



नेपाल सरकार
सङ्घीय मामिला तथा स्थानीय विकास मन्त्रालय

(पूर्वाधार नीति समन्वय शाखा)

सिंहदरवार, काठमाडौं

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पत्र संख्या:-०७९/७२

चलानी नं:-२७०

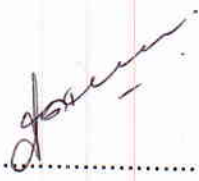
मिति:- २०७९/०८/१९

विषय:-नगर यातायात गुरु योजना कार्यान्वयन सम्बन्धमा ।

श्री नगरपालिकाको कार्यालय ,
७२ वटै, ।

प्रस्तुत विषयमा हालै गठन भएका सबै नगरपालिकाहरूमा नगर यातायात गुरु योजना मा एकरूपता ल्याई व्यवस्थित पूर्वाधार विकास कार्यका लागि Municipality Transport Master Plan Preparation Guide Lines and Terms of Reference यस मन्त्रालयबाट तयार भै मन्त्रालयको मिति २०७९/०८/१८ को निर्णयबाट स्वीकृत भएको छ ।

उक्त स्वीकृत नगर यातायात गुरु योजना (MTMP) Preparation Guide Lines and Terms of Reference for Hiring Consultant यसै साथ संलग्न गरी सो अनुसार कार्यान्वयनका लागि अनुरोध गर्दछु ।


कृष्ण बहादुर कटवाल
सि. डि. ई.
सि. डि. ई. निम्ति



Government of Nepal
Ministry of Federal Affairs and Local Development (MoFALD)
Simhadurbar, Kathmandu

Municipality Transport Master Plan

Preparation Guidelines and Terms of Reference for Hiring Consultant

Infrastructure Development Division, (IDD)/MoFALD

November 2014

A handwritten signature in black ink, consisting of a stylized 'L' shape with a small 'f' and a dot.

MUNICIPALITY TRANSPORT MASTER PLAN
PREPARATION GUIDELINES AND TERMS OF REFERENCE FOR HIRING CONSULTANTS
Municipality Transport Master Plan (MTMP)/ Municipality Transport
Perspective Plan (MTPP)
ofMunicipality of.....District

1. Introduction

Local Self-Governance Act (LSGA) provisions formulation of local development plan according to needs-based, bottom-up and participatory approach. It has prominently defined tangible steps for formulation of such development plan. Underlying objective of this plan is to make investment for planned development within each of the local bodies' territory. Ultimately, development endeavors help attaining sustainable livelihood and improved well-being of people. People's needs for sustainable livelihood and improved well-being are such that they require better access to information, markets and opportunities; they need better access to health, education and other goods and services. Accordingly, gradual investment from state owned and private entities in physical infrastructure development evolved urbanized and semi-urbanized settlements leading to improved access to various services, opportunities and resources by interior communities.

Ministry of Federal Affairs and Local Development stepped up to bring forward proposal to create additional 72 new municipalities from those urban and semi-urban settlements by combining prevalent Village Development Communities. Government of Nepal approved the proposal leading to creation of 72 new municipalities. Since these municipalities are at an early stage of infrastructure development they require ample mentoring and molding so that organized and beautiful cities are developed in due course of time. This will only be possible if and only if these municipalities can create **planned transport network** as it is '**infrastructure of infrastructures**'. Therefore, present environment is conducive for development of appropriate and implementable transport framework for these municipalities.

In this context, this **Terms of Reference (ToR)** is prepared to **hire consultants to prepare Municipal Transport Master Plan (MTMP)**. The ToR aptly amalgamates the framework for MTMP preparation with responsibility of the consultant to be hired in one package. Intended MTMP can partially fulfill lacking part of LSGA, which is objective tool for prioritizing the projects.

2. Objectives

The overall objective of the consulting services is to prepare the **Municipality Transport Master Plan (MTMP/MTPP)** of the

As part of MTMP preparation, accessibility planning could be an effective tool to assess the existing situation of the services and facilities. The interventions derived from the accessibility planning will represent the real needs and priorities of the local people. The planning approach is participatory and bottom-up from the settlement level. The implementations of such projects will certainly be more participatory and owned by the local communities.

The MTMP is designed to take account of the real needs of the people for infrastructure as per the Comprehensive Town Development Plan. Until this Comprehensive Town Development Plan is prepared the municipality will prepare intermediate visionary plan. Based on this visionary plan MTMP shall be prepared so as to **harmonized with DoLIDAR's Approach manual** to maintain similarity so that municipal transport network can be overlaid to the respective DTMP/other MTMPs to prepare local transport network.

