	Ploting 9 (W.No. 2)	This road passes through Ward 2, and it serves approximately 77 population. The road has total length of 0.2 Km. Out of which none of the section is earthen, 0.2 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C15	Ploting 9 (W.No. 2)	This road passes through Ward 2, and it serves approximately 68 population. The road has total length of 0.33 Km. Out of which none of the section is earthen, 0.33 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C16	Bhitri bato Ploting 10 (W.No. 2)	This road passes through Ward 2, and it serves approximately 23 population. The road has total length of 0.14 Km. Out of which none of the section is earthen, 0.14 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C17	Barakhutti chowk to ward office	This road passes through Ward 2, and it serves approximately 135 population. The road has total length of 0.49 Km. Out of which none of the section is earthen, 0.49 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C18	Ekta tol chowk to masuriya sadak	This road passes through Ward 2, and it serves approximately 68 population. The road has total length of 0.35 Km. Out of which none of the section is earthen, 0.35 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C19	Ekta nagar ring sadak	This road passes through Ward 2, and it serves approximately 45 population. The road has total length of 0.36 Km. Out of which none of the section is earthen, 0.36 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.

C20	2 no ward simana Barakhutti kulo to badarmatiya road	This road passes through Ward 2, Ward 3, and it serves approximately 270 population. The road has total length of 1.13 Km. Out of which none of the section is earthen, 1.13 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C21	Acharya Tole-Clinic bhawan chowk -Badarmatiya	This road passes through Ward 3, and it serves approximately 293 population. The road has total length of 1.07 Km. Out of which 0.91 Km of road is earthen, none of the section is blacktopped and 0.16 Km of track is yet to be opened.
C22	Karamdi khola masuriya badka galli chowk cilnic bhawan chowk (p4)	This road passes through Ward 3, and it serves approximately 315 population. The road has total length of 1.28 Km. Out of which none of the section is earthen, 1.28 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C23	Ghantadev saba chowk acharya tol -simina road	This road passes through Ward 3, Ward 4, and it serves approximately 68 population. The road has total length of 0.36 Km. Out of which 0.36 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
C24	Ghantadev saba chowk milan chowk -karamdai road	This road passes through Ward 3, and it serves approximately 158 population. The road has total length of 0.78 Km. Out of which 0.78 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
C25	Karamdi khola milan chowk naya basti to gauri chowk	This road passes through Ward 3, and it serves approximately 540 population. The road has total length of 1.28 Km. Out of which none of the section is earthen, 1.28 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C26	Khinaita tole to east south road	This road passes through Ward 4, and it serves approximately 32 population. The road has total length of 1.13 Km. Out of which none of the section is earthen, 1.13 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C27	Maurighat mabi chowk ratri prabi shiva mandir to Mahendra Highway	This road passes through Ward 4, Ward 8, and it serves approximately 450 population. The road has total length of 1.84 Km. Out of which none of the section is earthen, 1.84 Km of road is blacktopped and construction of new track is not required.
C28	naya basti jane chowk to gauri chowk road	This road passes through Ward 3, and it serves approximately 59 population. The road has total length of 0.66 Km. Out of which 0.66 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.

C29	Highway to 65 No. Chowk Lalit chowk- Gauri Chowk	This road passes through Ward 3, Ward 4, and it serves approximately 68 population. The road has total length of 0.37 Km. Out of which none of the section is earthen, 0.37 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C30	Lant Chowk- Gauri Chowk	This road passes through Ward 3, Ward 4, and it serves approximately 302 population. The road has total length of 1.02 Km. Out of which 0.17 Km of road is earthen, 0.85 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C31	Gauri chowk to budichaur jane bato	This road passes through Ward 3, Ward 4, and it serves approximately 45 population. The road has total length of 0.3 Km. Out of which none of the section is earthen, 0.3 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C32	Narendra smirti chowk- Mejheni Gadh to north connecting Road	This road passes through Ward 4, and it serves approximately 293 population. The road has total length of 1.96 Km. Out of which 1.48 Km of road is earthen, 0.48 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C33	iman chowk to club ghar najik	This road passes through Ward 4, and it serves approximately 68 population. The road has total length of 0.46 Km. Out of which 0.46 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
C34	Shiva mNdir- Barpipal Chowk- Rcc Culvert	This road passes through Ward 6, and it serves approximately 113 population. The road has total length of 1.13 Km. Out of which 1.13 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
C35	Hanseswor prabi bhagwanpur to rapti road	This road passes through Ward 6, and it serves approximately 248 population. The road has total length of 1.12 Km. Out of which none of the section is earthen, 1.12 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C36	Chaubato sagrapur bagrapur chowk to rapti	This road passes through Ward 6, and it serves approximately 428 population. The road has total length of 1.28 Km. Out of which none of the section is earthen, 1.28 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C37	Martin school hudai sagrapur chowk road	This road passes through Ward 6, Ward 7, and it serves approximately 113 population. The road has total length of 1.17 Km. Out of which 1.17 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.

C38	school chowk aananpur chowk mela sthal road	This road passes through Ward 7, and it serves approximately 203 population. The road has total length of 1.02 Km. Out of which none of the section is earthen, 1.02 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C39	Aananpur chowk to jeetpur sadak	This road passes through Ward 7, and it serves approximately 113 population. The road has total length of 0.25 Km. Out of which none of the section is earthen, 0.25 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C40	Dalit tole hudai aqueduct road	This road passes through Ward 7, and it serves approximately 68 population. The road has total length of 0.59 Km. Out of which none of the section is earthen, 0.59 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C41	Chaubato health heart hudai mini airport road	This road passes through Ward 7, and it serves approximately 23 population. The road has total length of 0.7 Km. Out of which none of the section is earthen, 0.7 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C42	Srinarayan chowk to bhanpur road	This road passes through Ward 3, Ward 4, Ward 7, Ward 8, and it serves approximately 203 population. The road has total length of 1.97 Km. Out of which none of the section is earthen, 1.97 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C43	Punkhola -Lamkhola-Simle Connection Road	This road passes through Ward 5, Ward 9, and it serves approximately 203 population. The road has total length of 3.97 Km. Out of which 3.97 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
C44	Dolai khola janajyoti nimabi to piparikhutti bhitri road	This road passes through Ward 8, and it serves approximately 180 population. The road has total length of 0.77 Km. Out of which none of the section is earthen, 0.77 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C45	Bijaura chowk to Masan Ghat	This road passes through Ward 8, and it serves approximately 45 population. The road has total length of 0.45 Km. Out of which none of the section is earthen, 0.16 Km of road is gravelled, none of the section is blacktopped and 0.3 Km of track is yet to be opened.
C46	Bijauri chowk rcc culvert rcc bridhe needed(dolai khola)piparkhurri chowk to janajyoti nimabi road	This road passes through Ward 8, and it serves approximately 518 population. The road has total length of 1.92 Km. Out of which none of the section is earthen, 1.92 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.

C47	gai form hudai thaman ko ghar road	This road passes through Ward 8, and it serves approximately 90 population. The road has total length of 1.08 Km. Out of which none of the section is earthen, 1.08 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C48	Pipari chowk - dolai khola- Kohalwa Chowk	This road passes through Ward 8, and it serves approximately 450 population. The road has total length of 1.84 Km. Out of which none of the section is earthen, 1.84 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C49	Pipari chowk to pipari thati road	This road passes through Ward 8, and it serves approximately 180 population. The road has total length of 0.39 Km. Out of which none of the section is earthen, 0.39 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C50	Amen chaudhari ko ghar- buddha nagar chowk- Dip Jyoti School	This road passes through Ward 5, Ward 6, Ward 7, Ward 8, and it serves approximately 338 population. The road has total length of 1.79 Km. Out of which none of the section is earthen, 1.79 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C51	Ganeshman Chowk to Mahendra Hwy	This road passes through Ward 5, Ward 8, and it serves approximately 113 population. The road has total length of 0.43 Km. Out of which none of the section is earthen, 0.43 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C52	Kamal road chowk to Dolai khola	This road passes through Ward 5, and it serves approximately 158 population. The road has total length of 0.51 Km. Out of which 0.4 Km of road is earthen, 0.11 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C53	Lathuwa chowk to dolai khola road	This road passes through Ward 5, and it serves approximately 383 population. The road has total length of 0.55 Km. Out of which none of the section is earthen, 0.55 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C54	Dodhai chowk to dohai chowk(p1)	This road passes through Ward 5, and it serves approximately 135 population. The road has total length of 0.28 Km. Out of which none of the section is earthen, 0.28 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
C55	Lathuwa chowk nutan bal uddhan hudai singhe khola sadak	This road passes through Ward 5, and it serves approximately 225 population. The road has total length of 0.94 Km. Out of which 0.94 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.

C56	Gulmaura chowk to north road	This road passes through Ward 6, and it serves approximately 23 population. The road has total length of 0.3 Km. Out of which 0.3 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
C57	bal kalyan aadharbhut to bhulke road	This road passes through Ward 5, and it serves approximately 180 population. The road has total length of 3.55 Km. Out of which 3.55 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
C58	Bp ringroad	This road passes through Ward 1, and it serves approximately 68 population. The road has total length of 0.54 Km. Out of which 0.54 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
C59	Rupakot aadharbhut to char sale to Ghumaune gaun road	This road passes through Ward 2, Ward 9, and it serves approximately 203 population. The road has total length of 3.19 Km. Out of which 3.19 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
C60	Salle Bohore khet salleri danda chaupari road	This road passes through Ward 9, and it serves approximately 180 population. The road has total length of 2.63 Km. Out of which 2.63 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
C61	Lamokhola jane chowk to badrakshi devi school raod hudai lamakhola road	This road passes through Ward 4, Ward 9, and it serves approximately 135 population. The road has total length of 3.11 Km. Out of which 3.11 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.

4.5 List of Ward Roads of Class D

The following is the list of ward roads of class D. Total length of Class D road is 59.86 Km out of which 4.53 Km is blacktopped, 22.22 Km is gravelled, 27.63 Km is earthen and 5.48 Km is proposed new track.

Code	Road Name	Description
D001	Bhanu chowk to Shanti tole road	This road passes through Ward 1,The road has total length of 1.18 Km. Out of which none of the section is earthen, 0.39 Km of road is gravelled, none of the section is blacktopped and 0.79 Km of track is yet to be opened.
D002	Ploting 8 (Gautam buddha tole to east north w-1) road	This road passes through Ward 1,The road has total length of 0.3 Km. Out of which none of the section is earthen, 0.3 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D003	kanchi road	This road passes through Ward 1,The road has total length of 0.88 Km. Out of which none of the section is earthen, 0.88 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.

D004	Bhungbhunge chowk to hanuman mandir najik jane road	This road passes through Ward 1,The road has total length of 0.52 Km. Out of which 0.52 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D005	Bagasoti marg	This road passes through Ward 1,The road has total length of 0.18 Km. Out of which 0.18 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D006	Plotting new(W-1, Aapkholi chowk to south)	This road passes through Ward 1,The road has total length of 0.17 Km. Out of which none of the section is earthen, 0.17 Km of road is blacktopped and construction of new track is not required.
D007	Bimala ghar jane bato	This road passes through Ward 1,The road has total length of 0.16 Km. Out of which none of the section is earthen, 0.16 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D008	Rapti green park marg	This road passes through Ward 1,The road has total length of 0.16 Km. Out of which none of the section is earthen, 0.16 Km of road is blacktopped and construction of new track is not required.
D009	shah marg	This road passes through Ward 1,The road has total length of 0.16 Km. Out of which 0.16 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D010	rapti ganga marg	This road passes through Ward 1,The road has total length of 0.24 Km. Out of which none of the section is earthen, 0.24 Km of road is blacktopped and construction of new track is not required.
D011	Plotting 3 (W-1, School road)	This road passes through Ward 1,The road has total length of 0.27 Km. Out of which 0.27 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D012	santi marg (Bhanu chowk to south)	This road passes through Ward 1,The road has total length of 0.19 Km. Out of which 0.19 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D013	Padam pun sadak	This road passes through Ward 1,The road has total length of 0.18 Km. Out of which 0.18 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D014	reule tol sadak	This road passes through Ward 1,The road has total length of 0.16 Km. Out of which none of the section is earthen, 0.16 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D015	purano nagar bikas to area police station road	This road passes through Ward 1,The road has total length of 0.25 Km. Out of which none of the section is earthen, 0.25 Km of road is blacktopped and construction of new track is not required.
D016	dip jyoti boarding school to rapti chamber of commerse	This road passes through Ward 1,The road has total length of 0.24 Km. Out of which 0.24 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.

D017	Batauli chauraha rapti chamber of commerce badshala to batauli chauraha road	This road passes through Ward 1,The road has total length of 0.28 Km. Out of which none of the section is earthen, 0.28 Km of road is blacktopped and construction of new track is not required.
D018	badshala shiva mandir to rapti bus counter	This road passes through Ward 1,The road has total length of 0.21 Km. Out of which none of the section is earthen, 0.21 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D019	Ninja hotel bata bhalukhola	This road passes through Ward 1,The road has total length of 0.36 Km. Out of which none of the section is earthen, 0.36 Km of road is blacktopped and construction of new track is not required.
D020	Bihani marg (Darlami tol to Subedi tol south)	This road passes through Ward 1,The road has total length of 1.38 Km. Out of which none of the section is earthen, 1.38 Km of road is blacktopped and construction of new track is not required.
D021	Subedi tole east to south connecting road	This road passes through Ward 1, The road has total length of 0.37 Km. Out of which none of the section is earthen, 0.37 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D022	Sankhutta basti bata daxin rapti khola jane bato	This road passes through Ward 1,The road has total length of 0.17 Km. Out of which none of the section is earthen, 0.17 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D023	jagat ploting (Subedi tole east to south running road)	This road passes through Ward 1,The road has total length of 0.22 Km. Out of which none of the section is earthen, 0.22 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D024	subedi tol to thula kuwa road	This road passes through Ward 1,The road has total length of 0.39 Km. Out of which none of the section is earthen, 0.39 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D025	ploting 5 (Subedi tole west to south running road)	This road passes through Ward 1,The road has total length of 0.26 Km. Out of which none of the section is earthen, 0.26 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D026	Ploting 4	This road passes through Ward 1,The road has total length of 0.21 Km. Out of which none of the section is earthen, 0.21 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D027	Highway to GR wood factory Road	This road passes through Ward 1,The road has total length of 0.18 Km. Out of which none of the section is earthen, 0.18 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.

D028	ploting 6	This road passes through Ward 1,The road has total length of 0.24 Km. Out of which none of the section is earthen, 0.24 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D029	rishi plotting 1	This road passes through Ward 1,The road has total length of 0.41 Km. Out of which none of the section is earthen, 0.41 Km of road is blacktopped and construction of new track is not required.
D030	plotting 2	This road passes through Ward 1,The road has total length of 0.26 Km. Out of which 0.26 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D031	Plotting 7 (W-1 Naba Pratibha chowk to east)	This road passes through Ward 1,The road has total length of 0.33 Km. Out of which none of the section is earthen, 0.33 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D032	NTC office to kates nala(thilachaur jane bato)	This road passes through Ward 1, Ward 2, The road has total length of 0.53 Km. Out of which none of the section is earthen, 0.53 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D033	Kates nala chowk darlami tol to kates nala aqueduct	This road passes through Ward 1, The road has total length of 0.54 Km. Out of which none of the section is earthen, 0.54 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D034	Kates Nala chowk to Mukta Kamaiya Chowk Road	This road passes through Ward 1,The road has total length of 0.44 Km. Out of which 0.44 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D035	Bhakte chowk to mukta kamaiya chowk	This road passes through Ward 1, Ward 2, The road has total length of 0.2 Km. Out of which none of the section is earthen, 0.2 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D036	Ring road (Khururiya) to south road	This road passes through Ward 3,The road has total length of 0.16 Km. Out of which none of the section is earthen, 0.16 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D037	badka pul bata purba jane road	This road passes through Ward 3,The road has total length of 0.24 Km. Out of which none of the section is earthen, 0.24 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D038	Badka pul bata paschim jane road	This road passes through Ward 3,The road has total length of 0.28 Km. Out of which none of the section is earthen, 0.28 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.

D039	Ploting 14 (W.No. 2) South to Kathaha chowk	This road passes through Ward 2,The road has total length of 0.22 Km. Out of which none of the section is earthen, 0.22 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D040	Ploting 12 (W.No. 2) North to Kathaha chowk	This road passes through Ward 2, The road has total length of 0.26 Km. Out of which none of the section is earthen, 0.26 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D041	Ploting 6 (W.No. 2) Campus chowk to east	This road passes through Ward 2,The road has total length of 0.31 Km. Out of which none of the section is earthen, 0.31 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D042	Public academy road	This road passes through Ward 2, The road has total length of 0.39 Km. Out of which none of the section is earthen, 0.39 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D043	Bagge pati pauwa to badarmatiya sadak	This road passes through Ward 2,Ward 3,The road has total length of 0.83 Km. Out of which 0.83 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D044	Adarsha namuna mabi sadak	This road passes through Ward 2,The road has total length of 0.19 Km. Out of which none of the section is earthen, 0.19 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D045	Rishi Plotting 3	This road passes through Ward 1,The road has total length of 0.34 Km. Out of which none of the section is earthen, 0.34 Km of road is blacktopped and construction of new track is not required.
D046	Ploting 1 (W.No. 2) Barakhutti chowk to Ekta nagar road	This road passes through Ward 2, The road has total length of 0.33 Km. Out of which none of the section is earthen, 0.33 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D047	proposed Park road	This road passes through Ward 2,The road has total length of 0.21 Km. Out of which none of the section is earthen, none of the section is blacktopped and 0.21 Km of track is yet to be opened.
D048	Ploting 2 (W.No. 2) (way to Masuriya from Barakhutti chowk)	This road passes through Ward 2,The road has total length of 0.2 Km. Out of which none of the section is earthen, 0.2 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D049	Shantinagar sadak(ploting)	This road passes through Ward 2, The road has total length of 0.24 Km. Out of which none of the section is earthen, 0.24 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D050	durga bhawani janebaato	This road passes through Ward 3,The road has total length of 0.18 Km. Out of which 0.18 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.

D051	Aadarsha Tole chowk to Aadarsha Tole Road	This road passes through Ward 3,The road has total length of 0.41 Km. Out of which 0.41 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D052	highway to Acharya tol jane bato	This road passes through Ward 3,The road has total length of 0.22 Km. Out of which 0.22 Km of road is earthen, 0.21 Km of road is blacktopped and construction of new track is not required.
D053	Ploting road 18 (W.No. 2)	This road passes through Ward 3,The road has total length of 0.21 Km. Out of which none of the section is earthen, none of the section is blacktopped and construction of new track is not required.
D054	Petrol pump to Basantapur road	This road passes through Ward 3, Ward 4, The road has total length of 0.19 Km. Out of which none of the section is earthen, 0.19 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D055	narendra smirti chowk to daxin road	This road passes through Ward 4,The road has total length of 0.2 Km. Out of which 0.2 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D056	narendra smirti chowk bata daxin road	This road passes through Ward 4,The road has total length of 0.21 Km. Out of which none of the section is earthen, 0.21 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D057	Sisir chowk seren valley chowk hudai rcc culvert vako jane bato	This road passes through Ward 4,The road has total length of 0.54 Km. Out of which none of the section is earthen, 0.54 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D058	janakpur chowk to daxin jane bato	This road passes through Ward 4,The road has total length of 0.3 Km. Out of which none of the section is earthen, 0.3 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D059	Shiva Mandir to NorthEast bhitri road	This road passes through Ward 4,The road has total length of 0.18 Km. Out of which none of the section is earthen, 0.18 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D060	Ghantadev shiva mandir to purba galli ko uttar masuriya basti jane bato	This road passes through Ward 3,The road has total length of 0.82 Km. Out of which 0.82 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D061	Ghanta dev shiva mandir siri chaur naba jyoti nimabi to nayabasti road	This road passes through Ward 3,The road has total length of 0.48 Km. Out of which 0.48 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D062	siddartha boarding to siri chaur naba jyoti nimabi road	This road passes through Ward 3,The road has total length of 0.5 Km. Out of which 0.5 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.

D063	Mukta kamaiya road	This road passes through Ward 3,The road has total length
	J	of 0.55 Km. Out of which 0.55 Km of road is earthen, 0.27 Km of road is blacktopped and construction of new track is
		not required.
D064	rapti technical road	This road passes through Ward 3,The road has total length of 0.27 Km. Out of which none of the section is earthen, 0.46 Km of road is blacktopped and construction of new track is not required.
D065	maurighat school road	This road passes through Ward 3, The road has total length of 0.46 Km. Out of which none of the section is earthen, none of the section is blacktopped and construction of new track is not required.
D066	Bansghari to siddhartha boarding school	This road passes through Ward 3,The road has total length of 0.17 Km. Out of which 0.17 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D067	oli tol hudai dolai khola jane road	This road passes through Ward 4,The road has total length of 0.38 Km. Out of which 0.38 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D068	plotting road(W-4,In betwen Majheni gadh and Lalit chowk towards east	This road passes through Ward 4,The road has total length of 0.28 Km. Out of which 0.28 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D069	majhenigadh tole jane bato	This road passes through Ward 4,The road has total length of 0.56 Km. Out of which none of the section is earthen, 0.56 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D070	staff chowk basantapur shivamandir hudai embankment jane road	This road passes through Ward 3,The road has total length of 0.67 Km. Out of which none of the section is earthen, 0.67 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D071	basantapur gaun to mahatan tol	This road passes through Ward 3,The road has total length of 0.24 Km. Out of which none of the section is earthen, 0.24 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D072	Lasuniya bato	This road passes through Ward 7,The road has total length of 0.52 Km. Out of which 0.52 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D073	Chaubato to gai form	This road passes through Ward 7,The road has total length of 0.28 Km. Out of which none of the section is earthen, 0.28 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D074	Gai form to jib lal ghar road	This road passes through Ward 3, Ward 7, The road has total length of 0.24 Km. Out of which 0.24 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.

D075	Maruwa than to lal mani ko ghar	This road passes through Ward 7, The road has total length of 0.25 Km. Out of which none of the section is earthen, 0.25 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D076	Ramjanaki mandir to manjhi kulo pul road	This road passes through Ward 7,The road has total length of 1.17 Km. Out of which 1.17 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D077	Paschim galli road	This road passes through Ward 7, The road has total length of 0.31 Km. Out of which none of the section is earthen, 0.31 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D078	School Chowk to Agricultural Road	This road passes through Ward 7, The road has total length of 1.08 Km. Out of which none of the section is earthen, none of the section is blacktopped and 1.08 Km of track is yet to be opened.
D079	Eye hospital road	This road passes through Ward 7, The road has total length of 0.83 Km. Out of which none of the section is earthen, 0.38 Km of road is gravelled, none of the section is blacktopped and 0.45 Km of track is yet to be opened.
D080	Pipal Chautari Galli bato	This road passes through Ward 6,The road has total length of 0.31 Km. Out of which none of the section is earthen, 0.31 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D081	Kuwa to south Rcc Culvert Bhitri road	This road passes through Ward 6,The road has total length of 0.23 Km. Out of which none of the section is earthen, 0.23 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D082	Kuwa to East road	This road passes through Ward 6,The road has total length of 0.34 Km. Out of which none of the section is earthen, 0.34 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D083	Sailor Mill to east Galli bato	This road passes through Ward 6,The road has total length of 0.17 Km. Out of which none of the section is earthen, 0.17 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D084	Sargapur chowk to jagpur jane road	This road passes through Ward 6, Ward 7, The road has total length of 0.64 Km. Out of which 0.29 Km of road is earthen, 0.34 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D085	Sagrapur chowk jane bich ko bato	This road passes through Ward 6,Ward 7,The road has total length of 0.33 Km. Out of which 0.33 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.

D086	Jagpur gaun hudai sagrapur chowk roadwidth	This road passes through Ward 7, The road has total length of 0.33 Km. Out of which none of the section is earthen, 0.33 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D087	Jagpur gaun hudai sagrapur chowk road	This road passes through Ward 6,Ward 7,The road has total length of 0.34 Km. Out of which 0.34 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D088	Sagrapur to bhagwanpur road paschin(p5)	This road passes through Ward 6,The road has total length of 0.6 Km. Out of which 0.6 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D089	Bhawanpur to east Road	This road passes through Ward 6, The road has total length of 0.88 Km. Out of which none of the section is earthen, none of the section is blacktopped and 0.88 Km of track is yet to be opened.
D090	Deepak gahr jane bato sagrapur bata	This road passes through Ward 6,The road has total length of 0.25 Km. Out of which 0.25 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D091	Gairhan tol sadak	This road passes through Ward 6,The road has total length of 0.45 Km. Out of which 0.45 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D092	Mnjhi Kula culvert- Sagarpur Chowk Canal Road	This road passes through Ward 6,The road has total length of 1.33 Km. Out of which none of the section is earthen, none of the section is blacktopped and 1.33 Km of track is yet to be opened.
D093	Manjhi kula majheria hudai paschim road(p4)	This road passes through Ward 6,The road has total length of 0.63 Km. Out of which 0.63 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D094	Pipari bata bhanpur jodne sadak	This road passes through Ward 8,The road has total length of 0.71 Km. Out of which 0.71 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D095	Pipari jane road	This road passes through Ward 7, Ward 8, The road has total length of 0.2 Km. Out of which none of the section is earthen, 0.2 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D096	Bhitri purbi bato	This road passes through Ward 8,The road has total length of 0.2 Km. Out of which 0.2 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D097	Pipari gaun ring road	This road passes through Ward 7, Ward 8, The road has total length of 0.97 Km. Out of which 0.46 Km of road is earthen, 0.51 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.

D098	Sano nadi intake jane bato	This road passes through Ward 8,The road has total length of 0.23 Km. Out of which none of the section is earthen, 0.23 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D099	ploting road 2 (W.No. 7)	This road passes through Ward 7,The road has total length of 0.21 Km. Out of which 0.21 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D100	Purba galli Road	This road passes through Ward 7,The road has total length of 0.66 Km. Out of which 0.56 Km of road is earthen, 0.09 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D101	East of Maruwathan chowkBhitri bato	This road passes through Ward 7,The road has total length of 0.2 Km. Out of which none of the section is earthen, 0.2 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D102	Sargaiya Road	This road passes through Ward 6, Ward 7, The road has total length of 1.98 Km. Out of which 1.72 Km of road is earthen, 0.26 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D103	Parti galla bato	This road passes through Ward 7, The road has total length of 0.45 Km. Out of which none of the section is earthen, 0.45 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D104	pargatinagar chowk to sarbodaye mabi road	This road passes through Ward 5, Ward 7, The road has total length of 0.25 Km. Out of which none of the section is earthen, 0.25 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D105	pargatinagar chowk sarbodaye mabi hudai damodar road(p2)	This road passes through Ward 5, Ward 7, The road has total length of 0.32 Km. Out of which none of the section is earthen, 0.32 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D106	kamal road chowk rice mil to sarbodaye mabi jane road	This road passes through Ward 5,The road has total length of 0.3 Km. Out of which none of the section is earthen, 0.3 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D107	KAMAL ROAD CHOWK TO KHUM BDR PUN CHOWK ROAD	This road passes through Ward 5, Ward 6, The road has total length of 0.24 Km. Out of which none of the section is earthen, 0.24 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D108	Kamal Road chowk- Khim bdr Chowk Road to east new track	This road passes through Ward 5,The road has total length of 0.19 Km. Out of which none of the section is earthen, none of the section is blacktopped and 0.19 Km of track is yet to be opened.

D109	Badka kulo bato	This road passes through Ward 6,The road has total length
		of 0.86 Km. Out of which 0.86 Km of road is earthen, none
		of the section is blacktopped and construction of new track
D110	Badka Kula Bhitri bato	is not required. This road passes through Ward 6,The road has total length
DIII	Budha Hala Billin outo	of 0.16 Km. Out of which 0.16 Km of road is earthen, none
		of the section is blacktopped and construction of new track
D111	D 1 - 1 - D1 '(1 - 4 -	is not required.
D111	Dumri kula Bhitri bato	This road passes through Ward 6,The road has total length of 0.36 Km. Out of which 0.36 Km of road is earthen, none
		of the section is blacktopped and construction of new track
		is not required.
D112	Dhumri kulo bato	This road passes through Ward 6, The road has total length
		of 0.95 Km. Out of which 0.95 Km of road is earthen, none of the section is blacktopped and construction of new track
		is not required.
D113	Lalthuwa to east New	This road passes through Ward 5,The road has total length
	Track	of 0.16 Km. Out of which none of the section is earthen,
		none of the section is blacktopped and 0.16 Km of track is yet to be opened.
D114	lathuwa chowk to lathuwa	This road passes through Ward 5,The road has total length
	paschim galli	of 0.19 Km. Out of which 0.19 Km of road is earthen, none
		of the section is blacktopped and construction of new track
D115	Singhe khola pul bata	is not required. This road passes through Ward 5,The road has total length
2110	dodhai chowk jane road	of 0.36 Km. Out of which none of the section is earthen,
		0.36 Km of road is gravelled, none of the section is
		blacktopped and construction of new track is not required.
D116	Singhe khola pul - narti	This road passes through Ward 5,The road has total length
	kula -Hari Kumars' House	of 0.71 Km. Out of which 0.71 Km of road is earthen, none
		of the section is blacktopped and construction of new track is not required.
D117	Sukumbasu tol hudai	This road passes through Ward 8,The road has total length
	mango firm	of 1.23 Km. Out of which 1.23 Km of road is earthen, none
		of the section is blacktopped and construction of new track is not required.
D118	pipri khutti chowk bata	This road passes through Ward 8,The road has total length
	halka paschim gayera uttar	of 0.44 Km. Out of which none of the section is earthen,
	jane road	0.44 Km of road is gravelled, none of the section is
		blacktopped and construction of new track is not required.
D119	Piperkhutti chowk to	This road passes through Ward 8,The road has total length
	jutpani chowk hudai rcc bridge needed area samma	of 0.83 Km. Out of which none of the section is earthen, 0.83 Km of road is gravelled, none of the section is
	road	blacktopped and construction of new track is not required.
D460		
D120	Gai form to jutpani chowk	This road passes through Ward 8,The road has total length of 0.27 Km. Out of which none of the section is earthen,
		0.27 Km. Out of which hole of the section is cartilen,
		blacktopped and construction of new track is not required.
D121	Maruwa than to purba	This road passes through Ward 8,The road has total length
	daxin highway touch jane	of 0.24 Km. Out of which 0.24 Km of road is earthen, none
	bato(bagihawa bato)	

		of the section is blacktopped and construction of new track is not required.
D122	Dorahawa bato	This road passes through Ward 8,The road has total length of 0.3 Km. Out of which 0.3 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D123	Ploting raod 3 (W.No. 7)	This road passes through Ward 8,The road has total length of 0.32 Km. Out of which none of the section is earthen, 0.32 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D124	Bagihawa paschim raod	This road passes through Ward 8,The road has total length of 0.35 Km. Out of which 0.35 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D125	Lakhan chowk to gauria simal buta jane bato	This road passes through Ward 8,The road has total length of 0.39 Km. Out of which none of the section is earthen, 0.39 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D126	Lakhan chowk to gauria simal buta jane bato(prabhakar ghar jane bato)	This road passes through Ward 8,The road has total length of 0.22 Km. Out of which 0.22 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D127	Gauri simal buta chowk to gharti ko ghar(track open)	This road passes through Ward 8,The road has total length of 0.2 Km. Out of which 0.2 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D128	Bhitri bato(Baguri road)	This road passes through Ward 5, Ward 8, The road has total length of 0.69 Km. Out of which 0.69 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D129	Shiva mandir road	This road passes through Ward 8,The road has total length of 0.22 Km. Out of which none of the section is earthen, 0.22 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D130	Kohalwa chowk to shankar saba	This road passes through Ward 8,The road has total length of 0.36 Km. Out of which 0.36 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D131	Shaheb chowk to ganeshman chowk hudai paschim sisaniya chowk(p5)	This road passes through Ward 5, Ward 8, The road has total length of 1.54 Km. Out of which none of the section is earthen, 1.54 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D132	Track open	This road passes through Ward 5,The road has total length of 0.18 Km. Out of which none of the section is earthen, none of the section is blacktopped and 0.18 Km of track is yet to be opened.

D133	kalapani chowk to rani tol sadak	This road passes through Ward 5,The road has total length of 0.22 Km. Out of which none of the section is earthen, 0.22 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D134	dolai khola dam	This road passes through Ward 5,The road has total length of 0.56 Km. Out of which 0.56 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D135	Plotting Road 1 (W.No. 5) On west side of Kamal roa	This road passes through Ward 5,The road has total length of 0.19 Km. Out of which none of the section is earthen, 0.19 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
D136	rcc culvert to mansaram ghar road	This road passes through Ward 5,The road has total length of 0.45 Km. Out of which 0.45 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D137	basudev gyawali ghar to yubraj be ghar	This road passes through Ward 5,The road has total length of 0.56 Km. Out of which 0.56 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D138	madan adhakari sadak	This road passes through Ward 5,The road has total length of 0.18 Km. Out of which 0.18 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D139	Machhetal marg	This road passes through Ward 1,The road has total length of 0.45 Km. Out of which 0.45 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D140	Saligram road to jagat ram ghar road	This road passes through Ward 5,The road has total length of 0.47 Km. Out of which 0.47 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D141	Ram pd ghar rcc culvert hudai jagat ram ghar	This road passes through Ward 5,The road has total length of 0.67 Km. Out of which 0.67 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D142	nutan bal uddhan to singhe khola road	This road passes through Ward 5,The road has total length of 0.92 Km. Out of which 0.92 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D143	karange tole to tallo karange road	This road passes through Ward 5,The road has total length of 0.23 Km. Out of which 0.23 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
D144	Karange Tole to North New Track	This road passes through Ward 5,The road has total length of 0.2 Km. Out of which none of the section is earthen, none of the section is blacktopped and 0.2 Km of track is yet to be opened.
D145	kamal road chowk to dolai khola road	This road passes through Ward 5,The road has total length of 0.15 Km. Out of which 0.15 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.

4.6 Rural municipality Inventory Map Of Road Network

Road inventory survey was conducted throught the rural municipality as far as possible except the new construction considered. In the inventory survey, the surface condition, width of road, and intervention required were collected. These data are presented in rural municipality inventory map of road by surface condition, by width and invention needed. Similarly the map of road infrastructure is also prepared. Refer annex of this report for map in detail.

Table 15: Length of Roads based on surface condition

Road Class	Road surface (km)								
	Blacktopped	Gravel	Earthen	New Track	Sub-Total				
A		22.18	46.13	2.92	71.23				
В	0.7	17.7	27.7		46.1				
C	2.32	44.95	27.32	0.46	75.05				
D	4.53	22.22	27.63	5.48	59.86				
Total	7.55	107.05	128.78	8.86	252.24				

Chapter 5: Perspective Plan of Rural municipality Transport Network

5.1 Process and procedure for collection of demand

For the collection of ward road demand, ward level workshop on each ward was conducted. With discussion with the concerned stakeholders of each ward, five roads from each ward with their significance were selected as the ward road for the RMTMP period.

5.2 Scoring system for screening, grading and prioritization

As the financial resources of rural municipality is less as compared to the demand of people there is always conflict among the leaders from different parts for the development of road infrastructure. For this we have to prioritize roads, based on the certain conditions. For this RMTMP, we have adopted the criteria given by the ministry with discussion and minor modification with the concerned stakeholders. Based on this criteria, municipal and ward roads have been prioritized class wise. The details of prioritization criteria are included in chapter 1 of Volume II of this report and prioritized roads are shown in Annex with detail of score on each criteria and ranking.

5.3 Possible inter-rural municipality/district linkages

This rural municipality is supported with 15.36Km long Mahendra Highway which is under Department of Road and 51.7 Km long Previous district roads which are now under the rural municipality itself. This highway and district roads mainly serve for the inter municipality and inter district mobility. The municipal roads planned on this RMTMP also serves for intermunicipality/district mobility. Some of them are as follows:

Road Name	Inter-Municipality/District Connection
Agricultural Road	Lamahi Municipality
Bageswoti Pahadi Marga	Lamahi Municipality
Khanepani Chowk-Pipal dada chowk-Janta aadharbhut School-Banglachuli Gaunpalika	Banglachuli Rural Municipality
Shree Narayan Chowk-Club Ghar Chowk-Chauni Tole Chowk-Simle bawari Gaun	Banglachuli Rural Municipality
Bp ringroad	Banglachuli Rural Municipality

5.5 Interventions for MTPP

a. Maintenance

Maintenance refers to the actions required to repair a road and keep it in good and passable condition. For RMTMP planning purposes standard costs per kilometre for each maintenance type are applied to the entire road network, whereby for certain maintenance

type's distinction is made according to the surface type of the road. Maintenance activities include:

Emergency maintenance - Basic repairs aimed at removing landslides and repairing damage to the road that inhibit the proper use of the road and make it impassable. This mainly takes place during and after the rainy season. A provisional lump sum is reserved for the entire road network based on the network length. Allocation to specific road sections is based on the actual need for clearing landslides or repairing washouts and cuts in the road.

Routine maintenance - General maintenance of the road aimed at preventing damage by ensuring the proper working of the different road elements (retaining walls, drainage system, carriageway, etc.) and cutting vegetation. This is carried out each year on a more or less continuous basis. Routine maintenance is required for the entire road network. The specific requirements for routine maintenance are determined on an annual basis through the road condition survey.

Recurrent maintenance - Repairs of minor damage to the road surface and road structures to bring them back to good condition. This is generally carried out once or twice a year. Recurrent maintenance is required for the entire municipal road network, whereby distinction is made according to the surface type. The specific requirements for recurrent maintenance are determined on an annual basis through the road condition survey.

Periodic maintenance - Larger repairs to the road largely aimed at renewing the road surface through re-gravelling, resealing or overlays. It is generally carried out with several years interval. Although periodic maintenance is only required for specific sections of the road network, a lump sum allocation is made for the entire road network based on average annual requirements, distinguishing between different surface types. The specific periodic maintenance requirements are determined on an annual basis through the annual road condition survey.

The length of roads in km to be included under each Maintenance type for the first year is indicated below.

Length of road in km for maintenance Road Recurrent Recurrent Recurrent Periodic Periodic Code Routine Emergency (earthen) (Black-topped) (Blacktopped) (Gravel) (Gravel) **A01** 30.68 30.68 19.57 19.57 11.11 A02 22.89 22.89 22.89 A03 13.21 13.21 1.08 12.13 1.08 1.93 1.93 1.93 **B01** 1.93 **B02** 0.51 0.51 0.51 0.51 2.42 2.42 2.42 2.42 **B03**

Table 16: Length of road for maintenance work

0.16

1.20

1.20

B04

1.36

1.36

B05	2.01	2.01		2.01			
B06	0.70	0.70			0.70	0.70	
B07	1.20	1.20	1.20				1.20
B08	2.45	2.45	2.45				2.45
B09	2.50	2.50	2.50				2.50
B10	2.08	2.08	2.08				2.08
B11	0.99	0.99	0.99				0.99
B12	0.69	0.69		0.69			
B13	0.34	0.34		0.34			
B14	10.94	10.94	0.41	10.53			0.41
B15	15.98	15.98	2.01	13.97			2.01
C01	10.80	10.80	10.80				10.80
C02	2.28	2.28	2.28				2.28
C03	0.87	0.87		0.87			
C04	0.48	0.48			0.48	0.48	
C05	1.05	1.05	1.05				1.05
C06	0.72	0.72	0.72				0.72
C07	1.83	1.83	1.83				1.83
C08	0.59	0.59	0.59				0.59
C09	0.40	0.40		0.40			
C10	1.85	1.85	1.85				1.85
C11	0.37	0.37	0.37				0.37
C12	0.50	0.50	0.50				0.50
C13	0.32	0.32		0.32			
C14	0.20	0.20	0.20				0.20
C15	0.33	0.33	0.33				0.33
C16	0.14	0.14	0.14				0.14
C17	0.49	0.49	0.49				0.49
C18	0.35	0.35	0.35				0.35
C19	0.36	0.36	0.36				0.36
C20	1.13	1.13	1.13				1.13
C21	0.91	0.91		0.91			
C22	1.28	1.28	1.28				1.28
C23	0.36	0.36		0.36			
C24	0.78	0.78		0.78			
C25	1.28	1.28	1.28				1.28
C26	1.13	1.13	1.13				1.13
C27	1.84	1.84			1.84	1.84	
C28	0.66	0.66		0.66			
C29	0.37	0.37	0.37				0.37
C30	1.02	1.02	0.85	0.17			0.85
C31	0.30	0.30	0.30				0.30
C32	1.96	1.96	0.48	1.48			0.48
C33	0.46	0.46		0.46			

C34	1.13	1.13		1.13			
C35	1.12	1.12	1.12	1.13			1.12
C36	1.28	1.28	1.28				1.28
C37	1.17	1.17	1.20	1.17			1.20
C38	1.02	1.02	1.02	1.17			1.02
C39	0.25	0.25	0.25				0.25
C40	0.23	0.23	0.23				0.23
C40	0.70	0.70	0.70				0.70
C41	1.97	1.97	1.97				1.97
C42	3.97	3.97	1.77	3.97			1.77
C43	0.77	0.77	0.77	3.71			0.77
C45	0.17	0.16	0.16				0.16
C46	1.92	1.92	1.92				1.92
C47	1.08	1.08	1.08				1.08
C47	1.84	1.84	1.84				1.84
C49	0.39	0.39	0.39				0.39
C50	1.79	1.79	1.79				1.79
C50	0.43	0.43	0.43				0.43
C52	0.43	0.43	0.11	0.40			0.11
C53	0.55	0.55	0.11	0.40			0.55
C54	0.28	0.28	0.28				0.28
C55	0.94	0.94	0.20	0.94			0.20
C56	0.30	0.30		0.30			
C57	3.55	3.55		3.55			
C58	0.54	0.54		0.54			
C59	3.19	3.19		3.19			
C60	2.63	2.63		2.63			
C61	3.11	3.11		3.11			
D001	0.39	0.39	0.39				0.39
D002	0.30	0.30	0.30				0.30
D003	0.88	0.88	0.88				0.88
D004	0.52	0.52		0.52			
D005	0.18	0.18		0.18			
D006	0.17	0.17			0.17	0.17	
D007	0.16	0.16	0.16				0.16
D008	0.16	0.16			0.16	0.16	
D009	0.16	0.16		0.16			
D010	0.24	0.24			0.24	0.24	
D011	0.27	0.27		0.27			
D012	0.19	0.19		0.19			
D013	0.18	0.18		0.18			
D014	0.16	0.16	0.16				0.16
D015	0.25	0.25			0.25	0.25	
D016	0.24	0.24		0.24			

D017	0.28	0.28			0.28	0.28	
D017	0.20	0.21	0.21		0.20	0.20	0.21
D019	0.36	0.36	0.21		0.36	0.36	0.21
D020	1.38	1.38			1.38	1.38	
D020	0.37	0.37	0.37		1.50	1.50	0.37
D021	0.37	0.37	0.37				0.17
D023	0.17	0.22	0.17				0.17
D024	0.39	0.39	0.39				0.39
D025	0.26	0.26	0.26				0.26
D026	0.20	0.20	0.20				0.21
D027	0.18	0.18	0.18				0.18
D028	0.16	0.24	0.16				0.24
D029	0.41	0.41	0.24		0.41	0.41	0.24
D030	0.26	0.26		0.26	0.11	0.11	
D031	0.33	0.33	0.33	0.20			0.33
D032	0.53	0.53	0.53				0.53
D033	0.54	0.54	0.54				0.54
D034	0.44	0.44	0.51	0.44			0.51
D035	0.20	0.20	0.20	0.11			0.20
D036	0.16	0.16	0.16				0.16
D037	0.24	0.24	0.24				0.24
D038	0.28	0.28	0.28				0.28
D039	0.22	0.22	0.22				0.22
D040	0.26	0.26	0.26				0.26
D041	0.31	0.31	0.31				0.31
D042	0.39	0.39	0.39				0.39
D043	0.83	0.83		0.83			
D044	0.19	0.19	0.19				0.19
D045	0.34	0.34			0.34	0.34	
D046	0.33	0.33	0.33				0.33
D047	0.00	-					
D048	0.20	0.20	0.20				0.20
D049	0.24	0.24	0.24				0.24
D050	0.18	0.18		0.18			
D051	0.41	0.41		0.41			
D052	0.22	0.22		0.22			
D053	0.21	0.21			0.21	0.21	
D054	0.19	0.19	0.19				0.19
D055	0.20	0.20		0.20			
D056	0.21	0.21	0.21				0.21
D057	0.54	0.54	0.54				0.54
D058	0.30	0.30	0.30				0.30
D059	0.18	0.18	0.18				0.18
D060	0.82	0.82		0.82			

D061	0.48	0.48		0.48			
D062	0.50	0.50		0.50			
D063	0.55	0.55		0.55			
D064	0.27	0.27			0.27	0.27	
D065	0.46	0.46			0.46	0.46	
D066	0.17	0.17		0.17			
D067	0.38	0.38		0.38			
D068	0.28	0.28		0.28			
D069	0.56	0.56	0.56				0.56
D070	0.67	0.67	0.67				0.67
D071	0.24	0.24	0.24				0.24
D072	0.52	0.52		0.52			
D073	0.28	0.28	0.28				0.28
D074	0.24	0.24		0.24			
D075	0.25	0.25	0.25				0.25
D076	1.17	1.17		1.17			
D077	0.31	0.31	0.31				0.31
D078	0.00	-					
D079	0.38	0.38	0.38				0.38
D080	0.31	0.31	0.31				0.31
D081	0.23	0.23	0.23				0.23
D082	0.34	0.34	0.34				0.34
D083	0.17	0.17	0.17				0.17
D084	0.64	0.64	0.34	0.29			0.34
D085	0.33	0.33		0.33			
D086	0.33	0.33	0.33				0.33
D087	0.34	0.34		0.34			
D088	0.60	0.60		0.60			
D089	0.00	-					
D090	0.25	0.25		0.25			
D091	0.45	0.45		0.45			
D092	0.00	-					
D093	0.63	0.63		0.63			
D094	0.71	0.71		0.71			
D095	0.20	0.20	0.20				0.20
D096	0.20	0.20		0.20			
D097	0.97	0.97	0.51	0.46			0.51
D098	0.23	0.23	0.23				0.23
D099	0.21	0.21		0.21			
D100	0.66	0.66	0.09	0.56			0.09
D101	0.20	0.20	0.20				0.20
D102	1.98	1.98	0.26	1.72			0.26
D103	0.45	0.45	0.45				0.45
D104	0.25	0.25	0.25				0.25

D105	0.22	0.22	0.22				0.22
D105	0.32	0.32	0.32				0.32
D106	0.30	0.30	0.30				0.30
D107	0.24	0.24	0.24				0.24
D108	0.00	-					
D109	0.86	0.86		0.86			
D110	0.16	0.16		0.16			
D111	0.36	0.36		0.36			
D112	0.95	0.95		0.95			
D113	0.00	-					
D114	0.19	0.19		0.19			
D115	0.36	0.36	0.36				0.36
D116	0.71	0.71		0.71			
D117	1.23	1.23		1.23			
D118	0.44	0.44	0.44				0.44
D119	0.83	0.83	0.83				0.83
D120	0.27	0.27	0.27				0.27
D121	0.24	0.24		0.24			
D122	0.30	0.30		0.30			
D123	0.32	0.32	0.32				0.32
D124	0.35	0.35		0.35			
D125	0.39	0.39	0.39				0.39
D126	0.22	0.22		0.22			
D127	0.20	0.20		0.20			
D128	0.69	0.69		0.69			
D129	0.22	0.22	0.22				0.22
D130	0.36	0.36		0.36			
D131	1.54	1.54	1.54				1.54
D132	0.00	-					
D133	0.22	0.22	0.22				0.22
D134	0.56	0.56		0.56			
D135	0.19	0.19	0.19				0.19
D136	0.45	0.45		0.45			
D137	0.56	0.56		0.56			
D138	0.18	0.18		0.18			
D139	0.45	0.45		0.45			
D140	0.47	0.47		0.47			
D141	0.67	0.67		0.67			
D142	0.92	0.92		0.92			
D143	0.23	0.23		0.23			
D144	0.00	-					
D145	0.15	0.15		0.15			
Total	243.39	243.39	107.05	128.78	7.56	7.56	107.05

Table 17: Cost of maintenance for first year of RMTMP in thousands

			Cost for ma	aintenance (In	Thousands)		
Road Code	Emergency	Routine	Recurrent (Gravel)	Recurrent (earthen)	Recurrent (Black- topped)	Periodic (Black- topped)	Periodic (Gravel)
A01	920.44	613.62	7,829.84	2,776.65	-	-	4,893.6
A02	686.76	57.84	-	5,723.03	-	-	-
A03	396.30	64.20	432.00	3,032.50	-	-	270.0
B01	57.86	8.57	771.41	-	-	-	482.1
B02	15.21	10.14	202.81	-	-	-	126.8
B03	72.56	48.37	967.50	-	-	-	604.7
B04	40.66	27.11	478.25	39.92	-	-	298.9
B05	60.35	40.24	-	502.96	-	-	-
B06	20.94	13.96	-	-	348.97	139.59	-
B07	36.02	24.01	480.21	-	-	-	300.1
B08	73.61	49.07	981.49	-	-	-	613.4
B09	74.94	49.96	999.18	-	-	-	624.5
B10	62.54	41.70	833.93	-	-	-	521.2
B11	29.64	19.76	395.13	-	-	-	247.0
B12	20.61	13.74	-	171.73	-	-	-
B13	10.31	6.87	-	85.88	-	-	-
B14	328.25	218.83	165.78	2,631.79	-	-	103.6
B15	479.52	319.68	803.95	3,493.56	-	-	502.5
C01	324.05	216.03	4,320.68	-	-	-	2,700.4
C02	68.55	45.70	913.95	-	-	-	571.2
C03	26.24	17.49	-	218.68	-	-	-
C04	14.45	9.63	-	-	240.85	96.34	-
C05	31.64	21.10	421.91	-	-	-	263.7
C06	21.50	14.33	286.64	-	-	-	179.2
C07	54.78	36.52	730.44	-	-	-	456.5
C08	17.80	11.86	237.27	-	-	-	148.3
C09	11.86	7.91	-	98.83	-	-	-
C10	55.45	36.97	739.37	-	-	-	462.1
C11	11.18	7.45	149.05	-	-	-	93.2
C12	15.02	10.01	200.20	-	-	-	125.1
C13	9.53	6.35	-	79.42	-	-	-
C14	6.01	4.01	80.20	-	-	-	50.1
C15	9.85	6.57	131.32	-	-	-	82.1
C16	4.31	2.88	57.53	-	-	-	36.0
C17	14.69	9.79	195.84	-	-	-	122.4
C18	10.35	6.90	138.02	-	-	-	86.3
C19	10.94	7.29	145.90	-	-	-	91.2
C20	33.86	22.57	451.44	-	-	-	282.1
C21	27.27	18.18	-	227.25	-	-	-
C22	38.48	25.66	513.12	-	-	-	320.7