2.1 The specific objectives of this guideline, but not necessarily limited to the following, are:

- Finalize visionary city development plan if Comprehensive Town Development Plan is not prepared.
- Analyze the accessibility situation.
- Identify and priorities the interventions based on the accessibility situation.
- Prepare Indicative Developmental Potential Map (IDPM)
- Prepare the Municipality Inventory Map (MIM) of Road networks.
- Collection of demands for new/rehabilitation transport linkages from Municipalities/Settlements based on city development plan.
- Prepare the Perspective Plan of transport services and facilities;

- Synchronise the draft Perspective Plans of adjoining VDCs/Municipalities/ districts
- Develop scoring criteria and its approval from Municipality.
- Prepare the five year Municipality Transport Master Plan (MTMP)
- Prepare a realistic physical and financial implementation plan of prioritized roads for the MTMP period; and
- Prepare Municipal Transport Perspective Plan (MTPP)

3. Scope of Services

The consultant shall provide high quality professional services for the preparation of MTMP/MTPP, with the reference to the annexes 1-5 and visionary city development plan. The scope of services to be carried out by the Consultant shall broadly include, but not be limited to, the followings:

a) Assist in the Formulation of the Municipality Roads Coordination Committee (MRCC)

The main task of the MRCC is to provide support to the municipality in formulating, managing and monitoring Municipality road transport infrastructure policies, rules and regulations. Generally, the MRCC shall be composed of;

- | | |
|---|------------------|
| • Infrastructure Development Committee Chair | Chairperson MRCC |
| • Executive Officer of municipality | Member |
| • Two elected or nominated Municipality members | Member |
| • One representative from different political parties | Member |
| • Chiefs of Lines agencies within the municipality (Max 3 nos from prevalent offices) | Member |
| • Representative from Women and ethnic minority groups | Member |
| • DTO representative | Member |
| • Planning section chief of municipality | Member |
| • Technical Section Chief | Member Secretary |

The consultant shall advise, assist and support the Municipality to form the MRCC. It shall ensure involvement of the MRCC in the entire planning, decision-making, programming etc. processes in the preparation of the MTMP. Initiating with one **introduction/orientation workshop** to the various stakeholders (MRCC, Ward representative and Tole Sudhar Committee's representatives) about the process and procedures and their respective roles during the Preparation of MTMP/MTPP the consultant shall continue preparation of MTMP.

b) Secondary Sources of Information and Review of the existing MTMP

The consultant shall collect secondary information from the various district based line agencies, project/programmes, INGOs/NGOs, and other regional and central level organizations as required.

The consultant shall review the available existing MTMP if any. All the roads identified from secondary sources shall be assessed and considered seriously for the forthcoming MTMP. The MTMP should be updated every 5 years.

c) Accessibility Data Collection and Analysis

Accessibility data shall be collected using GPS from settlement level by involving enumerator/s. Proper orientation training provided to the enumerator/s for efficient data collection within the prescribed time period. (Please refer Annex -5)

The collected information will be stored on a computer. Primary analysis will be done to find the accessibility situation of the Municipality and identify the gaps with the reference to Comprehensive City Development Plan/Visionary City Development Plan.

d) Prepare the Indicative Municipality Development Potential Map (IDPM)

The consultant shall prepare the **Municipality's Indicative Development Potential Map (IDPM)** according to the Comprehensive City Development Plan/Visionary City Development Plan taking reference of the Annexes 1-5. The base map will be prepared on a 1:25000 scale topographical map and digitized to prepare GIS Maps. The identification and ranking process of existing/potential areas and services (Please refer Annex-4) shall be carried. The consultant shall validate the IDPM from the MRCC and Municipality.

e) Prepare the Municipality Inventory Map (MIM) of Urban Road, Main Trails and Bridges

The consultant shall prepare **Municipality Inventory Map (MIM)** of the municipality linking to existing strategic and local road network such as national highways, trunk roads, district core road network (DRCN),

main trails and main bridges, wherever pertinent and possible, by plotting on the 1:25000 topo-base maps. The consultant shall carry out, by mobilizing enumerator/s, reconnaissance/walkover surveys. MIM shall be prepared with reference to form annexed (Please refer Annex-3). The consultant shall disseminate and discuss MIM with a wider audience through a municipality level **workshop**. Later, the MIM shall be discussed and verified through discussion with the municipality technical team and finalized from the municipality.