COO	10.76	7.17		89.65			
C23	23.29	15.53	_	194.10	_	-	_
C25	38.54	25.69	513.87	174.10	_		321.2
C25	33.76	22.51	450.15		_		281.3
C20	55.27	36.85	-30.13	_	921.20	368.48	201.3
C28	19.77	13.18	_	164.78	721.20	-	_
	11.00	7.33	146.62	104.78	-		91.6
C29 C30	30.48	20.32	340.32	41.28	-		212.7
C31	9.14	6.09	121.86	- 1.20	_		76.2
	58.89	0.07	193.71	369.67	_		70.2
C32	30.07	39.26	175.71	307.07			121.1
C33	13.74	9.16	-	114.47	-	-	-
C34	33.87	22.58	-	282.27	-	-	-
C35	33.50	22.34	446.71	-	-	-	279.2
C36	38.39	25.60	511.92	-	-	-	319.9
C37	35.04	23.36	-	291.98	-	-	-
C38	30.62	20.41	408.22	-	-	-	255.1
C39	7.62	5.08	101.57	-	-	-	63.5
C40	17.66	11.78	235.50	-	-	-	147.2
C41	21.09	14.06	281.23	-	-	-	175.8
C42	59.22	39.48	789.59	-	-	-	493.5
C43	119.06	79.37	-	992.18	-	-	-
C44	23.13	15.42	308.42	-	-	-	192.8
C45	4.73	3.15	63.08	-	-	-	39.4
C46	57.59	38.39	767.82	-	-	-	479.9
C47	32.48	21.65	433.01	-	-	-	270.6
C48	55.11	36.74	734.78	-	-	-	459.2
C49	11.80	7.87	157.33	-	-	-	98.3
C50	53.64	35.76	715.17	-	-	-	447.0
C51	12.81	8.54	170.79	-	-	-	106.7
C52	15.29	10.19	43.22	100.42	-	-	27.0
C53	16.57	11.05	220.98	-	-	-	138.1
C54	8.26	5.51	110.10	-	-	-	68.8
C55	28.09	18.72	-	234.05	-	-	-
C56	9.13	6.08	-	76.06	-	-	-
C57	106.47	70.98	-	887.22	-	-	-
C58	16.13	10.75	-	134.40	-	-	-
C59	95.69	63.79	-	797.42	-	-	-
C60	79.03	52.69	-	658.60	-	-	-
C61	93.38	62.25	-	778.14	-	-	-
D001	11.67	7.78	155.54	-	-	-	97.2
D002	8.89	5.93	118.57	-	-	-	74.1
D003	26.53	17.69	353.76	-	-	-	221.1
D004	15.62	10.42	-	130.20	-	-	-
D005	5.44	3.63	-	45.36	-	-	-

D006	5.18	3.46	-	-	86.40	34.56	-
	4.76	3.17	63.43	-	-	-	
D007							39.6
D008	4.75	3.17	-	-	79.17	31.67	-
D009	4.74	3.16	-	39.47	-	-	-
D010	7.12	4.75	-	-	118.66	47.46	-
D011	8.21	5.48	-	68.45	-	-	-
D012	5.74	3.82	-	47.80	-	-	-
D013	5.40	3.60	-	44.98	-	-	-
D014	4.68	3.12	62.45	-	-	-	39.0
D015	7.57	5.04	-	-	126.08	50.43	-
D016	7.19	4.79	-	59.93	-	-	-
D017	8.42	5.61	-	-	140.30	56.12	-
D018	6.30	4.20	84.00	-	-	-	52.5
D019	10.75	7.17	-	-	179.24	71.70	-
D020	41.49	27.66	-	-	691.47	276.59	-
D021	10.96	7.31	146.19	-	-	-	91.4
D022	5.11	3.41	68.18	-	-	-	42.6
D023	6.53	4.35	87.03	-	-	-	54.4
D024	11.56	7.71	154.10	-	-	-	96.3
D025	7.77	5.18	103.57	-	-	-	64.7
D026	6.31	4.21	84.17	-	-	-	52.6
D027	5.25	3.50	70.03	-	-	-	43.8
D028	7.09	4.73	94.56	-	-	-	59.1
D029	12.17	8.11	-	-	202.84	81.14	-
D030	7.87	5.24	-	65.54	-	-	-
D031	9.85	6.57	131.38	-	-	-	82.1
D032	15.96	10.64	212.83	-	-	-	133.0
D033	16.29	10.86	217.26	-	-	-	135.8
D034	13.28	8.85	-	110.67	-	-	-
D035	6.10	4.07	81.31	-	-	-	50.8
D036	4.85	3.23	64.63	-	-	-	40.4
D037	7.33	4.89	97.72	-	-	-	61.1
D038	8.33	5.55	111.03	-	-	-	69.4
D039	6.63	4.42	88.45	-	-	-	55.3
D040	7.86	5.24	104.77	-	-	-	65.5
D041	9.34	6.23	124.57	-	-	-	77.9
D042	11.66	7.77	155.46	-	-	-	97.2
D043	24.92	16.61	-	207.67	-	-	-
D044	5.71	3.81	76.19	-	454.00	-	47.6
D045	10.31	6.87	-	-	171.80	68.72	-
D046	9.96	6.64	132.79	-	-	-	83.0
D047	-	-	-	-	-	-	-
D048	5.96	3.97	79.44	-	-	-	49.6
D049	7.16	4.77	95.43	-	-	-	59.6

D050	5.35	3.56	_	44.55	_	_	_
D050	12.29	8.20	_	102.46	_	_	_
D051	6.50	4.34	_	54.20	_	_	<u>_</u>
D052	6.32	4.21	_	-	105.27	42.11	_
D053	5.85	3.90	77.99	_	103.27		48.7
D054	6.07	4.04	- 11.55	50.55	-	_	-
D055	6.43	4.29	85.76	-	_	_	53.6
D050	16.21	10.81	216.18	_	-	_	135.1
D057	8.95	5.97	119.31	-	_	_	74.6
D059	5.29	3.53	70.54	_	_	_	44.1
D060	24.69	16.46	-	205.79	_	_	-
D061	14.37	9.58	-	119.79	_	_	_
D062	14.98	9.99	-	124.82	_	_	_
D063	16.64	11.10	-	138.69	_	_	_
D064	8.12	5.41	-	-	135.36	54.14	_
D065	13.81	9.21	-	_	230.13	92.05	_
D066	5.02	3.34	-	41.80	-	_	_
D067	11.30	7.53	-	94.13	-	-	-
D068	8.43	5.62	-	70.22	-	_	-
D069	16.68	11.12	222.45	-	-	-	139.0
D070	20.25	13.50	269.97	-	-	_	168.7
D071	7.08	4.72	94.44	-	-	-	59.0
D072	15.56	10.38	-	129.69	-	-	-
D073	8.52	5.68	113.55	-	-	-	71.0
D074	7.20	4.80	-	60.00	-	-	-
D075	7.39	4.93	98.51	-	-	-	61.6
D076	35.07	23.38	-	292.28	-	-	-
D077	9.32	6.22	124.33	-	-	-	77.7
D078	-	-	-	-	-	-	-
D079	11.40	7.60	152.00	-	-	-	95.0
D080	9.40	6.26	125.28	-	-	-	78.3
D081	6.97	4.65	92.98	-	-	-	58.1
D082	10.28	6.85	137.02	-	-	-	85.6
D083	5.23	3.49	69.74	-	-	-	43.6
D084	19.07	12.71	136.62	73.52	-	-	85.4
D085	10.04	6.69	-	83.67	-	-	-
D086	9.94	6.63	132.59	-	-	-	82.9
D087	10.21	6.81	-	85.09	-	-	-
D088	18.01	12.01	-	150.07	-	-	-
D089	-	-	-	-	-	-	-
D090	7.51	5.01	-	62.62	-	-	-
D091	13.44	8.96	-	112.00	-	-	-
D092	-	-	-	-	-	-	-
D093	18.99	12.66	-	158.22	-	-	-

D094	21.28	14.19	_	177.35	_	_	_
D094	6.01	4.00	80.08	-	_	-	50.0
D096	5.94	3.96	-	49.47		_	-
D097	29.09	19.39	203.02	115.50	_	-	126.9
D097	6.82	4.55	90.94	-	_	-	56.8
D099	6.21	4.14	-	51.74	_	_	-
D100	19.65	13.10	36.15	141.19		_	22.6
D101	5.87	3.91	78.21	-	-	_	48.9
D101	59.39	39.59	105.51	428.98	_	_	65.9
D102	13.39	8.92	178.47	-	_	-	111.5
D103	7.57	5.05	100.95	-		_	63.1
D104	9.69	6.46	129.16	-	_	_	80.7
D105	8.96	5.97	119.43	-	_	_	74.6
D107	7.14	4.76	95.13	_		_	59.5
D107	-	-	-	_	_	_	-
D109	25.85	17.24	_	215.44	-	_	_
D110	4.94	3.29	-	41.17		_	_
D110	10.80	7.20	_	90.01	-	_	_
D112	28.58	19.06	-	238.20		_	_
D113	-	_	-	-	_	_	_
D114	5.78	3.85	-	48.14		-	_
D115	10.85	7.23	144.63	-	-	-	90.4
D116	21.30	14.20	-	177.54		_	-
D117	36.91	24.61	-	307.60	-	-	-
D118	13.18	8.79	175.77	-	-	-	109.9
D119	24.85	16.56	331.30	-	-	-	207.1
D120	8.20	5.47	109.34	-	-	-	68.3
D121	7.14	4.76	-	59.51	-	-	-
D122	8.88	5.92	-	74.02	-	-	-
D123	9.66	6.44	128.79	-	-	-	80.5
D124	10.45	6.97	-	87.06	-	-	-
D125	11.62	7.75	154.92	-	-	-	96.8
D126	6.66	4.44	-	55.52	-	-	-
D127	6.14	4.09	-	51.15	-	-	-
D128	20.82	13.88	-	173.51	-	-	-
D129	6.58	4.39	87.74	-	-	-	54.8
D130	10.93	7.28	-	91.06	-	-	-
D131	46.22	30.82	616.32	-	-	-	385.2
D132	-	-	-	-	-	-	-
D133	6.63	4.42	88.44	-	-	-	55.3
D134	16.75	11.17	-	139.59	-	-	-
D135	5.73	3.82	76.46	-	-	-	47.8
D136	13.61	9.07	-	113.43	-	-	-
D137	16.68	11.12	-	139.00	-	-	-

D138	5.39	3.59	-	44.93	-	-	-
D139	13.44	8.96	-	112.00	-	-	-
D140	13.99	9.33	-	116.59	-	-	-
D141	20.08	13.39	-	167.32	-	-	-
D142	27.75	18.50	-	231.22	-	-	-
D143	6.75	4.50	-	56.26	-	-	-
D144	-	-	-	-	-	-	-
D145	4.59	3.06	-	38.27	-	-	-
Total	7,301.69	4,867.80	42,820.38	32,195.85	3,777.74	1,511.10	26,762.7

b. Improvement

Improvement refers to actions required to improve a road to bring it to a maintainable all-weather standard. It includes the following actions:

- Rehabilitation Significant repairs required to bring a very poor road back to a maintainable standard. This does not include any changes to the original surface type.
- **2. Gravelling** Placement of gravel layer to make it all-weather and ensure that the road remains passable during the rainy season.
- 3. Cross drainage Placement of suitable cross-drainage structures with the aim of making the road all-weather and ensuring that the road remains passable even during the rainy season.
- **4. Protective structures** Placement of retaining walls and lined side drains to avoid excessive damage to the road during the rainy season and bring it to a maintainable standard.
- **5. Blacktopping** Placement of a blacktop layer in roads with traffic volumes exceeding 50 passenger car units (PCU) to reduce damage to the road surface.
- **6. Widening** Increase of the road width in roads with traffic volumes exceeding 500 passenger car units (PCU) to ensure the proper flow of traffic.

Table 18: Length for gravelling and blacktop and cost (in Thousands)

Road		Road	d surface (k	km)		Track	Crovelling	Blacktopping
Code	Black topped	Gravel	Earthen	New Track	Total	opening cost		Cost
A01	0.00	19.57	11.11	2.92	33.60	66,634	96,951	601,856
A02	0.00	0.00	22.89	0.00	22.89	-	83,870	236,648
A03	0.00	1.08	12.13	0.00	13.21	-	-	27,375
B01	0.00	1.93	0.00	0.00	1.93	-	79,054	234,281
B02	0.00	0.51	0.00	0.00	0.51	-	-	28,267
B03	0.00	2.42	0.00	0.00	2.42	-	59,554	160,373
B04	0.00	1.20	0.16	0.00	1.36	-	-	30,558
B05	0.00	0.00	2.01	0.00	2.01	-	-	36,613
B06	0.70	0.00	0.00	0.00	0.70	-	-	35,964

DAT	0.00	1.20	0.00	0.00	1.20			1.4.470
B07	0.00	1.20	0.00	0.00	1.20	-	-	14,479
B08		2.45	0.00	0.00	2.45	-	-	17,596
B09	0.00	2.50	0.00	0.00	2.50	-	-	7,431
B10	0.00	2.08	0.00	0.00	2.08	-	-	25 452
B11	0.00	0.99	0.00	0.00	0.99	-	- 002	35,452
B12	0.00	0.00	0.69	0.00	0.69	-	903	19,865
B13	0.00	0.00	0.34	0.00	0.34	-	1,943	5,035
B14	0.00	0.41	10.53	0.00	10.94	-	11,381	29,488
B15	0.00	2.01	13.97	0.00	15.98	-	3,886	10,068
C01	0.00	10.80	0.00	0.00	10.80	-	-	14,590
C02	0.00	2.28	0.00	0.00	2.28	-	-	21,883
C03	0.00	0.00	0.87	0.00	0.87	-	-	- 200
C04	0.48	0.00	0.00	0.00	0.48	-	-	6,298
C05	0.00	1.05	0.00	0.00	1.05	-	-	21,072
C06	0.00	0.72	0.00	0.00	0.72	-	-	3,138
C07	0.00	1.83	0.00	0.00	1.83	-	2.416	22,503
C08	0.00	0.59	0.00	0.00	0.59	-	3,416	8,851
C09	0.00	0.00	0.40	0.00	0.40	-	14.025	14,624
C10	0.00	1.85	0.00	0.00	1.85	-	14,035	36,362
C11	0.00	0.37	0.00	0.00	0.37	-	15,615	40,457
C12	0.00	0.50	0.00	0.00	0.50	-	-	5,581
C13	0.00	0.00	0.32	0.00	0.32	-	-	20,941
C14	0.00	0.20	0.00	0.00	0.20	-	-	4,484
C15	0.00	0.33	0.00	0.00	0.33	-	-	5,706
C16	0.00	0.14	0.00	0.00	0.14	1 044	4.700	20,818
C17	0.00	0.49	0.00	0.00	0.49	1,844	4,709	12,201
C18	0.00	0.35	0.00	0.00	0.35	-	3,849	9,972
C19	0.00	0.36	0.00	0.00	0.36	-	4 110	8,790
C20	0.00	1.13	0.00	0.00	1.13	-	4,119	10,673
C21 C22	0.00	0.00	0.91	0.16	1.07	-	1,767	5,811
		1.28	0.00	0.00	1.28	-	1,739 726	4,507 11,581
C23	0.00	0.00	0.36	0.00	0.36	-	720	
C24	0.00	0.00	0.78	0.00	0.78	-	-	20,382
C25	0.00	1.28	0.00	0.00	1.28	-	11,591	30,032
C26	0.00	1.13	0.00	0.00	1.13	-	13,695	35,483
C27	1.84	0.00	0.00	0.00	1.84	-	2,365	6,129
C28	0.00	0.00	0.66	0.00	0.66	-	-	8,015
C29	0.00	0.37	0.00	0.00	0.37	-	-	11,634
C30	0.00	0.85	0.17	0.00	1.02	-	-	12,024
C31	0.00	0.30	0.00	0.00	0.30	-	5,139	13,314
C32	0.00	0.48	1.48	0.00	1.96	3,377	1,300	5,166
C33	0.00	0.00	0.46	0.00	0.46	-	-	-
C34	0.00	0.00	1.13	0.00	1.13	-	-	14,645
C35	0.00	1.12	0.00	0.00	1.12	-	6,506	22,378

C36	0.00	1.28	0.00	0.00	1.28			8,169
C37	0.00	0.00	1.17	0.00	1.17	-	-	12,829
C37	0.00	1.02	0.00	0.00	1.17	-	-	2,286
C39	0.00	0.25	0.00	0.00	0.25	-	-	4,867
C40	0.00	0.23	0.00	0.00	0.23	-	-	12,731
C40	0.00	0.39	0.00	0.00	0.39	-	-	2,895
C41	0.00	1.97	0.00	0.00	1.97	-	1,398	3,622
C42	0.00	0.00	3.97	0.00	3.97	-	1,390	12,866
C43	0.00	0.00	0.00	0.00	0.77	-	-	6,762
C44	0.00	0.77	0.00	0.30	0.77		-	4,248
C45	0.00	1.92	0.00	0.00	1.92	-	4,968	12,872
C47	0.00	1.08	0.00	0.00	1.08	_	7,700	3,743
C48	0.00	1.84	0.00	0.00	1.84		2,900	7,514
							2,700	
C49	0.00	0.39	0.00	0.00	0.39	-	-	12,341
C50	0.00	1.79	0.00	0.00	1.79	-	-	3,934
C51	0.00	0.43	0.00	0.00	0.43	-	1.550	26,048
C52	0.00	0.11	0.40	0.00	0.51	-	1,578	4,088
C53	0.00	0.55	0.00	0.00	0.55	-	17.460	4,179
C54	0.00	0.28	0.00	0.00	0.28	-	17,462	45,243
C55	0.00	0.00	0.94	0.00	0.94	-	-	1,640
C56	0.00	0.00	0.30	0.00	0.30	-	2.015	3,473
C57	0.00	0.00	3.55	0.00	3.55	-	2,015	5,220
C58	0.00	0.00	0.54	0.00	0.54	-	-	123,139
C60	0.00	0.00	3.19 2.63	0.00	3.19 2.63	-	-	4,158 6,712
C61	0.00	0.00	3.11	0.00	3.11	-	1,339	3,468
D001	0.00	0.39	0.00	0.00	1.18	5,437	2,492	9,623
D001	0.00	0.39	0.00	0.79	0.30	3,437	2,492	12,546
D002	0.00	0.30	0.00	0.00	0.30	9,122	4,181	10,832
D003	0.00	0.00	0.52	0.00	0.52	9,122	1,637	4,241
D004	0.00	0.00	0.32	0.00	0.32	<u> </u>	1,037	2,629
D005	0.17	0.00	0.00	0.00	0.17	6,002	2,751	7,128
D007	0.00	0.16	0.00	0.00	0.16	- 0,002	1,989	5,153
D008	0.16	0.00	0.00	0.00	0.16	_	-	1,316
D009	0.00	0.00	0.16	0.00	0.16	_	1,887	4,888
D010	0.24	0.00	0.00	0.00	0.24	_		1,588
D011	0.00	0.00	0.27	0.00	0.27	-	5,393	16,120
D012	0.00	0.00	0.19	0.00	0.19	_	_	-
							2.067	10.010
D013	0.00	0.00	0.18	0.00	0.18	-	3,867	10,019
D014	0.00	0.16	0.00	0.00	0.16	7 422	3,674	9,520
D015	0.25	0.00	0.00	0.00	0.25	7,433	3,407	8,826
D016	0.00	0.00	0.24	0.00	0.24	-	1,452	7,895
D017	0.28	0.00	0.00	0.00	0.28	-	2,994	7,758

D018 0.00 0.21 0.00 0.00 0.21 - 2,907 7,531 D020 1.38 0.00 0.00 0.00 0.036 - 2,708 7,017 D021 0.00 0.37 0.00 0.00 0.37 3,102 1,422 6,778 D022 0.00 0.17 0.00 0.00 0.17 - 2,611 6,764 D023 0.00 0.02 0.00 0.02 - 2,587 6,703 D024 0.00 0.39 0.00 0.00 0.22 - 2,587 6,703 D025 0.00 0.26 0.00 0.00 0.26 - 2,232 5,783 D026 0.00 0.26 0.00 0.00 0.21 - 2,230 5,771 D027 0.00 0.18 0.00 0.00 0.21 - 2,181 5,551 D028 0.00 0.24 0.00 0.00 0.24 - 1,755 5,335 D030 0.00									
D020 1.38 0.00 0.00 0.00 1.38 - 2,708 7,017 D021 0.00 0.37 0.00 0.00 0.37 3,102 1.422 6,778 D022 0.00 0.00 0.00 0.17 - 2,611 6,764 D024 0.00 0.22 0.00 0.00 0.22 - - 6,744 D024 0.00 0.22 0.00 0.00 0.22 - 2,587 6,703 D025 0.00 0.26 0.00 0.00 0.26 - 2,232 5,783 D026 0.00 0.21 0.00 0.00 0.21 - 2,283 5,783 D027 0.00 0.18 0.00 0.00 0.21 - 2,283 5,783 D028 0.00 0.24 0.00 0.00 0.04 0.14 - 2,181 5,651 D030 0.00 0.00 0.00	D018	0.00	0.21	0.00	0.00	0.21	-	2,907	7,531
D021 0.00 0.37 0.00 0.00 0.37 3,102 1,422 6,778 D022 0.00 0.17 0.00 0.00 0.17 - 2,611 6,764 D023 0.00 0.22 0.00 0.09 0.39 - 5,587 6,703 D025 0.00 0.26 0.00 0.00 0.039 - 2,587 6,703 D026 0.00 0.26 0.00 0.00 0.21 - 2,232 5,783 D026 0.00 0.21 0.00 0.00 0.21 - 2,230 5,777 D027 0.00 0.18 0.00 0.00 0.01 1.8 5,176 D028 0.41 0.00 0.00 0.00 0.24 - - 5,450 D030 0.00 0.03 3.00 0.00 0.26 - 1,775 5,335 D031 0.00 0.53 0.00 0.00	D019	0.36	0.00	0.00	0.00	0.36	-	-	7,201
D022 0.00 0.17 0.00 0.00 0.17 - 2,611 6,764 D023 0.00 0.22 0.00 0.00 0.22 - - 6,744 D024 0.00 0.39 0.00 0.00 0.02 - 2,587 6,703 D025 0.00 0.26 0.00 0.00 0.26 - 2,232 5,783 D026 0.00 0.00 0.00 0.21 - 2,230 5,777 D027 0.00 0.18 0.00 0.00 0.00 0.01 2,2181 5,651 D028 0.00 0.24 0.00 0.00 0.00 0.24 - 5,496 D029 0.41 0.00 0.00 0.00 0.24 - - 5,496 D030 0.00 0.00 0.26 - 1,775 5,335 D031 0.00 0.53 0.00 0.23 - 1,775 <	D020	1.38	0.00	0.00	0.00	1.38	-	2,708	7,017
D023 0.00 0.22 0.00 0.00 0.22 - - 6,744 D024 0.00 0.39 0.00 0.00 0.39 - 2,587 6,703 D025 0.00 0.26 0.00 0.00 0.26 - 2,232 5,783 D026 0.00 0.21 - 2,230 5,777 D027 0.00 0.18 0.00 0.00 0.18 - 2,181 5,651 D028 0.00 0.24 0.00 0.00 0.00 0.24 - 5,496 D029 0.41 0.00 0.00 0.00 0.26 - 1,775 5,335 D030 0.00 0.033 0.00 0.00 0.26 - 1,775 5,335 D031 0.00 0.53 0.00 0.00 0.53 - 1,755 4,547 D033 0.00 0.54 0.00 0.00 0.54 - <	D021	0.00	0.37	0.00	0.00	0.37	3,102	1,422	6,778
D024 0.00 0.39 0.00 0.00 0.39 - 2,587 6,703 D025 0.00 0.26 0.00 0.00 0.00 0.26 - 2,232 5,783 D026 0.00 0.21 0.00 0.00 0.018 - 2,181 5,651 D027 0.00 0.18 0.00 0.00 0.00 0.18 - 2,181 5,651 D028 0.00 0.24 0.00 0.00 0.00 0.24 - - 5,496 D030 0.00 0.00 0.00 0.00 0.26 0.00 0.26 - 1,775 5,335 D031 0.00 0.33 0.00 0.00 0.33 - 924 5,176 D033 0.00 0.54 0.00 0.00 0.53 - 1,755 4,547 D033 0.00 0.54 0.00 0.00 0.54 - - 4,528 <th>D022</th> <th>0.00</th> <th>0.17</th> <th>0.00</th> <th>0.00</th> <th>0.17</th> <th>-</th> <th>2,611</th> <th>6,764</th>	D022	0.00	0.17	0.00	0.00	0.17	-	2,611	6,764
D025 0.00 0.26 0.00 0.026 - 2,232 5,783 D026 0.00 0.21 0.00 0.00 0.21 - 2,230 5,777 D027 0.00 0.18 0.00 0.00 0.018 - 2,181 5,651 D028 0.00 0.24 0.00 0.00 0.00 0.24 - 5,496 D030 0.00 0.00 0.00 0.00 0.41 - 2,103 5,450 D031 0.00 0.00 0.26 0.00 0.26 - 1,775 5,335 D031 0.00 0.53 0.00 0.00 0.53 - 1,755 4,547 D033 0.00 0.54 0.00 0.00 0.54 - 4,528 D034 0.00 0.04 0.00 0.44 0.00 0.44 - 1,747 4,527 D035 0.00 0.20 0.00 0.20	D023	0.00	0.22	0.00	0.00	0.22	-	-	6,744
D026 0.00 0.21 0.00 0.00 0.21 - 2,230 5,777 D027 0.00 0.18 0.00 0.00 0.18 - 2,181 5,651 D028 0.00 0.24 0.00 0.00 0.24 - - 5,496 D029 0.41 0.00 0.00 0.00 0.41 - 2,103 5,450 D030 0.00 0.00 0.26 0.00 0.26 - 1,775 5,335 D031 0.00 0.53 0.00 0.00 0.53 - 924 5,176 D032 0.00 0.53 0.00 0.00 0.53 - 1,755 4,547 D033 0.00 0.54 0.00 0.00 0.54 - - 4,528 D034 0.00 0.00 0.00 0.20 - 1,744 4,517 D035 0.00 0.20 0.00 0.00	D024	0.00	0.39	0.00	0.00	0.39	-	2,587	6,703
D027 0.00 0.18 0.00 0.00 0.18 - 2,181 5,651 D028 0.00 0.24 0.00 0.00 0.24 - - 5,496 D029 0.41 0.00 0.00 0.00 0.01 - 2,103 5,450 D030 0.00 0.03 0.00 0.026 - 1,775 5,335 D031 0.00 0.33 0.00 0.00 0.33 - 924 5,176 D032 0.00 0.53 0.00 0.00 0.53 - 1,755 4,547 D033 0.00 0.54 0.00 0.00 0.54 - - 4,528 D034 0.00 0.00 0.04 0.00 0.44 - 1,747 4,527 D035 0.00 0.20 0.00 0.20 - 1,744 4,517 D036 0.00 0.21 0.00 0.00 0.22 <th< th=""><th>D025</th><th>0.00</th><th>0.26</th><th>0.00</th><th>0.00</th><th>0.26</th><th>-</th><th>2,232</th><th>5,783</th></th<>	D025	0.00	0.26	0.00	0.00	0.26	-	2,232	5,783
D028 0.00 0.24 0.00 0.00 0.24 - 5,496 D029 0.41 0.00 0.00 0.00 0.41 - 2,103 5,450 D030 0.00 0.00 0.26 0.00 0.26 - 1,775 5,335 D031 0.00 0.53 0.00 0.03 - 924 5,176 D032 0.00 0.53 0.00 0.053 - 1,755 4,547 D033 0.00 0.54 0.00 0.00 0.54 - - 4,528 D034 0.00 0.00 0.00 0.04 - - 4,522 D035 0.00 0.20 0.00 0.00 0.20 - 1,744 4,521 D036 0.00 0.16 0.00 0.00 0.20 - 4,423 D037 0.00 0.24 0.00 0.00 0.22 - 1,630 4,224	D026	0.00	0.21	0.00	0.00	0.21	-	2,230	5,777
D029 0.41 0.00 0.00 0.00 0.41 - 2,103 5,450 D030 0.00 0.00 0.26 0.00 0.26 - 1,775 5,335 D031 0.00 0.33 0.00 0.00 0.33 - 924 5,176 D033 0.00 0.54 0.00 0.00 0.53 - 1,755 4,547 D034 0.00 0.04 0.00 0.04 - - 4,528 D034 0.00 0.00 0.04 0.00 0.44 - 1,744 4,527 D035 0.00 0.20 0.00 0.00 0.20 - 1,744 4,517 D036 0.00 0.16 0.00 0.00 0.00 0.16 - - 4,423 D037 0.00 0.28 0.00 0.00 0.22 - 1,630 4,224 D043 0.00 0.22 0.00	D027	0.00	0.18	0.00	0.00	0.18	-	2,181	5,651
D030 0.00 0.00 0.26 0.00 0.26 - 1,775 5,335 D031 0.00 0.33 0.00 0.00 0.33 - 924 5,176 D032 0.00 0.53 0.00 0.00 0.53 - 1,755 4,547 D033 0.00 0.54 0.00 0.00 0.54 - - 4,528 D034 0.00 0.00 0.44 0.00 0.44 - 1,744 4,527 D035 0.00 0.20 0.00 0.00 0.20 - 1,744 4,517 D036 0.00 0.16 0.00 0.00 0.016 - - 4,423 D037 0.00 0.24 0.00 0.00 0.24 - - 4,421 D038 0.00 0.28 0.00 0.00 0.22 - 1,630 4,224 D040 0.00 0.22 0.00 0.0	D028	0.00	0.24	0.00	0.00	0.24	-	-	5,496
D031 0.00 0.33 0.00 0.03 - 924 5,176 D032 0.00 0.53 0.00 0.00 0.53 - 1,755 4,547 D033 0.00 0.54 0.00 0.00 0.54 - - 4,528 D034 0.00 0.00 0.44 0.00 0.44 - 1,747 4,527 D035 0.00 0.20 0.00 0.00 0.20 - 1,744 4,517 D036 0.00 0.16 0.00 0.00 0.16 - - 4,421 D037 0.00 0.24 0.00 0.00 0.28 - - 4,333 D038 0.00 0.22 0.00 0.00 0.22 - 1,630 4,224 D040 0.00 0.22 0.00 0.00 0.22 - 1,569 4,066 D041 0.00 0.31 0.00 0.00 0.33<	D029	0.41	0.00	0.00	0.00	0.41	-	2,103	5,450
D032 0.00 0.53 0.00 0.00 0.53 - 1,755 4,547 D033 0.00 0.54 0.00 0.00 0.54 - - 4,528 D034 0.00 0.00 0.044 0.00 0.44 - 1,747 4,527 D035 0.00 0.20 0.00 0.00 0.20 - 1,744 4,517 D036 0.00 0.16 0.00 0.00 0.16 - - 4,423 D037 0.00 0.24 0.00 0.00 0.28 - - 4,433 D038 0.00 0.22 0.00 0.00 0.22 - 4,401 D043 0.00 0.22 0.00 0.02 - 1,569 4,066 D041 0.00 0.31 0.00 0.00 0.33 - - - D042 0.00 0.33 0.00 0.83 0.00 0.83	D030	0.00	0.00	0.26	0.00	0.26	-	1,775	5,335
D033 0.00 0.54 0.00 0.00 0.54 - - 4,528 D034 0.00 0.00 0.44 0.00 0.44 - 1,747 4,527 D035 0.00 0.20 0.00 0.00 0.20 - 1,744 4,517 D036 0.00 0.16 0.00 0.00 0.16 - - 4,423 D037 0.00 0.24 0.00 0.00 0.24 - - 4,401 D038 0.00 0.28 0.00 0.00 0.28 - - - 4,333 D039 0.00 0.22 0.00 0.00 0.26 - 1,569 4,066 D041 0.00 0.31 0.00 0.00 0.31 - 1,506 3,902 D042 0.00 0.39 0.00 0.00 0.33 0.00 0.33 - - - - D044 <th< th=""><th>D031</th><th>0.00</th><th>0.33</th><th>0.00</th><th>0.00</th><th>0.33</th><th>-</th><th>924</th><th>5,176</th></th<>	D031	0.00	0.33	0.00	0.00	0.33	-	924	5,176
D034 0.00 0.00 0.44 0.00 0.44 - 1,747 4,527 D035 0.00 0.20 0.00 0.00 0.20 - 1,744 4,517 D036 0.00 0.16 0.00 0.00 0.16 - - 4,423 D037 0.00 0.24 0.00 0.00 0.24 - - 4,401 D038 0.00 0.22 0.00 0.00 0.22 - 4,333 D039 0.00 0.22 0.00 0.00 0.22 - 1,630 4,224 D040 0.00 0.26 0.00 0.00 0.26 - 1,569 4,066 D041 0.00 0.31 0.00 0.00 0.33 - 1,506 3,902 D042 0.00 0.39 0.00 0.00 0.33 0.00 0.33 - - - D044 0.00 0.19 0.00 <th>D032</th> <th>0.00</th> <th>0.53</th> <th>0.00</th> <th>0.00</th> <th>0.53</th> <th>-</th> <th>1,755</th> <th>4,547</th>	D032	0.00	0.53	0.00	0.00	0.53	-	1,755	4,547
D035 0.00 0.20 0.00 0.00 0.20 - 1,744 4,517 D036 0.00 0.16 0.00 0.00 0.16 - - 4,423 D037 0.00 0.24 0.00 0.00 0.24 - - 4,401 D038 0.00 0.28 0.00 0.00 0.28 - - 4,333 D039 0.00 0.22 0.00 0.00 0.22 - 1,630 4,224 D040 0.00 0.26 0.00 0.00 0.26 - 1,569 4,066 D041 0.00 0.31 0.00 0.00 0.31 - 1,506 3,902 D042 0.00 0.39 0.00 0.00 0.33 - - - D043 0.00 0.00 0.00 0.33 0.00 0.83 - - - - D044 0.00 0.19	D033	0.00	0.54	0.00	0.00	0.54	-	-	4,528
D036 0.00 0.16 0.00 0.00 0.16 - - 4,423 D037 0.00 0.24 0.00 0.00 0.24 - - 4,401 D038 0.00 0.28 0.00 0.00 0.28 - - 4,333 D039 0.00 0.22 0.00 0.00 0.22 - 1,630 4,224 D040 0.00 0.26 0.00 0.00 0.26 - 1,569 4,066 D041 0.00 0.31 0.00 0.00 0.31 - 1,506 3,902 D042 0.00 0.39 0.00 0.00 0.39 - 1,466 3,798 D043 0.00 0.00 0.83 0.00 0.83 - - - - D044 0.00 0.19 0.00 0.00 0.33 - 1,408 3,648 D045 0.34 0.00 0.00	D034	0.00	0.00	0.44	0.00	0.44	-	1,747	4,527
D037 0.00 0.24 0.00 0.00 0.24 - - 4,401 D038 0.00 0.28 0.00 0.00 0.28 - - 4,333 D039 0.00 0.22 0.00 0.00 0.22 - 1,630 4,224 D040 0.00 0.26 0.00 0.00 0.26 - 1,569 4,066 D041 0.00 0.31 0.00 0.00 0.31 - 1,506 3,902 D042 0.00 0.39 0.00 0.00 0.39 - 1,466 3,798 D043 0.00 0.00 0.83 0.00 0.83 - - - - D044 0.00 0.19 0.00 0.00 0.01 0.1426 3,695 D045 0.34 0.00 0.00 0.00 0.33 - 1,408 3,648 D046 0.00 0.00 0.00 0.21 </th <th>D035</th> <th>0.00</th> <th>0.20</th> <th>0.00</th> <th>0.00</th> <th>0.20</th> <th>-</th> <th>1,744</th> <th>4,517</th>	D035	0.00	0.20	0.00	0.00	0.20	-	1,744	4,517
D038 0.00 0.28 0.00 0.00 0.28 - - 4,333 D039 0.00 0.22 0.00 0.00 0.22 - 1,630 4,224 D040 0.00 0.26 0.00 0.00 0.26 - 1,569 4,066 D041 0.00 0.31 0.00 0.00 0.31 - 1,506 3,902 D042 0.00 0.39 0.00 0.00 0.39 - 1,466 3,798 D043 0.00 0.00 0.83 0.00 0.83 - - - - D044 0.00 0.19 0.00 0.00 0.019 - 1,466 3,798 D045 0.34 0.00 0.00 0.00 0.019 - 1,426 3,695 D046 0.00 0.33 0.00 0.00 0.33 - 1,408 3,648 D047 0.00 0.00 0.00	D036	0.00	0.16	0.00	0.00	0.16	-	-	4,423
D039 0.00 0.22 0.00 0.00 0.22 - 1,630 4,224 D040 0.00 0.26 0.00 0.00 0.26 - 1,569 4,066 D041 0.00 0.31 0.00 0.00 0.31 - 1,506 3,902 D042 0.00 0.39 0.00 0.00 0.39 - 1,466 3,798 D043 0.00 0.00 0.00 0.00 0.83 - - - - - D044 0.00 0.19 0.00 0.00 0.19 - 1,426 3,695 D045 0.34 0.00 0.00 0.00 0.01 0.34 - 1,408 3,648 D046 0.00 0.33 0.00 0.00 0.33 - 1,408 3,648 D047 0.00 0.00 0.00 0.21 0.21 - - 3,633 D048 0.00	D037	0.00	0.24	0.00	0.00	0.24	-	-	4,401
D040 0.00 0.26 0.00 0.00 0.26 - 1,569 4,066 D041 0.00 0.31 0.00 0.00 0.31 - 1,506 3,902 D042 0.00 0.39 0.00 0.00 0.39 - 1,466 3,798 D043 0.00 0.00 0.00 0.83 - - - - D044 0.00 0.19 0.00 0.00 0.19 - 1,426 3,695 D045 0.34 0.00 0.00 0.00 0.34 - 1,408 3,648 D046 0.00 0.33 0.00 0.00 0.33 - 1,408 3,648 D047 0.00 0.00 0.00 0.21 0.21 - - 3,633 D048 0.00 0.20 0.00 0.00 0.22 - 1,391 3,605 D050 0.00 0.00 0.18 0.00 </th <th>D038</th> <th>0.00</th> <th>0.28</th> <th>0.00</th> <th>0.00</th> <th>0.28</th> <th>-</th> <th>-</th> <th>4,333</th>	D038	0.00	0.28	0.00	0.00	0.28	-	-	4,333
D041 0.00 0.31 0.00 0.00 0.31 - 1,506 3,902 D042 0.00 0.39 0.00 0.00 0.39 - 1,466 3,798 D043 0.00 0.00 0.83 0.00 0.83 - - - D044 0.00 0.19 0.00 0.00 0.19 - 1,426 3,695 D045 0.34 0.00 0.00 0.00 0.34 - 1,408 3,648 D046 0.00 0.33 0.00 0.00 0.33 - 1,408 3,648 D047 0.00 0.00 0.00 0.01 0.21 0.21 - - 3,633 D048 0.00 0.20 0.00 0.00 0.02 - 1,391 3,605 D050 0.00 0.00 0.01 0.02 - 1,288 3,337 D051 0.00 0.00 0.41 0.0	D039	0.00	0.22	0.00	0.00	0.22	-	1,630	4,224
D042 0.00 0.39 0.00 0.039 - 1,466 3,798 D043 0.00 0.00 0.83 0.00 0.83 - - - - D044 0.00 0.19 0.00 0.00 0.19 - 1,426 3,695 D045 0.34 0.00 0.00 0.00 0.34 - 1,408 3,648 D046 0.00 0.03 0.00 0.00 0.03 - 1,408 3,648 D047 0.00 0.00 0.00 0.21 0.21 - - 3,633 D048 0.00 0.20 0.00 0.00 0.22 - 1,391 3,605 D049 0.00 0.24 0.00 0.00 0.24 - - 3,578 D050 0.00 0.00 0.18 0.00 0.18 - 1,288 3,337 D051 0.00 0.00 0.22 0.00	D040	0.00	0.26	0.00	0.00	0.26	-	1,569	4,066
D043 0.00 0.00 0.83 0.00 0.83 -	D041	0.00	0.31	0.00	0.00	0.31	-	1,506	3,902
D044 0.00 0.19 0.00 0.019 - 1,426 3,695 D045 0.34 0.00 0.00 0.00 0.34 - 1,408 3,648 D046 0.00 0.03 0.00 0.00 0.33 - 1,408 3,648 D047 0.00 0.00 0.00 0.21 0.21 - - 3,633 D048 0.00 0.20 0.00 0.00 0.20 - 1,391 3,605 D049 0.00 0.24 0.00 0.00 0.24 - - 3,578 D050 0.00 0.00 0.18 0.00 0.18 - 1,288 3,337 D051 0.00 0.00 0.41 0.00 0.41 -	D042	0.00	0.39	0.00	0.00	0.39	-	1,466	3,798
D045 0.34 0.00 0.00 0.34 - 1,408 3,648 D046 0.00 0.33 0.00 0.00 0.33 - 1,408 3,648 D047 0.00 0.00 0.00 0.21 0.21 - - 3,633 D048 0.00 0.20 0.00 0.00 0.20 - 1,391 3,605 D049 0.00 0.24 0.00 0.00 0.24 - - 3,578 D050 0.00 0.00 0.18 0.00 0.18 - 1,288 3,337 D051 0.00 0.00 0.41 0.00 0.41 - <t< th=""><th>D043</th><th>0.00</th><th>0.00</th><th>0.83</th><th>0.00</th><th>0.83</th><th>-</th><th>-</th><th>-</th></t<>	D043	0.00	0.00	0.83	0.00	0.83	-	-	-
D046 0.00 0.33 0.00 0.00 0.33 - 1,408 3,648 D047 0.00 0.00 0.00 0.21 0.21 - - 3,633 D048 0.00 0.20 0.00 0.00 0.20 - 1,391 3,605 D049 0.00 0.24 0.00 0.00 0.24 - - 3,578 D050 0.00 0.00 0.18 0.00 0.18 - 1,288 3,337 D051 0.00 0.00 0.41 0.00 0.41 -<	D044	0.00	0.19	0.00	0.00	0.19	-	1,426	3,695
D047 0.00 0.00 0.00 0.21 0.21 - - 3,633 D048 0.00 0.20 0.00 0.00 0.20 - 1,391 3,605 D049 0.00 0.24 0.00 0.00 0.24 - - 3,578 D050 0.00 0.00 0.18 0.00 0.18 - 1,288 3,337 D051 0.00 0.00 0.41 0.00 0.41 -	D045	0.34	0.00	0.00	0.00	0.34	-	1,408	3,648
D048 0.00 0.20 0.00 0.00 0.20 - 1,391 3,605 D049 0.00 0.24 0.00 0.00 0.24 - - 3,578 D050 0.00 0.00 0.18 0.00 0.18 - 1,288 3,337 D051 0.00 0.00 0.41 0.00 0.41 -	D046	0.00	0.33	0.00	0.00	0.33	-	1,408	3,648
D049 0.00 0.24 0.00 0.00 0.24 - - 3,578 D050 0.00 0.00 0.18 0.00 0.18 - 1,288 3,337 D051 0.00 0.00 0.41 0.00 0.41 - - - D052 0.00 0.00 0.22 0.00 0.22 - - 3,165 D053 0.21 0.00 0.00 0.00 0.21 - - 3,154 D054 0.00 0.19 0.00 0.00 0.19 - - 3,137 D055 0.00 0.00 0.20 0.00 0.20 - 1,183 3,066 D056 0.00 0.21 0.00 0.00 0.21 - 2,976 D057 0.00 0.30 0.00 0.00 0.30 - 2,944 D059 0.00 0.18 0.00 0.00 0.82 - <t< th=""><th>D047</th><th>0.00</th><th>0.00</th><th>0.00</th><th>0.21</th><th>0.21</th><th>-</th><th>-</th><th>3,633</th></t<>	D047	0.00	0.00	0.00	0.21	0.21	-	-	3,633
D050 0.00 0.00 0.18 0.00 0.18 - 1,288 3,337 D051 0.00 0.00 0.41 0.00 0.41 - - - D052 0.00 0.00 0.22 0.00 0.22 - - 3,165 D053 0.21 0.00 0.00 0.00 0.21 - - 3,154 D054 0.00 0.19 0.00 0.00 0.19 - - 3,137 D055 0.00 0.00 0.20 0.00 0.20 - 1,183 3,066 D056 0.00 0.21 0.00 0.00 0.21 - - 2,976 D057 0.00 0.54 0.00 0.00 0.30 - - 2,944 D059 0.00 0.18 0.00 0.00 0.82 - - - - D060 0.00 0.00 0.82 0.00 <th>D048</th> <th>0.00</th> <th>0.20</th> <th>0.00</th> <th>0.00</th> <th>0.20</th> <th>-</th> <th>1,391</th> <th>3,605</th>	D048	0.00	0.20	0.00	0.00	0.20	-	1,391	3,605
D051 0.00 0.00 0.41 0.00 0.41 - 3,165 - - 3,165 - - - 3,154 - - - 3,154 - - - 3,154 - - - 3,137 - - - 3,137 - - - 3,137 - - - 3,137 - - - 3,137 - - - 3,137 - - - 3,137 - - - - 3,137 -	D049	0.00	0.24	0.00	0.00	0.24	-	-	3,578
D052 0.00 0.00 0.22 0.00 0.22 - - 3,165 D053 0.21 0.00 0.00 0.00 0.21 - - 3,154 D054 0.00 0.19 0.00 0.00 0.19 - - 3,137 D055 0.00 0.00 0.20 0.00 0.20 - 1,183 3,066 D056 0.00 0.21 0.00 0.00 0.21 - - 2,976 D057 0.00 0.54 0.00 0.00 0.54 - 1,145 2,966 D058 0.00 0.30 0.00 0.30 - - 2,944 D059 0.00 0.18 0.00 0.00 0.82 - - - - D060 0.00 0.00 0.82 0.00 0.82 - - -	D050	0.00	0.00	0.18	0.00	0.18	-	1,288	3,337
D053 0.21 0.00 0.00 0.00 0.21 - - 3,154 D054 0.00 0.19 0.00 0.00 0.19 - - 3,137 D055 0.00 0.00 0.20 0.00 0.20 - 1,183 3,066 D056 0.00 0.21 0.00 0.00 0.21 - 2,976 D057 0.00 0.54 0.00 0.00 0.54 - 1,145 2,966 D058 0.00 0.30 0.00 0.30 - - 2,944 D059 0.00 0.18 0.00 0.00 0.82 - - - - D060 0.00 0.00 0.82 0.00 0.82 - - -	D051	0.00	0.00	0.41	0.00	0.41	-	-	-
D054 0.00 0.19 0.00 0.00 0.19 - - 3,137 D055 0.00 0.00 0.20 0.00 0.20 - 1,183 3,066 D056 0.00 0.21 0.00 0.00 0.21 - 2,976 D057 0.00 0.54 0.00 0.00 0.54 - 1,145 2,966 D058 0.00 0.30 0.00 0.30 - - 2,944 D059 0.00 0.18 0.00 0.00 0.18 - 1,132 2,932 D060 0.00 0.00 0.82 0.00 0.82 - - -	D052	0.00	0.00	0.22	0.00	0.22	-	-	3,165
D055 0.00 0.00 0.20 0.00 0.20 - 1,183 3,066 D056 0.00 0.21 0.00 0.00 0.21 - 2,976 D057 0.00 0.54 0.00 0.00 0.54 - 1,145 2,966 D058 0.00 0.30 0.00 0.30 - - 2,944 D059 0.00 0.18 0.00 0.00 0.18 - 1,132 2,932 D060 0.00 0.00 0.82 0.00 0.82 - - -	D053	0.21	0.00	0.00	0.00	0.21	-	-	3,154
D056 0.00 0.21 0.00 0.00 0.21 - - 2,976 D057 0.00 0.54 0.00 0.00 0.54 - 1,145 2,966 D058 0.00 0.30 0.00 0.30 - - 2,944 D059 0.00 0.18 0.00 0.00 0.18 - 1,132 2,932 D060 0.00 0.00 0.82 0.00 0.82 - - - -	D054	0.00	0.19	0.00	0.00	0.19	-	-	3,137
D057 0.00 0.54 0.00 0.00 0.54 - 1,145 2,966 D058 0.00 0.30 0.00 0.00 0.30 - - 2,944 D059 0.00 0.18 0.00 0.00 0.18 - 1,132 2,932 D060 0.00 0.00 0.82 0.00 0.82 - - -	D055	0.00	0.00	0.20	0.00	0.20	-	1,183	3,066
D058 0.00 0.30 0.00 0.30 - - 2,944 D059 0.00 0.18 0.00 0.00 0.18 - 1,132 2,932 D060 0.00 0.00 0.82 0.00 0.82 - - -	D056	0.00	0.21	0.00	0.00	0.21	-	-	2,976
D059 0.00 0.18 0.00 0.00 0.18 - 1,132 2,932 D060 0.00 0.00 0.82 0.00 0.82 - - - -	D057	0.00	0.54	0.00	0.00	0.54	-	1,145	2,966
D060 0.00 0.00 0.82 0.00 0.82	D058	0.00	0.30	0.00	0.00	0.30	-	-	2,944
	D059	0.00	0.18	0.00	0.00	0.18	-	1,132	2,932
D061 0.00 0.00 0.48 0.00 0.48 - 1,095 2,836	D 060	0.00	0.00	0.82	0.00	0.82	-	-	-
	D061	0.00	0.00	0.48	0.00	0.48	-	1,095	2,836

D062	0.00	0.00	0.50	0.00	0.50	-	-	-
D063	0.00	0.00	0.55	0.00	0.55	-	-	2,789
D064	0.27	0.00	0.00	0.00	0.27	-	1,070	2,772
D065	0.46	0.00	0.00	0.00	0.46	-	1,052	2,725
D066	0.00	0.00	0.17	0.00	0.17	-	-	2,703
D067	0.00	0.00	0.38	0.00	0.38	-	-	2,699
D068	0.00	0.00	0.28	0.00	0.28	-	-	2,674
D069	0.00	0.56	0.00	0.00	0.56	-	-	2,622
D070	0.00	0.67	0.00	0.00	0.67	-	-	2,550
D071	0.00	0.24	0.00	0.00	0.24	-	-	2,536
D072	0.00	0.00	0.52	0.00	0.52	-	-	2,531
D073	0.00	0.28	0.00	0.00	0.28	-	-	2,431
D074	0.00	0.00	0.24	0.00	0.24	-	-	2,429
D075	0.00	0.25	0.00	0.00	0.25	-	-	2,414
D076	0.00	0.00	1.17	0.00	1.17	-	930	2,411
D 077	0.00	0.31	0.00	0.00	0.31	-	-	2,312
D078	0.00	0.00	0.00	1.08	1.08	-	883	2,287
D079	0.00	0.38	0.00	0.45	0.83	-	-	-
D080	0.00	0.31	0.00	0.00	0.31	-	-	2,260
D081	0.00	0.23	0.00	0.00	0.23	-	861	2,230
D082	0.00	0.34	0.00	0.00	0.34	-	-	2,226
D083	0.00	0.17	0.00	0.00	0.17	-	-	-
D084	0.00	0.34	0.29	0.00	0.64	-	824	2,135
D085	0.00	0.00	0.33	0.00	0.33	-	-	2,133
D086	0.00	0.33	0.00	0.00	0.33	-	-	2,108
D087	0.00	0.00	0.34	0.00	0.34	-	-	2,055
D088	0.00	0.00	0.60	0.00	0.60	-	-	-
D089	0.00	0.00	0.00	0.88	0.88	-	787	2,040
D090	0.00	0.00	0.25	0.00	0.25	-	-	2,005
D091	0.00	0.00	0.45	0.00	0.45	-	-	1,989
D092	0.00	0.00	0.00	1.33	1.33	-	754	1,954
D093	0.00	0.00	0.63	0.00	0.63	-	753	1,952
D094	0.00	0.00	0.71	0.00	0.71	-	-	1,943
D095	0.00	0.20	0.00	0.00	0.20	-	748	1,938
D096	0.00	0.00	0.20	0.00	0.20	-	-	1,937
D097	0.00	0.51	0.46	0.00	0.97	-	-	-
D098	0.00	0.23	0.00	0.00	0.23	-	-	1,925
D099	0.00	0.00	0.21	0.00	0.21	-	-	1,923
D100	0.00	0.09	0.56	0.00	0.66	-	-	1,893
D101	0.00	0.20	0.00	0.00	0.20	-	-	1,851
D102	0.00	0.26	1.72	0.00	1.98	-	707	1,833
D103	0.00	0.45	0.00	0.00	0.45	-	698	1,808
D104	0.00	0.25	0.00	0.00	0.25	-	-	1,801
D105	0.00	0.32	0.00	0.00	0.32	-	-	1,800

D106	0.00	0.30	0.00	0.00	0.30	-	_	1,786
D107	0.00	0.24	0.00	0.00	0.24	_	_	1,772
D107	0.00	0.00	0.00	0.19	0.19	_	681	1,765
D109	0.00	0.00	0.86	0.00	0.86	-	-	1,746
D110	0.00	0.00	0.16	0.00	0.16	_	_	- 1,7 10
D111	0.00	0.00	0.36	0.00	0.36	-	_	1,713
D112	0.00	0.00	0.95	0.00	0.95	1,442	661	1,713
D113	0.00	0.00	0.00	0.16	0.16	-,	-	1,710
D114	0.00	0.00	0.19	0.00	0.19	-	650	1,685
D115	0.00	0.36	0.00	0.00	0.36	_	643	1,666
D116	0.00	0.00	0.71	0.00	0.71	-	-	1,655
D117	0.00	0.00	1.23	0.00	1.23	-	635	1,647
D118	0.00	0.44	0.00	0.00	0.44	-	-	1,630
D119	0.00	0.83	0.00	0.00	0.83	1,366	626	1,622
D120	0.00	0.27	0.00	0.00	0.27	-	-	1,617
D121	0.00	0.00	0.24	0.00	0.24	-	622	1,611
D122	0.00	0.00	0.30	0.00	0.30	-	-	1,592
D123	0.00	0.32	0.00	0.00	0.32	-	605	1,568
D124	0.00	0.00	0.35	0.00	0.35	1,312	601	1,557
D125	0.00	0.39	0.00	0.00	0.39	-	601	1,557
D126	0.00	0.00	0.22	0.00	0.22	-	-	1,557
D127	0.00	0.00	0.20	0.00	0.20	-	-	1,551
D128	0.00	0.00	0.69	0.00	0.69	-	570	1,477
D129	0.00	0.22	0.00	0.00	0.22	-	566	1,465
D130	0.00	0.00	0.36	0.00	0.36	-	565	1,464
D131	0.00	1.54	0.00	0.00	1.54	1,224	561	1,454
D132	0.00	0.00	0.00	0.18	0.18	-	560	1,451
D133	0.00	0.22	0.00	0.00	0.22	-	-	1,436
D134	0.00	0.00	0.56	0.00	0.56	-	-	1,426
D135	0.00	0.19	0.00	0.00	0.19	-	-	1,420
D136	0.00	0.00	0.45	0.00	0.45	-	-	-
D137	0.00	0.00	0.56	0.00	0.56	-	-	1,388
D138	0.00	0.00	0.18	0.00	0.18	-	526	1,362
D139	0.00	0.00	0.45	0.00	0.45	-	518	1,341
D140	0.00	0.00	0.47	0.00	0.47	1,119	513	1,329
D141	0.00	0.00	0.67	0.00	0.67	-	-	1,291
D142	0.00	0.00	0.92	0.00	0.92	-	-	-
D143	0.00	0.00	0.23	0.00	0.23	-	496	1,286
D144	0.00	0.00	0.00	0.20	0.20	-	-	1,271
D145	0.00	0.00	0.15	0.00	0.15	-	481	1,246
Total	7.55	107.03	128.77	8.85	252.21	109,414	722,104	3,221,059

Table 19: Roads requiring cross drainage structures

Road Code	Туре	of Cross Drainag	e Structures	Sub-Total	
Roau Coue	Bridge	Culvert	Causeway	Sub-Total	
A01	4	6		10	
B01		2		2	
B04	1	1		2	
B05	1			1	
B08		1		1	
B09		2		2	
B12	1			1	
B14		1	1	1	
B15	1	4	4	9	
B13	1			1	
C03	1			1	
C07		1		1	
C20		1		1	
C25		1		1	
C30		3		3	
C37		1		1	
C38		1		1	
C42		1		1	
C46	1			1	
C47		1		1	
C48	1			1	
C50		1		1	
D019	1			1	
D072		1		1	
D073		1		1	
D085		1		1	
D097		1		1	
D103		2		2	
D127		1		1	
D128		3		3	
D137		1		1	
Total	18	44	5	67	

5.6 Perspective plan of rural municipality transport network with score and ranking

In total there are roads of length 252.24 Km within the rural municipality excluding feeder roads and National Highway, either in planned or existing condition. All the standards set by the rural municipality council are assumed not to decrease its RoW whenever these roads fall on the lower class in this RMTMP.

Table 20: Arrangement of Road width

SN	Class of Road	Minimum RoW(m)	Setback(m)	Pavement(m)	Footpath(m)
1	A	20	2.5	14	1.5m/1.5m(Both side)
2	В	15	2.5	9	1.5m/1.5 (Both side)
3	С	10	2	7	1.5m (One side)
4	D	6	1.5	5	None

Urban Development Strategy 2015 aims to pave 50% of the municipal roads by the end of 2031AD for New Municipalities and this RMTMP planned to pave <u>all roads</u> within the perspective period of 20 years i.e. by the year of 2038AD in its <u>full width</u>.

For the financial requirement, the rate of different interventions as given by the ToR is used. For the financial planning the following assumptions are made:

- 20% of length of hilly road requires retaining wall on hill and valley side and the cross section of retaining is taken as 1.5 square meter
- 20% of the length of hilly road requires gabion wall and the cross section of gabion is taken as 1 square meter
- 5% of the length of all roads requires retaining wall and the cross section of retaining is taken as 1.5 square meter
- full length of road requires longitudinal drainage structures
- Length of bridge in average taken as 30m
- Financial capacity of rural municipality increases by 13% each year

Based on this rate of item and total required interventions, a total of 891.4 crore of Nepalese rupees is projected to be required to develop road infrastructure and maintain road infrastructures. For this the assumption made is that the financial capacity of rural municipality increases by 13% each year. These costs will change slightly as the roads are improved and the standard costs change. This should be updated on annual basis.

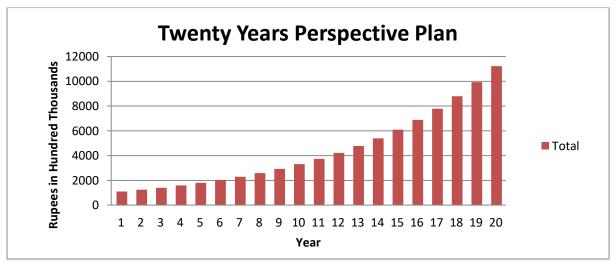


Figure 15: Perspective financial plan for 20 years

Voor	Projected Budget in Hundred Thousands								
Year	Class A	Class B	Class C	Class D	Construction	Maintenance	Total		
1	308	231	154	77	770	330	1,100		
2	348	261	174	87	870	373	1,243		
3	394	295	197	98	984	422	1,406		
4	445	334	222	111	1,112	477	1,589		
5	503	377	251	126	1,257	539	1,796		
6	568	426	284	142	1,420	609	2,029		
7	642	481	321	160	1,604	687	2,291		
8	725	544	363	181	1,813	777	2,590		
9	820	615	410	205	2,050	879	2,929		
10	926	695	463	232	2,316	993	3,309		
11	1,047	785	523	262	2,617	1,122	3,739		
12	1,183	887	591	296	2,957	1,267	4,224		
13	1,337	1,002	668	334	3,341	1,432	4,773		
14	1,510	1,133	755	378	3,776	1,618	5,394		
15	1,707	1,280	853	427	4,267	1,829	6,096		
16	1,928	1,446	964	482	4,820	2,066	6,886		
17	2,179	1,634	1,090	545	5,448	2,335	7,783		
18	2,462	1,847	1,231	616	6,156	2,638	8,794		
19	2,783	2,087	1,391	696	6,957	2,982	9,939		
20	3,144	2,358	1,572	786	7,860	3,369	11,229		
Total	24,960	18,720	12,480	6,240	62,400	26,740	89,140		

For the perspective implementation plans, the municipal and ward roads have been prioritized and ranked. Based on these ranking, the implementation should be done. The ranking of the municipal and ward roads with the score are as given under:

Table 21: Prioritization of roads

Road Code	Total	Classwise Rank	Overall Rank
A01	64.0626	1	1
A02	62.57736	2	2
A03	57.66066	3	4
B01	55.06633	2	7
B02	30.92284	9	43
B03	20.23989	11	53
B04	18.59663	12	56
B05	7.907559	14	78
B06	26.17469	10	48
B07	35.68453	8	34
B08	47.17859	6	18
B09	47.58634	5	17
B10	48.61151	4	15
B11	40.92155	7	28
B12	6.419237	15	79

B13	15.67639	13	58
B14	51.85127	3	10
B15	58.65959	1	3
C01	10.36102	58	74
C02	13.41348	51	67
C03	42.34364	18	27
C04	29.16771	33	45
C05	31.54582	30	41
C06	24.96525	36	49
C07	43.33882	16	25
C08	14.93065	44	60
C09	36.91858	22	32
C10	51.32921	5	11
C11	14.41904	45	61
C12	43.6352	15	24
C13	17.275	42	57
C14	21.53323	38	51
C15	13.90862	47	63
C16	11.77894	55	71
C17	44.94758	12	21
C18	13.47646	50	66
C19	10.34582	59	75
C20	15.36607	43	59
C21	42.84147	17	26
C22	47.63992	9	16
C23	13.15597	52	68
C24	48.78986	8	14
C25	28.21331	34	46
C26	23.21282	37	50
C27	52.58316	3	8
C28	13.84573	48	64
C29	12.97934	53	69
C30	35.85943	23	33
C31	11.40043	56	72
C32	27.45653	35	47
C33	11.38787	57	73
C34	14.31727	46	62
C35	19.60281	40	54
C36	57.47385	1	5
C37	31.17378	31	42
C38	31.59752	29	40
C39	19.19626	41	55
C40	9.967714	60	76
C41	32.38665	28	39
C42	49.44497	7	13

C43 12.21086 54 70 C44 38.11541 19 29 C45 29.30242 32 44 C46 56.68147 2 6 C47 13.60241 49 65 C48 44.61462 13 22 C49 43.82936 14 23 C50 35.17919 24 35 C51 21.41668 39 52 C52 23.738909 21 31 C53 52 4 9 C54 51.2509 6 12 C55 37.41358 20 30 C56 8.204656 61 77 C57 45.1977 11 20 C58 32.44033 27 38 C59 45.75084 10 19 C60 33.9606 25 36 C61 33.87933 26 37 D001				
C45 29.30242 32 44 C46 56.68147 2 6 C47 13.60241 49 65 C48 44.61462 13 22 C49 43.82936 14 23 C50 35.17919 24 35 C51 21.41668 39 52 C52 37.38909 21 31 C53 52 4 9 C54 51.2509 6 12 C55 37.41358 20 30 C55 37.41358 20 30 C56 8.204656 61 77 C57 45.1977 11 20 C58 32.44033 27 38 C59 45.75084 10 19 C60 33.9606 25 36 C61 33.87933 26 37 D001 23.96964 1 1 D002 1.	C43	12.21086	54	70
C46 56.68147 2 6 C47 13.60241 49 65 C48 44.61462 13 22 C49 43.82936 14 23 C50 35.17919 24 35 C51 21.41668 39 52 C51 21.41668 39 52 C52 37.38909 21 31 C52 37.8909 21 31 C53 52 4 9 C54 51.2509 6 12 C55 37.41358 20 30 C56 8.204656 61 77 C57 45.1977 11 20 C58 32.44033 27 38 C59 45.75084 10 19 C60 33.9606 25 36 C61 33.87933 26 37 D002 1.49736 75 D003 4.467294	C44	38.11541	19	29
C47 13.60241 49 65 C48 44.61462 13 22 C49 43.82936 14 23 C50 35.17919 24 35 C51 21.41668 39 52 C52 37.38909 21 31 C53 52 4 9 C53 52 4 9 C54 51.2509 6 12 C55 37.41358 20 30 C56 8.204656 61 77 C58 32.44033 27 38 C59 45.75084 10 19 C60 33.9606 25 36 C61 33.87933 26 37 D001 23.96944 1 1 D002 1.49736 75 D003 4.467294 19 19 D004 22.63079 4 4 D009 0.797533 1	C45	29.30242	32	44
C48 44.61462 13 22 C49 43.82936 14 23 C50 35.17919 24 35 C51 21.41668 39 52 C52 37.38909 21 31 C53 52 4 9 C54 51.2509 6 12 C55 37.41358 20 30 C56 8.204656 61 77 C57 45.1977 11 20 C58 32.44033 27 38 C59 45.75084 10 19 C60 33.9606 25 36 C61 33.87933 26 37 D001 23.96964 1 1 D002 1.49736 75 D003 4.467294 19 D004 22.63079 4 D005 0.916491 128 D006 0.872898 136 D007	C46	56.68147	2	6
C49 43.82936 14 23 C50 35.17919 24 35 C51 21.41668 39 52 C52 37.38909 21 31 C53 52 4 9 C54 51.2509 6 12 C55 37.41358 20 30 C56 8.204656 61 77 C57 45.1977 11 20 C58 32.44033 27 38 C59 45.75084 10 19 C60 33.87933 26 37 D001 23.9694 1 1 D002 1.49736 75 D003 4.467294 19 19 D004 22.63079 4 19 D005 0.916491 128 136 D007 0.800963 141 1 D008 0.799842 142 142 D010 1.198725 <th>C47</th> <th>13.60241</th> <th>49</th> <th>65</th>	C47	13.60241	49	65
CS0 35.17919 24 35 CS1 21.41668 39 52 CS2 37.38909 21 31 CS3 52 4 9 CS4 51.2509 6 12 CS5 37.41358 20 30 CS6 8.204656 61 77 CS7 45.1977 11 20 CS8 32.44033 27 38 CS9 45.75084 10 19 C60 33.9606 25 36 C61 33.87933 26 37 D001 23.96964 1 1 D002 1.49736 75 5 D003 4.467294 19 19 D004 22.63079 4 19 D005 0.916491 128 D006 0.872898 136 141 D008 0.799842 142 142 D009 0.797533 <th>C48</th> <th>44.61462</th> <th>13</th> <th>22</th>	C48	44.61462	13	22
C51 21.41668 39 52 C52 37.38909 21 31 C53 52 4 9 C54 51.2509 6 12 C55 37.41358 20 30 C56 8.204656 61 77 C57 45.1977 11 20 C58 32.44033 27 38 C59 45.75084 10 19 C60 33.9606 25 36 C61 33.87933 26 37 D001 23.96964 1 1 D002 1.49736 75 19 D003 4.467294 19 19 D004 22.63079 4 128 D005 0.916491 128 136 D006 0.872898 136 141 D007 0.800963 141 142 D009 0.797533 143 142 D011 <th>C49</th> <th>43.82936</th> <th>14</th> <th>23</th>	C49	43.82936	14	23
C52 37,38909 21 31 C53 52 4 9 C54 51,2509 6 12 C55 37,41358 20 30 C56 8,204656 61 77 C57 45,1977 11 20 C58 32,44033 27 38 C59 45,75084 10 19 C60 33,9606 25 36 C61 33,87933 26 37 D001 23,96964 1 1 D002 1,49736 75 5 D003 4,467294 19 19 D004 22,63079 4 19 D005 0,916491 128 136 D007 0,800963 141 1 D008 0,799533 143 143 D010 1,198725 97 1 D011 1,383035 81 1 D012	C50	35.17919	24	35
C53 52 4 9 C54 51.2509 6 12 C55 37.41358 20 30 C56 8.204656 61 77 C57 45.1977 11 20 C58 32.44033 27 38 C59 45.75084 10 19 C60 33.9606 25 36 C61 33.87933 26 37 D001 23.96964 1 1 D002 1.49736 75 19 D003 4.467294 19 19 D004 22.63079 4 19 D005 0.916491 128 136 D006 0.872898 136 141 D009 0.797533 143 142 D009 0.797533 143 142 D010 1.198725 97 D011 1.383035 81 125 D013 0.90	C51	21.41668	39	52
C54 51.2509 6 12 C55 37.41358 20 30 C56 8.204656 61 77 C57 45.1977 11 20 C58 32.44033 27 38 C59 45.75084 10 19 C60 33.9606 25 36 C61 33.87933 26 37 D001 23.96964 1 1 D002 1.49736 75 19 D003 4.467294 19 19 D004 22.63079 4 19 D005 0.916491 128 136 D006 0.872898 136 141 D008 0.799842 142 142 D009 0.797533 143 143 D010 1.198725 97 97 D011 1.383035 81 125 D013 0.908904 129 12	C52	37.38909	21	31
C55 37.41358 20 30 C56 8.204656 61 77 C57 45.1977 11 20 C58 32.44033 27 38 C59 45.75084 10 19 C60 33.9606 25 36 C61 33.87933 26 37 D001 23.96964 1 1 D002 1.49736 75 1 D003 4.467294 19 19 D004 22.63079 4 128 D005 0.916491 128 136 D006 0.872898 136 141 D007 0.800963 141 142 D009 0.797533 143 143 D010 1.198725 97 97 D011 1.383035 81 125 D012 0.965811 125 125 D013 0.908904 129 12	C53	52	4	9
C56 8.204656 61 77 C57 45.1977 11 20 C58 32.44033 27 38 C59 45.75084 10 19 C60 33.9606 25 36 C61 33.87933 26 37 D001 23.96964 1 1 D002 1.49736 75 19 D003 4.467294 19 19 D004 22.63079 4 19 D005 0.916491 128 136 D006 0.872898 136 141 D008 0.799842 142 142 D009 0.797533 143 143 D010 1.198725 97 97 D011 1.383035 81 125 D013 0.908904 129 129 D014 0.788663 144 144 D015 1.210802 93 144	C54	51.2509	6	12
C57 45.1977 11 20 C58 32.44033 27 38 C59 45.75084 10 19 C60 33.9606 25 36 C61 33.87933 26 37 D001 23.96964 1 1 D002 1.49736 75 1 D003 4.467294 19 19 D004 22.63079 4 19 D005 0.916491 128 D006 0.872898 136 D007 0.800963 141 D008 0.799842 142 D009 0.797533 143 D010 1.198725 97 D011 1.383035 81 D012 0.965811 125 D013 0.908904 129 D014 0.788663 144 D015 1.273761 88 D016 1.210802 93 D017 <t< th=""><th>C55</th><th>37.41358</th><th>20</th><th>30</th></t<>	C55	37.41358	20	30
C58 32.44033 27 38 C59 45.75084 10 19 C60 33.9606 25 36 C61 33.87933 26 37 D001 23.96964 1 1 D002 1.49736 75 1 D003 4.467294 19 19 D004 22.63079 4 19 D005 0.916491 128 136 D006 0.872898 136 141 D007 0.800963 141 142 D009 0.797533 143 143 D010 1.198725 97 97 D011 1.383035 81 125 D012 0.965811 125 125 D013 0.908904 129 144 D014 0.788663 144 144 D015 1.273761 88 10 D017 1.417358 79 137 <	C56	8.204656	61	77
C59 45.75084 10 19 C60 33.9606 25 36 C61 33.87933 26 37 D001 23.96964 1 1 D002 1.49736 75 D003 4.467294 19 D004 22.63079 4 D005 0.916491 128 D006 0.872898 136 D007 0.800963 141 D008 0.799842 142 D009 0.797533 143 D010 1.198725 97 D011 1.383035 81 D012 0.965811 125 D013 0.908904 129 D014 0.788663 144 D015 1.273761 88 D016 1.210802 93 D017 1.417358 79 D018 1.060815 113 D019 1.810761 60 D020 6.9855	C57	45.1977	11	20
C60 33.9606 25 36 C61 33.87933 26 37 D001 23.96964 1 D002 1.49736 75 D003 4.467294 19 D004 22.63079 4 D005 0.916491 128 D006 0.872898 136 D007 0.800963 141 D008 0.799842 142 D009 0.797533 143 D010 1.198725 97 D011 1.383035 81 D012 0.965811 125 D013 0.908904 129 D014 0.788663 144 D015 1.273761 88 D016 1.210802 93 D017 1.417358 79 D018 1.060815 113 D019 1.810761 60 D020 6.98559 12 D021 1.846074 56	C58	32.44033	27	38
C61 33.87933 26 37 D001 23.96964 1 D002 1.49736 75 D003 4.467294 19 D004 22.63079 4 D005 0.916491 128 D006 0.872898 136 D007 0.800963 141 D008 0.799842 142 D009 0.797533 143 D010 1.198725 97 D011 1.383035 81 D012 0.965811 125 D013 0.908904 129 D014 0.788663 144 D015 1.273761 88 D016 1.210802 93 D017 1.417358 79 D018 1.060815 113 D019 1.810761 60 D020 6.98559 12 D021 1.846074 56 D022 0.860957 137 D024 1.946033 54	C59	45.75084	10	19
D001 23,96964 1 D002 1.49736 75 D003 4.467294 19 D004 22,63079 4 D005 0.916491 128 D006 0.872898 136 D007 0.800963 141 D008 0.799842 142 D009 0.797533 143 D010 1.198725 97 D011 1.383035 81 D012 0.965811 125 D013 0.908904 129 D014 0.788663 144 D015 1.273761 88 D016 1.210802 93 D017 1.417358 79 D018 1.060815 113 D019 1.810761 60 D020 6.98559 12 D021 1.846074 56 D022 0.860957 137 D023 1.996033 54	C60	33.9606	25	36
D002 1.49736 75 D003 4.467294 19 D004 22.63079 4 D005 0.916491 128 D006 0.872898 136 D007 0.800963 141 D008 0.799842 142 D009 0.797533 143 D010 1.198725 97 D011 1.383035 81 D012 0.965811 125 D013 0.908904 129 D014 0.788663 144 D015 1.273761 88 D016 1.210802 93 D017 1.417358 79 D018 1.060815 113 D019 1.810761 60 D020 6.98559 12 D021 1.846074 56 D022 0.860957 137 D023 1.099053 107 D024 1.946033 54	C61	33.87933	26	37
D003 4.467294 19 D004 22.63079 4 D005 0.916491 128 D006 0.872898 136 D007 0.800963 141 D008 0.799842 142 D009 0.797533 143 D010 1.198725 97 D011 1.383035 81 D012 0.965811 125 D013 0.908904 129 D014 0.788663 144 D015 1.273761 88 D016 1.210802 93 D017 1.417358 79 D018 1.060815 113 D019 1.810761 60 D020 6.98559 12 D021 1.846074 56 D022 0.860957 137 D023 1.099053 107 D024 1.946033 54	D001	23.96964	1	
D004 22.63079 4 D005 0.916491 128 D006 0.872898 136 D007 0.800963 141 D008 0.799842 142 D009 0.797533 143 D010 1.198725 97 D011 1.383035 81 D012 0.965811 125 D013 0.908904 129 D014 0.788663 144 D015 1.273761 88 D016 1.210802 93 D017 1.417358 79 D018 1.060815 113 D019 1.810761 60 D020 6.98559 12 D021 1.846074 56 D022 0.860957 137 D023 1.099053 107 D024 1.946033 54	D002	1.49736	75	
D005 0.916491 128 D006 0.872898 136 D007 0.800963 141 D008 0.799842 142 D009 0.797533 143 D010 1.198725 97 D011 1.383035 81 D012 0.965811 125 D013 0.908904 129 D014 0.788663 144 D015 1.273761 88 D016 1.210802 93 D017 1.417358 79 D018 1.060815 113 D019 1.810761 60 D020 6.98559 12 D021 1.846074 56 D022 0.860957 137 D023 1.099053 107 D024 1.946033 54	D003	4.467294	19	
D006 0.872898 136 D007 0.800963 141 D008 0.799842 142 D009 0.797533 143 D010 1.198725 97 D011 1.383035 81 D012 0.965811 125 D013 0.908904 129 D014 0.788663 144 D015 1.273761 88 D016 1.210802 93 D017 1.417358 79 D018 1.060815 113 D019 1.810761 60 D020 6.98559 12 D021 1.846074 56 D022 0.860957 137 D023 1.099053 107 D024 1.946033 54	D004	22.63079	4	
D007 0.800963 141 D008 0.799842 142 D009 0.797533 143 D010 1.198725 97 D011 1.383035 81 D012 0.965811 125 D013 0.908904 129 D014 0.788663 144 D015 1.273761 88 D016 1.210802 93 D017 1.417358 79 D018 1.060815 113 D019 1.810761 60 D020 6.98559 12 D021 1.846074 56 D022 0.860957 137 D023 1.946033 54	D005	0.916491	128	
D008 0.799842 142 D009 0.797533 143 D010 1.198725 97 D011 1.383035 81 D012 0.965811 125 D013 0.908904 129 D014 0.788663 144 D015 1.273761 88 D016 1.210802 93 D017 1.417358 79 D018 1.060815 113 D019 1.810761 60 D020 6.98559 12 D021 1.846074 56 D022 0.860957 137 D023 1.099053 107 D024 1.946033 54	D006	0.872898	136	
D009 0.797533 143 D010 1.198725 97 D011 1.383035 81 D012 0.965811 125 D013 0.908904 129 D014 0.788663 144 D015 1.273761 88 D016 1.210802 93 D017 1.417358 79 D018 1.060815 113 D019 1.810761 60 D020 6.98559 12 D021 1.846074 56 D022 0.860957 137 D023 1.099053 107 D024 1.946033 54	D007	0.800963	141	
D010 1.198725 97 D011 1.383035 81 D012 0.965811 125 D013 0.908904 129 D014 0.788663 144 D015 1.273761 88 D016 1.210802 93 D017 1.417358 79 D018 1.060815 113 D019 1.810761 60 D020 6.98559 12 D021 1.846074 56 D022 0.860957 137 D023 1.099053 107 D024 1.946033 54	D008	0.799842	142	
D011 1.383035 81 D012 0.965811 125 D013 0.908904 129 D014 0.788663 144 D015 1.273761 88 D016 1.210802 93 D017 1.417358 79 D018 1.060815 113 D019 1.810761 60 D020 6.98559 12 D021 1.846074 56 D022 0.860957 137 D023 1.099053 107 D024 1.946033 54	D009	0.797533	143	
D012 0.965811 125 D013 0.908904 129 D014 0.788663 144 D015 1.273761 88 D016 1.210802 93 D017 1.417358 79 D018 1.060815 113 D019 1.810761 60 D020 6.98559 12 D021 1.846074 56 D022 0.860957 137 D023 1.099053 107 D024 1.946033 54	D010	1.198725	97	
D013 0.908904 129 D014 0.788663 144 D015 1.273761 88 D016 1.210802 93 D017 1.417358 79 D018 1.060815 113 D019 1.810761 60 D020 6.98559 12 D021 1.846074 56 D022 0.860957 137 D023 1.099053 107 D024 1.946033 54	D011	1.383035	81	
D014 0.788663 144 D015 1.273761 88 D016 1.210802 93 D017 1.417358 79 D018 1.060815 113 D019 1.810761 60 D020 6.98559 12 D021 1.846074 56 D022 0.860957 137 D023 1.099053 107 D024 1.946033 54	D012	0.965811	125	
D015 1.273761 88 D016 1.210802 93 D017 1.417358 79 D018 1.060815 113 D019 1.810761 60 D020 6.98559 12 D021 1.846074 56 D022 0.860957 137 D023 1.099053 107 D024 1.946033 54	D013	0.908904	129	
D016 1.210802 93 D017 1.417358 79 D018 1.060815 113 D019 1.810761 60 D020 6.98559 12 D021 1.846074 56 D022 0.860957 137 D023 1.099053 107 D024 1.946033 54	D014	0.788663	144	
D017 1.417358 79 D018 1.060815 113 D019 1.810761 60 D020 6.98559 12 D021 1.846074 56 D022 0.860957 137 D023 1.099053 107 D024 1.946033 54	D015	1.273761	88	
D018 1.060815 113 D019 1.810761 60 D020 6.98559 12 D021 1.846074 56 D022 0.860957 137 D023 1.099053 107 D024 1.946033 54	D016	1.210802	93	
D019 1.810761 60 D020 6.98559 12 D021 1.846074 56 D022 0.860957 137 D023 1.099053 107 D024 1.946033 54	D017	1.417358	79	
D020 6.98559 12 D021 1.846074 56 D022 0.860957 137 D023 1.099053 107 D024 1.946033 54	D018	1.060815	113	
D021 1.846074 56 D022 0.860957 137 D023 1.099053 107 D024 1.946033 54	D019	1.810761	60	
D022 0.860957 137 D023 1.099053 107 D024 1.946033 54	D020	6.98559	12	
D023 1.099053 107 D024 1.946033 54	D021	1.846074		
D024 1.946033 54	D022	0.860957	137	
	D023	1.099053		
D025 1.307867 86				
	D025	1.307867	86	

D026	1.062861	111	
D027	0.884334	134	
D028	1.194138	98	
D029	2.04919	51	
D030	1.324294	84	
D031	1.659041	68	
D032	2.687649	38	
D033	2.743597	36	
D034	2.236127	48	
D035	1.02678	116	
D036	19.81613	8	
D037	1.233977	91	
D038	1.402053	80	
D039	1.117005	104	
D040	1.323031	85	
D041	1.573048	71	
D042	1.963223	52	
D043	4.195981	22	
D044	0.962083	127	
D045	1.735628	62	
D046	1.676938	66	
D047	1.062512	112	
D048	1.00317	120	
D049	1.205115	94	
D050	0.900104	132	
D051	2.070107	50	
D052	1.095113	108	
D053	1.063447	110	
D054	17.98491	10	
D055	1.021375	117	
D056	1.082935	109	
D057	2.729959	37	
D058	1.506705	74	
D059	0.89083	133	
D060	4.15795	24	
D061	2.420332	41	
D062	2.522008	40	
D063	2.802207	35	
D064	1.367467	83	
D065	2.324923	43	
D066	0.844652	138	
D067	1.901845	55	
D068	1.418869	78	
D069	2.809071	33	

D070	3.409212	28	
D071	1.192628	99	
D072	2.620361	39	
D073	1.433972	77	
D074	1.212257	92	
D075	1.243989	90	
D076	5.905479	14	
D077	1.570088	72	
D078	5.475263	15	
D079	4.204522	21	
D080	1.581994	70	
D081	1.17414	100	
D082	1.73037	63	
D083	0.880632	135	
D084	3.210778	31	
D085	1.690626	65	
D086	1.674321	67	
D087	1.719308	64	
D088	19.03227	9	
D089	20.42148	6	
D090	1.265164	89	
D091	2.262889	46	
D092	23.71929	3	
D093	20.19683	7	
D094	3.583414	26	
D095	1.011207	118	
D096	0.999569	121	
D097	4.897419	16	
D098	1.148389	101	
D099	1.045313	114	
D100	3.309359	30	
D101	0.987683	122	
D102	10	11	
D103	2.253711	47	
D104	1.274802	87	
D105	20.63103	5	
D106	1.50815	73	
D107	1.201361	96	
D108	0.966129	124	
D109	4.353035	20	
D110	0.831842	139	
D111	1.81863	59	
D112	4.812785	17	
D113	0.824244	140	

D114	0.972671	123	
D115	1.826354	58	
D116	3.587137	25	
D117	6.21497	13	
D118	2.21968	49	
D119	4.183651	23	
D120	1.380797	82	
D121	1.202367	95	
D122	1.495476	76	
D123	1.62642	69	
D124	1.759101	61	
D125	1.956368	53	
D126	1.121708	103	
D127	1.033478	115	
D128	3.505716	27	
D129	1.107964	106	
D130	1.839775	57	
D131	23.78293	2	
D132	0.901781	131	
D133	1.116803	105	
D134	2.820412	32	
D135	0.965594	126	
D136	2.291898	44	
D137	2.808496	34	
D138	0.907893	130	
D139	2.262899	45	
D140	2.355756	42	
D141	3.380697	29	
D142	4.671739	18	
D143	1.136801	102	
D144	1.006388	119	
D145	0.773212	145	

Chapter 6: First Five Year Rural municipality Transport Master Plan

The Rural Municipal Transport Master Plan (RMTMP) that covers the next five years is prepared based on the projected financial requirement to fulfil the perspective plan. Year-wise targets are prepared for the different roads and intervention types.

6.1 Five Year Projected Financial Plan

To fulfil the required interventions implementation plan, financial requirements should be collected from the possible funding sources. For this the present financial capacity of the rural municipality is considered to increase by 15% each year. The rural municipality aims to invest approximately 11 Crore of budget in road infrastructure in the following fiscal year and this budget will increase on the years following.

6.2 Sharing of Funds

The distribution of the available road sector budget for the RMTMP period is given by ToR is as given below figure. Out of 100% budget, 70% is allocated for the construction of roads and 30% is allocated for maintenance work. As this amount of budget for maintenance work is huge, this amount can also be used for the construction of drain and retaining structures while in the initial RMTMP period. After large network of road is developed, this amount will be used in maintenance work.

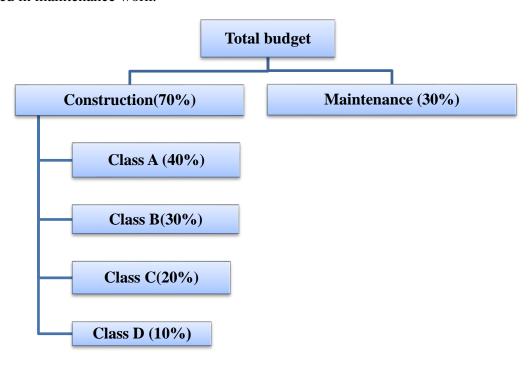
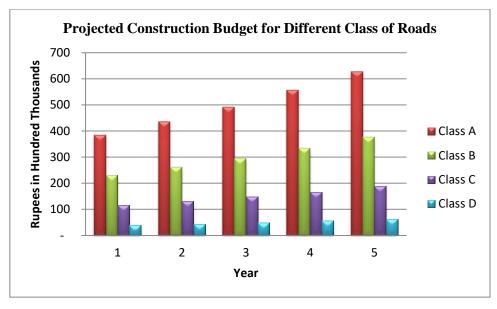


Figure 16: Distribution of Budget in RMTMP period

Based on the above distribution scheme of the budget, the required annual budget will be as follows:



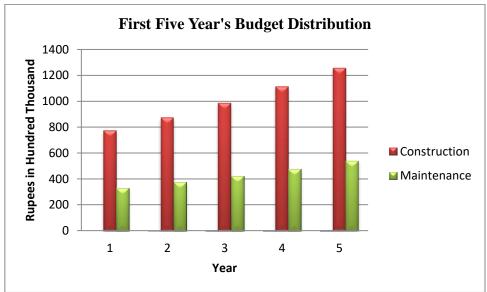


Figure 17: Investment Plan for RMTMP period

6.3 First Five Year Rural municipality Transport Implementation Plan

For the implementation plan of RMTMP period, the following assumptions have been made:

- Class 'A', 'B' and 'C' roads are planned for intermediate lane.
- Class 'D' roads are planned for single lane.
- All class of roads are planned for upto all weather condition only
- Emphasis given to accessibility.
- Maintenance budget is considered to use in the construction/management of drain and retaining structures.
- For class A roads gravelling is given first emphasis and after the completion of gravelling, blacktop is planned

The projected budget for first five year plan is as follows:

Table 22: Projected budget distribution for first five years

Year	Projected Budget (in Hundred Thousand)							
1 ear	Construction	Maintenance	Total					
1	770	330	1,100					
2	870	373	1,243					
3	984	422	1,406					
4	1,112	477	1,589					
5	1,257	539	1,796					
Total	4,993	2,141	7,134					

Table 23: Projected construction budget for different class of roads

Year	Projected Budget (in Hundred Thousand)							
1 cai	Class A	Class B	Class C	Class D				
1	308 231		154	77				
2	348	261	174	87				
3	394	295	197	98				
4	445	334	222	111				
5	5 503		251	126				
Total	1,998	1,498	998	499				

Table 24: Length of Interventions for first 5 year for different class of roads

Class	Length in Km								
Class	New track	Gravelling	Blacktop						
A	2.92	49.04	3.05						
В	2.45	24.50	8.35						
С	0.46	26.71	1.81						
D	4.53	11.71	2.91						
	10.36	111.97	16.12						

Table 25: RMTMP first three year construction Budget Class A

	Proposed Improvement			I year			II year		III year				
Road Code	New Track	Gravelling	Blacktopping	Periodic Maintenance	Length completed (Km)	Cost	Intervention	length completed (Km)	Cost	Intervention	Length completed (Km)	Cost	Intervention
A01	2.92	14.02	33.60	-	2.92	15,017,143	New Track	5.80	18,228,571	Gravelling	8.22	25,840,092	Gravelling
A02	-	22.89	22.89	-	3.17	9,947,143	Gravelling	3.00	9,428,571	Gravelling	3.00	9,428,571	Gravelling
A03	-	12.13	13.21	-	-	-	Gravelling	2.27	7,134,286	Gravelling	1.32	4,132,857	Gravelling

Table 26: RMTMP fourth and fifth year construction Budget Class A

		Proj	posed Improvement			IV year			V year	
Road Code	New Track	Gravelling	Blacktopping	Periodic Maintenance	Length completed (Km)	Cost	Intervention	Length completed (Km)	Cost	Intervention
A01	2.92	14.02	33.60	-	-	-	Blacktopping	3.05	24,795,000	Blacktopping
A02	-	22.89	22.89	-	9.15	28,757,143	Gravelling	4.58	14,385,294	Gravelling
A03	-	12.13	13.21	-	5.01	15,745,714	Gravelling	3.54	11,110,000	Gravelling

Table 27: RMTMP first three year construction Budget Class B

		Prop	osed Improveme	ent	I year			I	I year		III year		
Road Code	New Track	Gravelling	Blacktopping	Periodic Maintenance	Length completed (Km)	Cost	Intervention	length completed (Km)	Cost	Intervention	Length completed (Km)	Cost	Intervention
B15	-	13.97	15.98	-	2.00	6,285,714	Gravelling	1.30	4,085,714	Gravelling	2.80	8,800,000	Gravelling
B01	-	-	1.93	-	1.00	8,142,857	Blacktopping	0.50	4,071,429	Blacktopping	0.43	3,489,377	Blacktopping
B14	-	10.53	10.94	-	2.00	6,285,714	Gravelling	1.30	4,085,714	Gravelling	2.00	6,285,714	Gravelling
B10	-	-	2.08	-	0.30	2,402,143	Blacktopping	0.50	4,071,429	Blacktopping	0.50	4,071,429	Blacktopping
B09	-	-	2.50	-	-	-	Blacktopping	0.50	4,071,429	Blacktopping	0.50	4,071,429	Blacktopping
B08	2.45	2.45	4.91	-		-	New Track	1.00	2,000,000	New Track	1.45	2,907,432	New Track
B11	-	-	0.99	-		-	Blacktopping	0.46	3,713,143	Blacktopping	-	-	Blacktopping

Table 28: RMTMP fourth and fifth year construction Budget Class B

		Prop	osed Improveme	ent		IV	year		V year				
Road Code	New Track	Gravelling	Blacktopping	Periodic Maintenance	Length completed (Km)	Cost	Remaining Length (Km)	Intervention	Length completed (Km)	Cost	Remaining Length (Km)	Intervention	
B15	-	13.97	15.98	-	3.20	10,057,143	4.67	Gravelling	4.67	14,690,437	-	Gravelling	
B01	-	-	1.93	-	-	-	-	Blacktopping	-	-	-	Blacktopping	
B14	-	10.53	10.94	-	2.06	6,472,714	3.17	Gravelling	3.17	9,955,440	-	Gravelling	
B10	-	-	2.08	-	0.79	6,431,473	-	Blacktopping	-	-	-	Blacktopping	
B09	-	-	2.50	-	0.75	6,107,143	0.75	Blacktopping	0.75	6,090,450	-	Blacktopping	
B08	2.45	2.45	4.91	-	-	-	-	New Track		-	-	New Track	
B11	-	-	0.99	-	0.53	4,330,665	-	Blacktopping		-	-	Blacktopping	
B07	-	-	1.20	-	-	-	1.20	Blacktopping	0.86	6,962,143	0.35	Blacktopping	

Table 29: RMTMP five year construction Budget Class C

							1111 1110 year c	П							
	Pro	posed Improvemei	ıt			I year				II year			II	I year	
Road Code	New Track Gravelli	g Blacktopping	Periodic Maintenance	Length completed (Km)	Cost	Remaining length (Km)	Intervention	length completed (Km)	Cost	Remaining Length (Km)	Intervention	Length completed (Km)	Cost	Remaining Length (Km)	Intervention
C36	-	1.28		-	-	1.28	Blacktopping		-	1.28	Blacktopping		-	1.28	Blacktopping
C46	-	1.92		-	-	1.92	Blacktopping		-	1.92	Blacktopping	-	-	1.92	Blacktopping
C27	-	-	1.84	-	-	-	Blacktopping		-	-	Blacktopping	-	-	-	Blacktopping
C53	-	0.55		-	-	0.55	Blacktopping		-	0.55	Blacktopping	-	-	0.55	Blacktopping
C10	-	1.85			-	1.85	Blacktopping		-	1.85	Blacktopping	-	-	1.85	Blacktopping
C54	-	0.28			-	0.28	Blacktopping		-	0.28	Blacktopping		-	0.28	Blacktopping
C42	-	1.97		-	-	-	Blacktopping		-	-	Blacktoppin	-	-	-	Blacktopping
C24	0.78	0.78		0.78	2,451,429	- 0.00	Gravelling		-	-	Blacktopping	-	-	-	Blacktopping
C22	-	1.28		-	-	1.28	Blacktopping		-	1.28	Blacktopping	-	-	1.28	Blacktopping
C59	3.19	3.19		1.50	4,714,286	1.69	Gravelling	1.69	5,310,391	-	Gravelling	-	-	-	Gravelling
C57	3.55	3.55		1.41	4,431,429	2.14	Gravelling	2.14	6,722,194	-	Gravelling	-	-	-	Gravelling
C17	-	0.49			-	0.49	Blacktopping		-	0.49	Blacktopping	-	-	0.49	Blacktopping
C48	-	1.84			-	1.84	Blacktopping		-	1.84	Blacktopping	-	-	1.84	Blacktopping
C49	-	0.39			-	0.39	Blacktopping		-	0.39	Blacktopping	-	-	0.39	Blacktopping
C12	-	0.50			-	0.50	Blacktopping		-	0.50	Blacktopping	-	-	0.50	Blacktopping
C07	-	1.83			-	1.83	Blacktopping		-	1.83	Blacktopping	-	-	1.83	Blacktopping
C21	1.07	1.07		0.16	320,000	0.00	New Track		-	0.00	New Track		-	0.00	New Track
C03	0.87	0.87		0.87	2,749,129	-	Gravelling		-	-	Gravelling	-	-	-	Gravelling
C44	-	0.77			-	0.77	Blacktopping		-	0.77	Blacktopping		-	0.77	Blacktopping
C55	0.94	0.94		0.234	735,429	0.70	Gravelling	0.70	2,206,917	-	Gravelling	-	-	-	Gravelling

C52		0.40	0.51		-	0.40	Gravelling	0.40	1,262,369	-	Gravelling	-	-	-	Gravelling
C09		0.40	0.40			0.40	Gravelling	0.40	1,242,475	-	Gravelling	-	-	-	Gravelling
C30		0.17	1.02			0.17	Gravelling	0.17	518,889	-	Gravelling	-	-	-	Gravelling
C50		-	1.79			1.79	Blacktopping		-	1.79	Blacktopping		-	1.79	Blacktopping
C60		2.63	2.63			2.63	Gravelling	0	-	2.63	Gravelling	0.835	2,624,286	1.80	Gravelling
C61		3.11	3.11			3.11	Gravelling		-	3.11	Gravelling	0.8	2,514,286	2.31	Gravelling
C58		0.54	0.54			0.54	Gravelling		-	0.54	Gravelling	0.54	1,689,622	-	Gravelling
C41		-	0.70			0.70	Blacktopping		-	0.70	Blacktopping		-	0.70	Blacktopping
C38		-	1.02			1.02	Blacktopping		-	1.02	Blacktopping		-	1.02	Blacktopping
C05		-	1.05			1.05	Blacktopping			1.05	Blacktopping		-	1.05	Blacktopping
C37		1.17	1.17			1.17	Gravelling			1.17	Gravelling	1.17	3,670,574	-	Gravelling
C45	0.30	0.30	0.45			0.30	New Track			0.30	New Track	0.30	591,006	-	New Track
C04	-	-	-	0.48			maintain			-	maintain		-	-	maintain
C25	-	-	1.28			1.28	Blacktopping			1.28	Blacktopping		-	1.28	Blacktopping
C32	-	1.48	1.96			1.48	Gravelling			1.48	Gravelling	1.48	4,647,302	-	Gravelling
C13	-	0.32	0.32			0.32	Gravelling			0.32	Gravelling	0.32	998,464	-	Gravelling
C34	-	1.13	1.13			1.13	Gravelling			1.13	Gravelling	0.95	2,970,000	0.18	Gravelling

Table 30: RMTMP fourth and fifth year construction Budget Class C

		Duana	osed Improveme	nt		IV	WOOM.			V	woon.	
		Propo	i mproveme	III		IV	year	1		V.	year	
Road Code	New Track	Gravelling	Blacktopping	Periodic Maintenance	Length completed (Km)	Cost	Remaining Length (Km)	Intervention	Length completed (Km)	Cost	Remaining Length (Km)	Intervention
C36	-	-	1.28	-	-	-	1.28	Blacktopping	1.28	10,421,147	-	Blacktopping
C46	-	-	1.92	-	-	-	1.92	Blacktopping	0.53	4,315,714	1.39	Blacktopping
C60	-	2.63	2.63	-	1.80	5,655,226	-	Gravelling		-	-	Gravelling
C61	-	3.11	3.11	-	2.31	7,268,014	-	Gravelling		-	-	Gravelling
C58	-	0.54	0.54	-	-	-	-	Gravelling		-	-	Gravelling
C41	-	-	0.70	-		-	0.70	Blacktopping		-	0.70	Blacktopping
C38	-	-	1.02	-		-	1.02	Blacktopping		-	1.02	Blacktopping
C05	-	-	1.05	-		-	1.05	Blacktopping		-	1.05	Blacktopping
C37	-	1.17	1.17	-	-	-	-	Gravelling	-	-	-	Gravelling
C45	0.30	0.30	0.45	-	-	-	-	New Track	0.30	928,724	-	Gravelling
C04	-	-	-	0.48	0	-	-	maintain		-	-	maintain
C25	-	-	1.28	-		-	1.28	Blacktopping		-	1.28	Blacktopping
C32	-	1.48	1.96	-		-	-	Gravelling	-	-	-	Gravelling
C06	-	-	0.72	-		-	0.72	Blacktopping		-	0.72	Blacktopping
C26	-	-	1.13	-		-	1.13	Blacktopping		-	1.13	Blacktopping
C14	-	-	0.20	-		-	0.20	Blacktopping		-	0.20	Blacktopping
C34	-	1.13	1.13	-	0.18	578,578	-	Gravelling	-	-	-	Gravelling
C15	-	-	0.33	-		-	0.33	Blacktopping		-	0.33	Blacktopping
C28	-	0.66	0.66	-	0.66	2,071,517	-	Gravelling	-	-	-	Gravelling
C47	-	-	1.08	-		-	1.08	Blacktopping		-	1.08	Blacktopping
C18	-	-	0.35	-		-	0.35	Blacktopping		-	0.35	Blacktopping

C02	-	-	2.28	-		-	2.28	Blacktopping		-	2.28	Blacktopping
C23	-	0.36	0.36	-	0.36	1,127,041	-	Gravelling	-	-	-	Gravelling
C29	-	-	0.37	-		-	0.37	Blacktopping		-	0.37	Blacktopping
C43	-	3.97	3.97	-	1.75	5,500,000	2.22	Gravelling	2.22	6,973,120	-	Gravelling
C16	-	-	0.14	-		-	0.14	Blacktopping		-	0.14	Blacktopping
C31	-	-	0.30	-		-	0.30	Blacktopping		-	0.30	Blacktopping
C33	-	0.46	0.46	-		-	0.46	Gravelling	0.46	1,438,995	-	Gravelling
C01	-	-	10.80	-		-	10.80	Blacktopping		-	10.80	Blacktopping
C19	-	-	0.36	-		-	0.36	Blacktopping		-	0.36	Blacktopping
C40	-	-	0.59	-		-	0.59	Blacktopping		-	0.59	Blacktopping
C56	-	0.30	0.30	-		-	0.30	Gravelling	0.30	956,120	-	Gravelling

Table 31: RMTMP five year construction Budget for Class D

		Propos	sed Improvement		I year				Π	I year		III year				
Road Code	New Track	Gravelling	Blacktopping	Periodic Maintenance	Length completed (Km)	Cost	Remaining length (Km)	Intervention	length completed (Km)	Cost	Remaining Length (Km)	Intervention	Length completed (Km)	Cost	Remaining Length (Km)	Intervention
D001	0.79	0.79	1.18	-	0.79	1,359,374	-	New Track	0.79	1,744,530	-	Gravelling	-	-	1.18	Blacktopping
D131	-	-	1.54	-	0.51	2,907,000	1.03	Blacktopping	0.52	2,964,000	0.51	Blacktopping	0.51	2,911,503	-	Blacktopping
D092	1.33	1.33	1.33	-	1.33	2,280,000	0.00	New Track	0.50	1,100,000	0.83	Gravelling	0.83	1,826,484	-	Gravelling
D004	-	0.52	0.52	-	0.52	1,145,800	-	Gravelling	0.52	1,145,800	-	Gravelling	-	-	-	Gravelling
D105	-	-	0.32	-					0.32	1,840,507	-	Blacktopping	-	-	-	Blacktopping
D089	0.88	0.88	0.88	-						-	0.88	New Track	0.88	1,500,554	-	New Track
D093	-	0.63	0.63	-									0.63	1,392,329	-	Gravelling
D036	-	-	0.16	-									0.16	920,949	-	Blacktopping
D088	-	0.60	0.60	-									0.60	1,320,658	-	Gravelling
D054	-	-	0.19	-									-	-	-	
D102	-	1.72	1.98	-									-	-	1.72	Gravelling

Table 32: RMTMP fourth and fifth year construction Budget Class D Roads

Road		Propo	osed Improvemen	nt		IV	year		V year				
Code	New Track	Gravelling	Blacktopping	Periodic Maintenance	Length completed (Km)	Cost	Remaining Length (Km)	Intervention	Length completed (Km)	Cost	Remaining Length (Km)	Intervention	
D102	-	1.72	1.98	-	1.72	3,775,046	-	Gravelling	-	-	-	Gravelling	
D020	-	-	-	1.38	-	-	-			-	-	Periodic Maintenance	
D117	-	1.23	1.23	-	1.23	2,706,836	-	Gravelling	-	-	1.23	Gravelling	
D076	-	1.17	1.17	-	1.17	2,572,042	-	Gravelling	-	-	1.17	Gravelling	
D078	1.08	1.08	1.08	-	1.08	1,858,183	-	New Track	-	-	1.08	Gravelling	
D097	-	0.46	0.97	-		-	0.46	Gravelling	0.46	1,016,369	-	Gravelling	
D112	-	0.95	0.95	-					0.95	2,096,136	-	Gravelling	
D142	-	0.92	0.92	-					0.92	2,034,705	-	Gravelling	
D003	-	-	0.88	-					0.88	5,041,034	-	Blacktopping	
D109	-	0.86	0.86	-					0.86	1,895,898	-	Gravelling	
D079	0.45	0.45	0.83	-					0.45	775,478	-	New Track	

Chapter 7: Conclusion and Recommendation

The final report of RMTMP of Rapti Rural Municipality is prepared after the analysis of field data and requirement of the rural municipality itself. The short term and long term plan is prepared for five year and twenty years period. This RMTMP aims to blacktop 28.63 Km of road, gravel 97.13 Km of road and open 8.53Km of new track in first five year period. This planning is based on the assumption that the spending capacity of Rural Municipality increases by 15% per year. The total budget for 20 years of implementation of this RMTMP is projected to be 891.4 Crore, 70% of which is allocated for construction and 30% is allocated for maintenance of existing structures. The ultimate goal of this RMTMP is to blacktop all the rural municipality roads to their full extent.

The concept of RMTMP is to develop sustainable and economic road network, therefore the Rural Municipality should focus on strengthening existing road network to operate them in all weather conditions rather than opening new tracks. Moreover, strategically important tracks should be opened after proper planning and design. Due to unavailability of intra municipal transport system, the number of private vehicles is increasing in the Rural Municipality which may cause severe problem of traffic congestion in future. So, Rural Municipality should take immediate action to operate local transport system inside the Rapti Rural municipality by Rural municipality itself or with collaboration with private entities. Similarly, the rural municipality should allocate different land use zones based on their present and future use, which will be applicable in future planning of infrastructure facilities inside Rural Municipality.

References

Australia, M. R. (2011). Road Hierarchy Criteria.

Central Bureau of Statistics. (2013). *National Census 2011*. Kathmandu: Government of Nepal, National Planning Commission Secretariat.

Cole, S. (2005). *Applied Transport Economics Policy, Management and Decision Making*. London: Kogan Page Limited.

Elgar, E. (2002). Transport Economics. Cheltenham: Edward ELgar Publishing Limited.

Eppell, V. A., Bunker, J., & McClurg, B. (2001). A four level road hierarchy for network planning and management. *Proceedings 20th ARRB Conference*. Melbourne: Jaeger, Vicki, Eds.

kadiyali, D. L. (2011). Traffic Engineering and Transport planning.

Litman, T. (2015). Evaluating Active Transport Benefits and Costs (Guide to valuing walking and cycling improvements and encouragement programs). Victooria Transport Policy Institute.

McClurg, B., Bunker, J., & Eppell, V. (2001). A four level road hierarchy for network planning and management. *ARRB*. Melbourne.

Meyer M.D & Miller E.J. Urban Transportation Planning.

National Planning Commission. (2012). *National population and housing census (A national report)*. Kathmandu: Central Bureau of Statistics.

Government of Nepal, (2068). Nepal Urban Road Standard 2068 (Draft).

Department of Roads, Nepal Road Standard 2070.

TRB. (2013). *Transit capacity and quality of service manual*. Washington D.C.: Transit cooperative research program.

National Urban Development Strategy 2015, GoN, Ministry of Urban Development

District transport master plan, Dang

ANNEX - I

Road list with Description

S.No.	Road Code	Road Name	Description
1	A01	Tundikhel-Lalmatiya Paschim Chowk- Khururiya-bhanpur- Jeetpur-Pathhar Gadhwa-Dodhai Chowk- Kalapani Chowk-Sahid Smarak Park-Tundikhel- Mahendra Hwy	This road passes through Ward 1,Ward 2,Ward 3,Ward 4,Ward 5,Ward 6,Ward 7,Ward 8, and it serves approximately 3150 population. The road has total length of 33.6 Km. Out of which 11.11 Km of road is earthen, 19.57 Km of road is gravelled, none of the section is blacktopped and 2.92 Km of track is yet to be opened.
3	A02	Aapkholi chowk- Sanighos -Chaupari- Chhauni tole-Karange road	This road passes through Ward 1,Ward 2,Ward 4,Ward 5,Ward 9, and it serves approximately 1125 population. The road has total length of 22.89 Km. Out of which 22.89 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
4	A03	Shree Narayan Chowk- Club Ghar Chowk- Chauni Tole Chowk- Simle bawari Gaun road	This road passes through Ward 4, Ward 8, Ward 9, and it serves approximately 1890 population. The road has total length of 13.32 Km. Out of which 12.23 Km of road is earthen, 1.08 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
5	B01	Bhakte Chowk- Ramnagar Chowk road	This road passes through Ward 2,Ward 3, and it serves approximately 270 population. The road has total length of 1.93 Km. Out of which none of the section is earthen, 1.93 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
6	B02	Tundikhel Lalmatiya purbi chowk to punyepur road	This road passes through Ward 2,Ward 3, and it serves approximately 23 population. The road has total length of 0.51 Km. Out of which none of the section is earthen, 0.51 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
7	В03	Traffic Chowk- Chaptare-Ramnagar Chowk-Maruwathan	This road passes through Ward 1,Ward 2, and it serves approximately 293 population. The road has total length of 2.42 Km. Out of which none of the section is earthen, 2.42 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
8	B04	Traffic chowk to bhalukhola road	This road passes through Ward 1,Ward 5, and it serves approximately 113 population. The road has total length of 1.36 Km. Out of which 0.16 Km of road is earthen, 1.2 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
9	B05	Rapti samudhayek rapti green park hudai hanumangadhi road to tinkune Ringroad	This road passes through Ward 1, and it serves approximately 135 population. The road has total length of 2.01 Km. Out of which 2.01 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.

10	B06	Durga himali marg Upto Rapti River	This road passes through Ward 1, and it serves approximately 180 population. The road has total length of 0.7 Km. Out of which none of the section is earthen, 0.7 Km of road is blacktopped and construction of new track is not required.
11	В07	mini micro buspark Purano nagar bikas samiti ko chowk road	This road passes through Ward 1, and it serves approximately 158 population. The road has total length of 1.2 Km. Out of which none of the section is earthen, 1.2 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
12	B08	Arnanhanpur chowk to Jeetpur - Mahendra Hwy	This road passes through Ward 7,Ward 8, and it serves approximately 180 population. The road has total length of 2.45 Km. Out of which none of the section is earthen, 2.45 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
13	B09	Sisahaniya Milan chowk Rapti road	This road passes through Ward 5,Ward 7, and it serves approximately 495 population. The road has total length of 2.5 Km. Out of which none of the section is earthen, 2.5 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
14	B10	Bal kalya Aadharbhut - Dodhai Canal-Chaubato	This road passes through Ward 5,Ward 6, and it serves approximately 270 population. The road has total length of 2.08 Km. Out of which none of the section is earthen, 2.08 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
15	B11	Majheria Gulmaura chowk to west road	This road passes through Ward 6, and it serves approximately 135 population. The road has total length of 0.99 Km. Out of which none of the section is earthen, 0.99 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
16	B12	Paharuwa south to Lathuwa South Road	This road passes through Ward 5, Ward 6, and it serves approximately 23 population. The road has total length of 0.69 Km. Out of which 0.69 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
17	B13	Milan dada to South road	This road passes through Ward 8, and it serves approximately 45 population. The road has total length of 0.34 Km. Out of which 0.34 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
18	B14	Kalapani Chowk-Pipal dada chowk-Karange tole-Banglachuli Gaunpalika road	This road passes through Ward 5, and it serves approximately 720 population. The road has total length of 10.94 Km. Out of which 10.53 Km of road is earthen, 0.41 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
19	B15	BP chowk -Sanighos Khola-Ghumaune Gaun- Simle Bawari Gaun road	This road passes through Ward 1,Ward 2,Ward 9, and it serves approximately 1350 population. The road has total length of 15.98 Km. Out of which 13.97 Km of road is earthen, 2.01 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.

20	C01	Nahar road (Southern)	This road passes through Ward 1, Ward 2, Ward 3, Ward 7, and it serves approximately 90 population. The road has total length of 10.8 Km. Out of which none of the section is earthen, 10.8 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
21	C02	Nahar road (Upper)	This road passes through Ward 1,Ward 2, and it serves approximately 180 population. The road has total length of 2.28 Km. Out of which none of the section is earthen, 2.28 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
22	C03	Khanal guest house batauli chauraha dip boarding hudai dip marga jodne sadak	This road passes through Ward 1, and it serves approximately 68 population. The road has total length of 0.87 Km. Out of which 0.87 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
23	C04	Naba Pratibha chowk to chaptare chaupari sadak	This road passes through Ward 1, and it serves approximately 158 population. The road has total length of 0.48 Km. Out of which none of the section is earthen, 0.48 Km of road is blacktopped and construction of new track is not required.
24	C05	Baraha Rukh Chowk- Kalika chowk - Ramnagar chowk sadak	This road passes through Ward 2, and it serves approximately 135 population. The road has total length of 1.05 Km. Out of which none of the section is earthen, 1.05 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
25	C06	Ambeswori mandir kathaha bich galli sadak	This road passes through Ward 2, and it serves approximately 248 population. The road has total length of 0.72 Km. Out of which none of the section is earthen, 0.72 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
26	C07	Barakhutti chowk - Bagge Pati Pauwa- Baraha Rukh Thati	This road passes through Ward 2, and it serves approximately 225 population. The road has total length of 1.83 Km. Out of which none of the section is earthen, 1.83 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
27	C08	Bichgalli Campus chowk road	This road passes through Ward 2, and it serves approximately 68 population. The road has total length of 0.59 Km. Out of which none of the section is earthen, 0.59 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
28	C09	School Chowk to Nava Prativa Chowk road	This road passes through Ward 1, and it serves approximately 54 population. The road has total length of 0.4 Km. Out of which 0.4 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
29	C10	Kates nala satmare tole Chowk-Harse Dada Chowk-Ekata Tole Chowk	This road passes through Ward 1,Ward 2, and it serves approximately 270 population. The road has total length of 1.85 Km. Out of which none of the section is earthen, 1.85 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.

30	C11	Ploting 7 (W.No. 2) Bararukh chowk to north	This road passes through Ward 2, and it serves approximately 81 population. The road has total length of 0.37 Km. Out of which none of the section is earthen, 0.37 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
31	C12	Harse tal to harde dada chowk(p1)	This road passes through Ward 1,Ward 2, and it serves approximately 158 population. The road has total length of 0.5 Km. Out of which none of the section is earthen, 0.5 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
32	C13	Ploting 8 (W.No. 2) Harse danda chowk to east	This road passes through Ward 2, and it serves approximately 90 population. The road has total length of 0.32 Km. Out of which 0.32 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
33	C14	Ploting 9 (W.No. 2)	This road passes through Ward 2, and it serves approximately 77 population. The road has total length of 0.2 Km. Out of which none of the section is earthen, 0.2 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
34	C15	Ploting 9 (W.No. 2)	This road passes through Ward 2, and it serves approximately 68 population. The road has total length of 0.33 Km. Out of which none of the section is earthen, 0.33 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
35	C16	Bhitri bato Ploting 10 (W.No. 2)	This road passes through Ward 2, and it serves approximately 23 population. The road has total length of 0.14 Km. Out of which none of the section is earthen, 0.14 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
36	C17	Barakhutti chowk to ward office	This road passes through Ward 2, and it serves approximately 135 population. The road has total length of 0.49 Km. Out of which none of the section is earthen, 0.49 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
37	C18	Ekta tol chowk to masuriya sadak	This road passes through Ward 2, and it serves approximately 68 population. The road has total length of 0.35 Km. Out of which none of the section is earthen, 0.35 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
38	C19	Ekta nagar ring sadak	This road passes through Ward 2, and it serves approximately 45 population. The road has total length of 0.36 Km. Out of which none of the section is earthen, 0.36 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.

39	C20	2 no ward simana Barakhutti kulo to badarmatiya road	This road passes through Ward 2,Ward 3, and it serves approximately 270 population. The road has total length of 1.13 Km. Out of which none of the section is earthen, 1.13 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
40	C21	Acharya Tole-Clinic bhawan chowk - Badarmatiya	This road passes through Ward 3, and it serves approximately 293 population. The road has total length of 1.07 Km. Out of which 0.91 Km of road is earthen, none of the section is blacktopped and 0.16 Km of track is yet to be opened.
41	C22	Karamdi khola masuriya badka galli chowk cilnic bhawan chowk (p4)	This road passes through Ward 3, and it serves approximately 315 population. The road has total length of 1.28 Km. Out of which none of the section is earthen, 1.28 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
42	C23	Ghantadev saba chowk acharya tol -simina road	This road passes through Ward 3,Ward 4, and it serves approximately 68 population. The road has total length of 0.36 Km. Out of which 0.36 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
43	C24	Ghantadev saba chowk milan chowk -karamdai road	This road passes through Ward 3, and it serves approximately 158 population. The road has total length of 0.78 Km. Out of which 0.78 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
44	C25	Karamdi khola milan chowk naya basti to gauri chowk	This road passes through Ward 3, and it serves approximately 540 population. The road has total length of 1.28 Km. Out of which none of the section is earthen, 1.28 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
45	C26	Khinaita tole to east south road	This road passes through Ward 4, and it serves approximately 32 population. The road has total length of 1.13 Km. Out of which none of the section is earthen, 1.13 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
46	C27	Maurighat mabi chowk ratri prabi shiva mandir to Mahendra Highway	This road passes through Ward 4,Ward 8, and it serves approximately 450 population. The road has total length of 1.84 Km. Out of which none of the section is earthen, 1.84 Km of road is blacktopped and construction of new track is not required.
47	C28	naya basti jane chowk to gauri chowk road	This road passes through Ward 3, and it serves approximately 59 population. The road has total length of 0.66 Km. Out of which 0.66 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
48	C29	Highway to 65 No. Chowk	This road passes through Ward 3,Ward 4, and it serves approximately 68 population. The road has total length of 0.37 Km. Out of which none of the section is earthen, 0.37 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.

49	C30	Lalit chowk- Gauri Chowk	This road passes through Ward 3,Ward 4, and it serves approximately 302 population. The road has total length of 1.02 Km. Out of which 0.17 Km of road is earthen, 0.85 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
50	C31	Gauri chowk to budichaur jane bato	This road passes through Ward 3,Ward 4, and it serves approximately 45 population. The road has total length of 0.3 Km. Out of which none of the section is earthen, 0.3 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
51	C32	Narendra smirti chowk- Mejheni Gadh to north connecting Road	This road passes through Ward 4, and it serves approximately 293 population. The road has total length of 1.96 Km. Out of which 1.48 Km of road is earthen, 0.48 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
52	C33	iman chowk to club ghar najik	This road passes through Ward 4, and it serves approximately 68 population. The road has total length of 0.46 Km. Out of which 0.46 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
53	C34	Shiva mNdir- Barpipal Chowk- Rcc Culvert	This road passes through Ward 6, and it serves approximately 113 population. The road has total length of 1.13 Km. Out of which 1.13 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
54	C35	Hanseswor prabi bhagwanpur to rapti road	This road passes through Ward 6, and it serves approximately 248 population. The road has total length of 1.12 Km. Out of which none of the section is earthen, 1.12 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
55	C36	Chaubato sagrapur bagrapur chowk to rapti	This road passes through Ward 6, and it serves approximately 428 population. The road has total length of 1.28 Km. Out of which none of the section is earthen, 1.28 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
56	C37	Martin school hudai sagrapur chowk road	This road passes through Ward 6,Ward 7, and it serves approximately 113 population. The road has total length of 1.17 Km. Out of which 1.17 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
57	C38	school chowk aananpur chowk mela sthal road	This road passes through Ward 7, and it serves approximately 203 population. The road has total length of 1.02 Km. Out of which none of the section is earthen, 1.02 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
58	C39	Aananpur chowk to jeetpur sadak	This road passes through Ward 7, and it serves approximately 113 population. The road has total length of 0.25 Km. Out of which none of the section is earthen, 0.25 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.

59	C40	Dalit tole hudai aqueduct road	This road passes through Ward 7, and it serves approximately 68 population. The road has total length of 0.59 Km. Out of which none of the section is earthen, 0.59 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
60	C41	Chaubato health heart hudai mini airport road	This road passes through Ward 7, and it serves approximately 23 population. The road has total length of 0.7 Km. Out of which none of the section is earthen, 0.7 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
61	C42	Srinarayan chowk to bhanpur road	This road passes through Ward 3, Ward 4, Ward 7, Ward 8, and it serves approximately 203 population. The road has total length of 1.97 Km. Out of which none of the section is earthen, 1.97 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
62	C43	Punkhola -Lamkhola- Simle Connection Road	This road passes through Ward 5,Ward 9, and it serves approximately 203 population. The road has total length of 3.97 Km. Out of which 3.97 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
63	C44	Dolai khola janajyoti nimabi to piparikhutti bhitri road	This road passes through Ward 8, and it serves approximately 180 population. The road has total length of 0.77 Km. Out of which none of the section is earthen, 0.77 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
64	C45	Bijaura chowk to Masan Ghat	This road passes through Ward 8, and it serves approximately 45 population. The road has total length of 0.45 Km. Out of which none of the section is earthen, 0.16 Km of road is gravelled, none of the section is blacktopped and 0.3 Km of track is yet to be opened.
65	C46	Bijauri chowk rcc culvert rcc bridhe needed(dolai khola)piparkhurri chowk to janajyoti nimabi road	This road passes through Ward 8, and it serves approximately 518 population. The road has total length of 1.92 Km. Out of which none of the section is earthen, 1.92 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
66	C47	gai form hudai thaman ko ghar road	This road passes through Ward 8, and it serves approximately 90 population. The road has total length of 1.08 Km. Out of which none of the section is earthen, 1.08 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
67	C48	Pipari chowk - dolai khola-Kohalwa Chowk	This road passes through Ward 8, and it serves approximately 450 population. The road has total length of 1.84 Km. Out of which none of the section is earthen, 1.84 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.

68	C49	Pipari chowk to pipari thati road	This road passes through Ward 8, and it serves approximately 180 population. The road has total length of 0.39 Km. Out of which none of the section is earthen, 0.39 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
69	C50	Amen chaudhari ko ghar- buddha nagar chowk- Dip Jyoti School	This road passes through Ward 5, Ward 6, Ward 7, Ward 8, and it serves approximately 338 population. The road has total length of 1.79 Km. Out of which none of the section is earthen, 1.79 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
70	C51	Ganeshman Chowk to Mahendra Hwy	This road passes through Ward 5,Ward 8, and it serves approximately 113 population. The road has total length of 0.43 Km. Out of which none of the section is earthen, 0.43 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
71	C52	Kamal road chowk to Dolai khola	This road passes through Ward 5, and it serves approximately 158 population. The road has total length of 0.51 Km. Out of which 0.4 Km of road is earthen, 0.11 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
72	C53	Lathuwa chowk to dolai khola road	This road passes through Ward 5, and it serves approximately 383 population. The road has total length of 0.55 Km. Out of which none of the section is earthen, 0.55 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
73	C54	Dodhai chowk to dohai chowk(p1)	This road passes through Ward 5, and it serves approximately 135 population. The road has total length of 0.28 Km. Out of which none of the section is earthen, 0.28 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
74	C55	Lathuwa chowk nutan bal uddhan hudai singhe khola sadak	This road passes through Ward 5, and it serves approximately 225 population. The road has total length of 0.94 Km. Out of which 0.94 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
75	C56	Gulmaura chowk to north road	This road passes through Ward 6, and it serves approximately 23 population. The road has total length of 0.3 Km. Out of which 0.3 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
76	C57	bal kalyan aadharbhut to bhulke road	This road passes through Ward 5, and it serves approximately 180 population. The road has total length of 3.55 Km. Out of which 3.55 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
77	C58	Bp ringroad	This road passes through Ward 1, and it serves approximately 68 population. The road has total length of 0.54 Km. Out of which 0.54 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.

78	C59	Rupakot aadharbhut to char sale to Ghumaune gaun road	This road passes through Ward 2,Ward 9, and it serves approximately 203 population. The road has total length of 3.19 Km. Out of which 3.19 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
79	C60	Salle Bohore khet salleri danda chaupari road	This road passes through Ward 9, and it serves approximately 180 population. The road has total length of 2.63 Km. Out of which 2.63 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
80	C61	Lamokhola jane chowk to badrakshi devi school raod hudai lamakhola road	This road passes through Ward 4,Ward 9, and it serves approximately 135 population. The road has total length of 3.11 Km. Out of which 3.11 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
81	D001	Bhanu chowk to Shanti tole road	This road passes through Ward 1,The road has total length of 1.18 Km. Out of which none of the section is earthen, 0.39 Km of road is gravelled, none of the section is blacktopped and 0.79 Km of track is yet to be opened.
82	D002	Ploting 8 (Gautam buddha tole to east north w-1) road	This road passes through Ward 1, The road has total length of 0.3 Km. Out of which none of the section is earthen, 0.3 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
83	D003	kanchi road	This road passes through Ward 1, The road has total length of 0.88 Km. Out of which none of the section is earthen, 0.88 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
84	D004	Bhungbhunge chowk to hanuman mandir najik jane road	This road passes through Ward 1, The road has total length of 0.52 Km. Out of which 0.52 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
85	D005	Bagasoti marg	This road passes through Ward 1,The road has total length of 0.18 Km. Out of which 0.18 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
86	D006	Plotting new(W-1, Aapkholi chowk to south)	This road passes through Ward 1,The road has total length of 0.17 Km. Out of which none of the section is earthen, 0.17 Km of road is blacktopped and construction of new track is not required.
87	D007	Bimala ghar jane bato	This road passes through Ward 1, The road has total length of 0.16 Km. Out of which none of the section is earthen, 0.16 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
88	D008	Rapti green park marg	This road passes through Ward 1,The road has total length of 0.16 Km. Out of which none of the section is earthen, 0.16 Km of road is blacktopped and construction of new track is not required.
89	D009	shah marg	This road passes through Ward 1,The road has total length of 0.16 Km. Out of which 0.16 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.

90	D010	rapti ganga marg	This road passes through Ward 1,The road has total length of 0.24 Km. Out of which none of the section is earthen, 0.24 Km of road is blacktopped and construction of new track is not required.
91	D011	Plotting 3 (W-1, School road)	This road passes through Ward 1, The road has total length of 0.27 Km. Out of which 0.27 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
92	D012	santi marg (Bhanu chowk to south)	This road passes through Ward 1, The road has total length of 0.19 Km. Out of which 0.19 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
93	D013	Padam pun sadak	This road passes through Ward 1, The road has total length of 0.18 Km. Out of which 0.18 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
94	D014	reule tol sadak	This road passes through Ward 1, The road has total length of 0.16 Km. Out of which none of the section is earthen, 0.16 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
95	D015	purano nagar bikas to area police station road	This road passes through Ward 1,The road has total length of 0.25 Km. Out of which none of the section is earthen, 0.25 Km of road is blacktopped and construction of new track is not required.
96	D016	dip jyoti boarding school to rapti chamber of commerse	This road passes through Ward 1, The road has total length of 0.24 Km. Out of which 0.24 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
97	D017	Batauli chauraha rapti chamber of commerce badshala to batauli chauraha road	This road passes through Ward 1, The road has total length of 0.28 Km. Out of which none of the section is earthen, 0.28 Km of road is blacktopped and construction of new track is not required.
98	D018	badshala shiva mandir to rapti bus counter	This road passes through Ward 1, The road has total length of 0.21 Km. Out of which none of the section is earthen, 0.21 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
99	D019	Ninja hotel bata bhalukhola	This road passes through Ward 1, The road has total length of 0.36 Km. Out of which none of the section is earthen, 0.36 Km of road is blacktopped and construction of new track is not required.
100	D020	Bihani marg (Darlami tol to Subedi tol south)	This road passes through Ward 1, The road has total length of 1.38 Km. Out of which none of the section is earthen, 1.38 Km of road is blacktopped and construction of new track is not required.
101	D021	Subedi tole east to south connecting road	This road passes through Ward 1, The road has total length of 0.37 Km. Out of which none of the section is earthen, 0.37 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
102	D022	Sankhutta basti bata daxin rapti khola jane bato	This road passes through Ward 1,The road has total length of 0.17 Km. Out of which none of the section is earthen, 0.17 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.

103	D023	jagat ploting (Subedi tole east to south running road)	This road passes through Ward 1, The road has total length of 0.22 Km. Out of which none of the section is earthen, 0.22 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
104	D024	subedi tol to thula kuwa road	This road passes through Ward 1,The road has total length of 0.39 Km. Out of which none of the section is earthen, 0.39 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
105	D025	ploting 5 (Subedi tole west to south running road)	This road passes through Ward 1, The road has total length of 0.26 Km. Out of which none of the section is earthen, 0.26 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
106	D026	Ploting 4	This road passes through Ward 1,The road has total length of 0.21 Km. Out of which none of the section is earthen, 0.21 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
107	D027	Highway to GR wood factory Road	This road passes through Ward 1,The road has total length of 0.18 Km. Out of which none of the section is earthen, 0.18 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D028	ploting 6	This road passes through Ward 1, The road has total length of 0.24 Km. Out of which none of the section is earthen, 0.24 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D029	rishi plotting 1	This road passes through Ward 1, The road has total length of 0.41 Km. Out of which none of the section is earthen, 0.41 Km of road is blacktopped and construction of new track is not required.
108	D030	plotting 2	This road passes through Ward 1, The road has total length of 0.26 Km. Out of which 0.26 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D031	Plotting 7 (W-1 Naba Pratibha chowk to east)	This road passes through Ward 1, The road has total length of 0.33 Km. Out of which none of the section is earthen, 0.33 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D032	NTC office to kates nala(thilachaur jane bato)	This road passes through Ward 1,Ward 2,The road has total length of 0.53 Km. Out of which none of the section is earthen, 0.53 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D033	Kates nala chowk darlami tol to kates nala aqueduct	This road passes through Ward 1, The road has total length of 0.54 Km. Out of which none of the section is earthen, 0.54 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D034	Kates Nala chowk to Mukta Kamaiya Chowk Road	This road passes through Ward 1, The road has total length of 0.44 Km. Out of which 0.44 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.

108	D035	Bhakte chowk to mukta kamaiya chowk	This road passes through Ward 1, Ward 2, The road has total length of 0.2 Km. Out of which none of the section is earthen, 0.2 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D036	Ring road (Khururiya) to south road	This road passes through Ward 3,The road has total length of 0.16 Km. Out of which none of the section is earthen, 0.16 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D037	badka pul bata purba jane road	This road passes through Ward 3,The road has total length of 0.24 Km. Out of which none of the section is earthen, 0.24 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D038	Badka pul bata paschim jane road	This road passes through Ward 3,The road has total length of 0.28 Km. Out of which none of the section is earthen, 0.28 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D039	Ploting 14 (W.No. 2) South to Kathaha chowk	This road passes through Ward 2,The road has total length of 0.22 Km. Out of which none of the section is earthen, 0.22 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D040	Ploting 12 (W.No. 2) North to Kathaha chowk	This road passes through Ward 2, The road has total length of 0.26 Km. Out of which none of the section is earthen, 0.26 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D041	Ploting 6 (W.No. 2) Campus chowk to east	This road passes through Ward 2, The road has total length of 0.31 Km. Out of which none of the section is earthen, 0.31 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D042	Public academy road	This road passes through Ward 2, The road has total length of 0.39 Km. Out of which none of the section is earthen, 0.39 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D043	Bagge pati pauwa to badarmatiya sadak	This road passes through Ward 2,Ward 3,The road has total length of 0.83 Km. Out of which 0.83 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D044	Adarsha namuna mabi sadak	This road passes through Ward 2, The road has total length of 0.19 Km. Out of which none of the section is earthen, 0.19 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D045	Rishi Plotting 3	This road passes through Ward 1,The road has total length of 0.34 Km. Out of which none of the section is earthen, 0.34 Km of road is blacktopped and construction of new track is not required.
108	D046	Ploting 1 (W.No. 2) Barakhutti chowk to Ekta nagar road	This road passes through Ward 2, The road has total length of 0.33 Km. Out of which none of the section is earthen, 0.33 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.

108	D047	proposed Park road	This road passes through Ward 2, The road has total length of 0.21 Km. Out of which none of the section is earthen, none of the section is blacktopped and 0.21 Km of track is yet to be opened.
108	D048	Ploting 2 (W.No. 2) (way to Masuriya from Barakhutti chowk)	This road passes through Ward 2, The road has total length of 0.2 Km. Out of which none of the section is earthen, 0.2 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D049	Shantinagar sadak(ploting)	This road passes through Ward 2, The road has total length of 0.24 Km. Out of which none of the section is earthen, 0.24 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D050	durga bhawani janebaato	This road passes through Ward 3, The road has total length of 0.18 Km. Out of which 0.18 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D051	Aadarsha Tole chowk to Aadarsha Tole Road	This road passes through Ward 3, The road has total length of 0.41 Km. Out of which 0.41 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D052	highway to Acharya tol jane bato	This road passes through Ward 3, The road has total length of 0.22 Km. Out of which 0.22 Km of road is earthen, 0.21 Km of road is blacktopped and construction of new track is not required.
108	D053	Ploting road 18 (W.No. 2)	This road passes through Ward 3, The road has total length of 0.21 Km. Out of which none of the section is earthen, none of the section is blacktopped and construction of new track is not required.
108	D054	Petrol pump to Basantapur road	This road passes through Ward 3, Ward 4, The road has total length of 0.19 Km. Out of which none of the section is earthen, 0.19 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D055	narendra smirti chowk to daxin road	This road passes through Ward 4, The road has total length of 0.2 Km. Out of which 0.2 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D056	narendra smirti chowk bata daxin road	This road passes through Ward 4, The road has total length of 0.21 Km. Out of which none of the section is earthen, 0.21 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D057	Sisir chowk seren valley chowk hudai rcc culvert vako jane bato	This road passes through Ward 4, The road has total length of 0.54 Km. Out of which none of the section is earthen, 0.54 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D058	janakpur chowk to daxin jane bato	This road passes through Ward 4, The road has total length of 0.3 Km. Out of which none of the section is earthen, 0.3 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.

108	D059	Shiva Mandir to NorthEast bhitri road	This road passes through Ward 4,The road has total length of 0.18 Km. Out of which none of the section is earthen, 0.18 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D060	Ghantadev shiva mandir to purba galli ko uttar masuriya basti jane bato	This road passes through Ward 3,The road has total length of 0.82 Km. Out of which 0.82 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D061	Ghanta dev shiva mandir siri chaur naba jyoti nimabi to nayabasti road	This road passes through Ward 3,The road has total length of 0.48 Km. Out of which 0.48 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D062	siddartha boarding to siri chaur naba jyoti nimabi road	This road passes through Ward 3, The road has total length of 0.5 Km. Out of which 0.5 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D063	Mukta kamaiya road	This road passes through Ward 3, The road has total length of 0.55 Km. Out of which 0.55 Km of road is earthen, 0.27 Km of road is blacktopped and construction of new track is not required.
108	D064	rapti technical road	This road passes through Ward 3, The road has total length of 0.27 Km. Out of which none of the section is earthen, 0.46 Km of road is blacktopped and construction of new track is not required.
108	D065	maurighat school road	This road passes through Ward 3, The road has total length of 0.46 Km. Out of which none of the section is earthen, none of the section is blacktopped and construction of new track is not required.
108	D066	Bansghari to siddhartha boarding school	This road passes through Ward 3, The road has total length of 0.17 Km. Out of which 0.17 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D067	oli tol hudai dolai khola jane road	This road passes through Ward 4, The road has total length of 0.38 Km. Out of which 0.38 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D068	plotting road(W-4,In betwen Majheni gadh and Lalit chowk towards east	This road passes through Ward 4, The road has total length of 0.28 Km. Out of which 0.28 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D069	majhenigadh tole jane bato	This road passes through Ward 4, The road has total length of 0.56 Km. Out of which none of the section is earthen, 0.56 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D070	staff chowk basantapur shivamandir hudai embankment jane road	This road passes through Ward 3, The road has total length of 0.67 Km. Out of which none of the section is earthen, 0.67 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D071	basantapur gaun to mahatan tol	This road passes through Ward 3,The road has total length of 0.24 Km. Out of which none of the section is earthen, 0.24 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.

108	D072	Lasuniya bato	This road passes through Ward 7,The road has total length of 0.52 Km. Out of which 0.52 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D073	Chaubato to gai form	This road passes through Ward 7,The road has total length of 0.28 Km. Out of which none of the section is earthen, 0.28 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D074	Gai form to jib lal ghar road	This road passes through Ward 3,Ward 7,The road has total length of 0.24 Km. Out of which 0.24 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D075	Maruwa than to lal mani ko ghar	This road passes through Ward 7,The road has total length of 0.25 Km. Out of which none of the section is earthen, 0.25 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D076	Ramjanaki mandir to manjhi kulo pul road	This road passes through Ward 7,The road has total length of 1.17 Km. Out of which 1.17 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D077	Paschim galli road	This road passes through Ward 7,The road has total length of 0.31 Km. Out of which none of the section is earthen, 0.31 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D078	School Chowk to Agricultural Road	This road passes through Ward 7, The road has total length of 1.08 Km. Out of which none of the section is earthen, none of the section is blacktopped and 1.08 Km of track is yet to be opened.
108	D079	Eye hospital road	This road passes through Ward 7,The road has total length of 0.83 Km. Out of which none of the section is earthen, 0.38 Km of road is gravelled, none of the section is blacktopped and 0.45 Km of track is yet to be opened.
108	D080	Pipal Chautari Galli bato	This road passes through Ward 6, The road has total length of 0.31 Km. Out of which none of the section is earthen, 0.31 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D081	Kuwa to south Rcc Culvert Bhitri road	This road passes through Ward 6, The road has total length of 0.23 Km. Out of which none of the section is earthen, 0.23 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D082	Kuwa to East road	This road passes through Ward 6, The road has total length of 0.34 Km. Out of which none of the section is earthen, 0.34 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D083	Sailor Mill to east Galli bato	This road passes through Ward 6, The road has total length of 0.17 Km. Out of which none of the section is earthen, 0.17 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.

108	D084	Sargapur chowk to jagpur jane road	This road passes through Ward 6, Ward 7, The road has total length of 0.64 Km. Out of which 0.29 Km of road is earthen, 0.34 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D085	Sagrapur chowk jane bich ko bato	This road passes through Ward 6, Ward 7, The road has total length of 0.33 Km. Out of which 0.33 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D086	Jagpur gaun hudai sagrapur chowk roadwidth	This road passes through Ward 7, The road has total length of 0.33 Km. Out of which none of the section is earthen, 0.33 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D087	Jagpur gaun hudai sagrapur chowk road	This road passes through Ward 6, Ward 7, The road has total length of 0.34 Km. Out of which 0.34 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D088	Sagrapur to bhagwanpur road paschin(p5)	This road passes through Ward 6, The road has total length of 0.6 Km. Out of which 0.6 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D089	Bhawanpur to east Road	This road passes through Ward 6, The road has total length of 0.88 Km. Out of which none of the section is earthen, none of the section is blacktopped and 0.88 Km of track is yet to be opened.
108	D090	Deepak gahr jane bato sagrapur bata	This road passes through Ward 6, The road has total length of 0.25 Km. Out of which 0.25 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D091	Gairhan tol sadak	This road passes through Ward 6, The road has total length of 0.45 Km. Out of which 0.45 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D092	Mnjhi Kula culvert- Sagarpur Chowk Canal Road	This road passes through Ward 6, The road has total length of 1.33 Km. Out of which none of the section is earthen, none of the section is blacktopped and 1.33 Km of track is yet to be opened.
108	D093	Manjhi kula majheria hudai paschim road(p4)	This road passes through Ward 6, The road has total length of 0.63 Km. Out of which 0.63 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D094	Pipari bata bhanpur jodne sadak	This road passes through Ward 8,The road has total length of 0.71 Km. Out of which 0.71 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D095	Pipari jane road	This road passes through Ward 7, Ward 8, The road has total length of 0.2 Km. Out of which none of the section is earthen, 0.2 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D096	Bhitri purbi bato	This road passes through Ward 8,The road has total length of 0.2 Km. Out of which 0.2 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.

108	D097	Pipari gaun ring road	This road passes through Ward 7, Ward 8, The road has total length of 0.97 Km. Out of which 0.46 Km of road is earthen, 0.51 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D098	Sano nadi intake jane bato	This road passes through Ward 8,The road has total length of 0.23 Km. Out of which none of the section is earthen, 0.23 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D099	ploting road 2 (W.No. 7)	This road passes through Ward 7,The road has total length of 0.21 Km. Out of which 0.21 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D100	Purba galli Road	This road passes through Ward 7,The road has total length of 0.66 Km. Out of which 0.56 Km of road is earthen, 0.09 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D101	East of Maruwathan chowkBhitri bato	This road passes through Ward 7,The road has total length of 0.2 Km. Out of which none of the section is earthen, 0.2 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D102	Sargaiya Road	This road passes through Ward 6, Ward 7, The road has total length of 1.98 Km. Out of which 1.72 Km of road is earthen, 0.26 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D103	Parti galla bato	This road passes through Ward 7,The road has total length of 0.45 Km. Out of which none of the section is earthen, 0.45 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D104	pargatinagar chowk to sarbodaye mabi road	This road passes through Ward 5, Ward 7, The road has total length of 0.25 Km. Out of which none of the section is earthen, 0.25 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D105	pargatinagar chowk sarbodaye mabi hudai damodar road(p2)	This road passes through Ward 5, Ward 7, The road has total length of 0.32 Km. Out of which none of the section is earthen, 0.32 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D106	kamal road chowk rice mil to sarbodaye mabi jane road	This road passes through Ward 5, The road has total length of 0.3 Km. Out of which none of the section is earthen, 0.3 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D107	KAMAL ROAD CHOWK TO KHUM BDR PUN CHOWK ROAD	This road passes through Ward 5, Ward 6, The road has total length of 0.24 Km. Out of which none of the section is earthen, 0.24 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D108	Kamal Road chowk- Khim bdr Chowk Road to east new track	This road passes through Ward 5, The road has total length of 0.19 Km. Out of which none of the section is earthen, none of the section is blacktopped and 0.19 Km of track is yet to be opened.

108	D109	Badka kulo bato	This road passes through Ward 6,The road has total length of 0.86 Km. Out of which 0.86 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D110	Badka Kula Bhitri bato	This road passes through Ward 6,The road has total length of 0.16 Km. Out of which 0.16 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D111	Dumri kula Bhitri bato	This road passes through Ward 6,The road has total length of 0.36 Km. Out of which 0.36 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D112	Dhumri kulo bato	This road passes through Ward 6, The road has total length of 0.95 Km. Out of which 0.95 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D113	Lalthuwa to east New Track	This road passes through Ward 5,The road has total length of 0.16 Km. Out of which none of the section is earthen, none of the section is blacktopped and 0.16 Km of track is yet to be opened.
108	D114	lathuwa chowk to lathuwa paschim galli	This road passes through Ward 5, The road has total length of 0.19 Km. Out of which 0.19 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D115	Singhe khola pul bata dodhai chowk jane road	This road passes through Ward 5, The road has total length of 0.36 Km. Out of which none of the section is earthen, 0.36 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D116	Singhe khola pul - narti kula -Hari Kumars' House	This road passes through Ward 5, The road has total length of 0.71 Km. Out of which 0.71 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D117	Sukumbasu tol hudai mango firm	This road passes through Ward 8, The road has total length of 1.23 Km. Out of which 1.23 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D118	pipri khutti chowk bata halka paschim gayera uttar jane road	This road passes through Ward 8,The road has total length of 0.44 Km. Out of which none of the section is earthen, 0.44 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D119	Piperkhutti chowk to jutpani chowk hudai rcc bridge needed area samma road	This road passes through Ward 8,The road has total length of 0.83 Km. Out of which none of the section is earthen, 0.83 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D120	Gai form to jutpani chowk	This road passes through Ward 8,The road has total length of 0.27 Km. Out of which none of the section is earthen, 0.27 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D121	Maruwa than to purba daxin highway touch jane bato(bagihawa bato)	This road passes through Ward 8,The road has total length of 0.24 Km. Out of which 0.24 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.

108	D122	Dorahawa bato	This road passes through Ward 8,The road has total length of 0.3 Km. Out of which 0.3 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D123	Ploting raod 3 (W.No. 7)	This road passes through Ward 8,The road has total length of 0.32 Km. Out of which none of the section is earthen, 0.32 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D124	Bagihawa paschim raod	This road passes through Ward 8,The road has total length of 0.35 Km. Out of which 0.35 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D125	Lakhan chowk to gauria simal buta jane bato	This road passes through Ward 8,The road has total length of 0.39 Km. Out of which none of the section is earthen, 0.39 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D126	Lakhan chowk to gauria simal buta jane bato(prabhakar ghar jane bato)	This road passes through Ward 8,The road has total length of 0.22 Km. Out of which 0.22 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D127	Gauri simal buta chowk to gharti ko ghar(track open)	This road passes through Ward 8,The road has total length of 0.2 Km. Out of which 0.2 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D128	Bhitri bato(Baguri road)	This road passes through Ward 5, Ward 8, The road has total length of 0.69 Km. Out of which 0.69 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D129	Shiva mandir road	This road passes through Ward 8, The road has total length of 0.22 Km. Out of which none of the section is earthen, 0.22 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D130	Kohalwa chowk to shankar saba	This road passes through Ward 8,The road has total length of 0.36 Km. Out of which 0.36 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D131	Shaheb chowk to ganeshman chowk hudai paschim sisaniya chowk(p5)	This road passes through Ward 5, Ward 8, The road has total length of 1.54 Km. Out of which none of the section is earthen, 1.54 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D132	Track open	This road passes through Ward 5, The road has total length of 0.18 Km. Out of which none of the section is earthen, none of the section is blacktopped and 0.18 Km of track is yet to be opened.
108	D133	kalapani chowk to rani tol sadak	This road passes through Ward 5,The road has total length of 0.22 Km. Out of which none of the section is earthen, 0.22 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D134	dolai khola dam	This road passes through Ward 5, The road has total length of 0.56 Km. Out of which 0.56 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.

108	D135	Plotting Road 1 (W.No. 5) On west side of Kamal roa	This road passes through Ward 5,The road has total length of 0.19 Km. Out of which none of the section is earthen, 0.19 Km of road is gravelled, none of the section is blacktopped and construction of new track is not required.
108	D136	rcc culvert to mansaram ghar road	This road passes through Ward 5, The road has total length of 0.45 Km. Out of which 0.45 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D137	basudev gyawali ghar to yubraj be ghar	This road passes through Ward 5, The road has total length of 0.56 Km. Out of which 0.56 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D138	madan adhakari sadak	This road passes through Ward 5, The road has total length of 0.18 Km. Out of which 0.18 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D139	Machhetal marg	This road passes through Ward 1, The road has total length of 0.45 Km. Out of which 0.45 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D140	Saligram road to jagat ram ghar road	This road passes through Ward 5, The road has total length of 0.47 Km. Out of which 0.47 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D141	Ram pd ghar rcc culvert hudai jagat ram ghar	This road passes through Ward 5, The road has total length of 0.67 Km. Out of which 0.67 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D142	nutan bal uddhan to singhe khola road	This road passes through Ward 5, The road has total length of 0.92 Km. Out of which 0.92 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D143	karange tole to tallo karange road	This road passes through Ward 5, The road has total length of 0.23 Km. Out of which 0.23 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.
108	D144	Karange Tole to North New Track	This road passes through Ward 5, The road has total length of 0.2 Km. Out of which none of the section is earthen, none of the section is blacktopped and 0.2 Km of track is yet to be opened.
108	D145	kamal road chowk to dolai khola road	This road passes through Ward 5,The road has total length of 0.15 Km. Out of which 0.15 Km of road is earthen, none of the section is blacktopped and construction of new track is not required.

ANNEX-II

Maps:

- 1. Location Map
- 2. Land Use Map
- 3. Strategic Road Network and District Road Core Network
- 4. Existing Road Network
- 5. Foot Trails
- 6. Existing Infrastructures
- 7. Roads: Proposed New Tracks
- 8. Roads: Hierarchy by Priority
- 9. Roads: Hierarchy by Width
- 10. Roads: Hierarchy by Surface
- 11. Consolidated Rural Municipal Prospective Plan
- 12. Cross Drainage Structures
- 13. Digital Coding of Rural Municipal Roads