f) Collection of Demands for New/Upgrading/Rehabilitation Transport Linkages from Wards/Settlements

The consultant shall collect formal requests for new construction or rehabilitation of different linkages from wards and settlements, on their needs basis (Please refer Annex-2). The demand shall be collected in the order of priority in case of more than one transport linkage is demanded from each ward. The collected demand shall be screened, synthesized, synchronized and harmonized at municipality level through a **workshop**. Similarly, the consultant shall obtain the socio-economic data of all requested transport linkages by involving enumerator. The consultant may follow relevant annexes of DoLIDAR's simplified approach manual for preparation of DTMP/DTPP.

g) Developing Scoring Criteria and its Approval from Municipality

The Consultant shall mandatorily develop weight system for the scoring and prioritization criteria for screening and prioritized demand following guidelines annexed (Please refer Annex-4), for all interventions. The scoring and prioritization criteria shall be approved by the municipality. All the demanded linkages shall be processed and undergo through the screening and prioritization process.

h) Road classification and nomenclature

The consultant shall prepare road classification criteria, propose metric system of road nomenclature and accordingly apply the same during data collection and stock taking from field. For this, annexed guideline shall be followed. (Please refer Annexes 1&5)

i) Preparation of Perspective Plan of Interventions of Services and Facilities

The consultant shall prepare perspective plan of interventions of services and facilities, which are identified from the accessibility analysis and municipality level workshops. All the identified interventions shall be screened and rated on the basis of approved criteria. The consultant shall discuss with the municipality technical team and the MRCC relating to interventions of services and facilities for the improvement of the access situation and shall forward to Municipality Council meetings with recommendation. Accordingly, the final perspective plan of municipality roads will be developed. The perspective plan shall be shown in GIS maps also.

j) Analyse Fund Availability for Roads

The internal and external financial resources available in the municipality shall be reviewed by the consultant discussing with the municipality authorities so that the financial resources available for the transport interventions during the five year MTMP period can be estimated. Sources of funding include annual budget allocated in the municipality, the budget allocated through GoN central agencies such as DoLIDAR/MoFALD etc. Other possible sources of funds could be from road tolls, royalties, land taxes etc. Prospects of funding from other external sources, including possible and committed funding from donors, are reviewed and shall be taken into account.

k) Preparation of the Municipality Transport Master Plan (MTMP)

Considering the Perspective Plan, the consultant shall prioritize the Perspective Plan (Refer annex 4.) Subsequently, the consultant shall prepare and/or update the five year MTMP of the municipality by selecting transport interventions (maintenance, upgrading and new construction of main trails, trail bridges and roads) from among top priority in the Perspective Plan starting from first and that could be implemented in the next five years period. This shall be based on cost estimates of maintenance, upgrading, rehabilitation and new construction of main trails, bridges and roads and available financial resources.

The consultant shall present the findings of the MTMP and MTPP to municipality and MRCC in a **workshop** and incorporate the suggestions and recommendations from the Municipality and MRCC in the final report. Subsequently, the municipality will present the final MTMP report to the municipality council for formal approval that will be approved by municipality council with a strong commitment not to invest in non-MTMP roads.

l) Prepare a Realistic Physical and Financial Implementation Plan of Prioritized Roads for the MTMP Period

The consultant shall collect information on existing resources spent on transport infrastructure and possible available resources, and make a projection for the next five years period. From the total projected resources, the consultant shall discuss with the municipality to find out the appropriate proportion to be spent on on-going roads and new interventions (construction/rehabilitation/maintenance etc) proposed. Based on the five year projected funds availability the financial implementation plan shall be prepared. This step involves matching the estimated resources that are expected to be available to the municipality over the plan period, with the interventions for on-going roads and proposed ones. The total numbers of road and interventions proposed for the MTMP period shall match with the projected available resources and should avoid proposing a long list for the MTMP period. (Please refer annex 5)

4. Client's Proposed Composition of Staff

i) Study Team Composition and Input:

The team shall consist of the following professionals and support staff for preparation of MTMP/MTPP.

a) Professionals:

Position	Man-Month		Total (pm)	Remarks
	Office	Field		
Team Leader/Planner	0.5	1.0	1.5	Approx. only
Engineer/Socio-economist	0.25	1.0	1.25	Approx. only
GIS Expert	0.5	0.5	1.0	Approx. only

b) Support Staff

Position	Man-Month		Total (pm)	Remarks
	Office	Field		
Sub-engineer/Supervisor/draft person	0.5	1.0	1.5	Approx. only
Enumerators		8.0	8.0	Approx. only

ii) Qualification and Experience:

a. Team Leader/Planner

The Team Leader/Planner should have wide experience and expertise in planning of rural roads, including:

- ❖ More than 3 years experience in planning, such as preparation of DTMP/MTMP, District Periodic Plan etc with socio-economic or engineering background.
- ❖ Preparation of DTMP/MTMPs according to DoLIDAR's Approach Manual and IRAP tool is an advantage.
- ❖ Must have Masters Degree in any one of the following subjects: Regional/Transport Planning, Civil Engineering, Economics, Sociology, Rural Development or Management?.
- ❖ In case of Team Leader an engineer he/she must be registered in Nepal Engineering Council.

The Engineer (if Team Leader is other than engineer) should have

- ❖ More than 3 years experience in rural road engineering and preparation of DTMP/MTMPs according to DoLIDAR's Approach Manual is an advantage.
- ❖ Must have a bachelor's degree in Civil Engineering.
- ❖ Must be registered in Nepal Engineering Council.

Socio-economist (if Team Leader is from engineering field) should have

- ❖ More than 3 years experience in socio-economic surveys. Preparation of District Periodic Plan, District Transport Master Plan and/or District Annual Plan is an advantage.
- ❖ Must have completed Masters' Degree in Social Science or Economics.

GIS expert should have

- ❖ More than 3 years experience in GIS relating to mapping and analysis. Preparation of maps of District Transport Master Plans is an advantage.
- ❖ Must be Bachelor in Engineering or Geography.
- ❖ Relevant training in GIS.

5. Duration of the Study and Reporting

The duration for the assigned task is four (4) months. The consultant shall submit the following reports:

- i) Inception report:** The consultant shall submit two (2) copies of the inception report within two (2) weeks after signing the contract. Inception must include detail methodology for formulating municipality's visionary plan, collection of secondary information, work plan and activities. The forms and formats/questionnaires shall be fine tuned and proposed appropriately if found lacking for this assignment. The formats and questionnaires shall be reviewed and approved by Municipality Technical section in coordination with planning section within the municipality. The municipality shall seek consultation and/or support from DoLIDAR /MoFALD at any time during the entire period.
- ii) Field report:** The consultant shall submit two (2) copies of the field report within one and a half months from the date of signing of contract. The report shall indicate detail methodology applied for completion of fieldwork, associated problems encountered and adopted solutions.
- iii) Draft report:** The consultant shall submit four (2) copies of the draft report after two and a half months from the date of signing the contract. The report should have two volumes. **Volume I** should contain the main report and all GIS maps and **Volume II** should contain various data and detail analysis for scoring and prioritization. All maps should be **multi-colour** and the layers that shall include:
- Map 1: Map of Nepal showing strategic road network and location of district
 Map 2: Indicative Development Potential Map
 Map 3: municipality Road Inventory Map
 Map 4: Land Use Map of the municipality
 Map 5: Consolidated MTPP Map showing all Road Class 'A', 'B' & 'C' as defined by municipality
 Map 5a: MTPP Map of Road Class 'A'
 Map 5b: MTPP Map of Road Class 'B'
 Map 5c: MTPP Map of Road Class 'C'
 Map 6: Consolidated MTMP Map of showing all Road Class 'A', 'B' & 'C'
 Map 6a: MTMP Map of Road Class 'A'
 Map 6b: MTMP Map of Road Class 'B'
 Map 6c: MTPP Map of Road Class 'C'
 Map 6d: Map showing Bridges
- The consultant shall conduct one interactive one day workshop for acquiring comments/suggestions by involving related stakeholders. This draft report shall also have to be submitted to Infrastructure Development Division (IDD)/MoFALD for review.

A few samples of the desired maps can be referred from DoLIDAR approach manual.

- iv) Final report:** The consultant shall submit six (6) copies and two soft copies (one for IDD) of final reports three months from the date of signing of contract. Final report shall incorporate comments and suggestions received on the draft reports and also from municipality workshops. The report should be also be submitted in two Volumes, as mentioned in the draft report. All six (6) sets of GIS maps should fit in A3 size paper with the nearest 25,000 thousand scale (i.e, 1:200,000, 1:225,000, 1:250,000, 1:275,000 etc) and required layer as described in draft report. In addition, one (1) set of the hard copy of maps should be in topographic fin map sheets.

On copy of the draft and final reports' Volume-I shall also be submitted in Nepali. The reporting schedule is summarized below:

S.N.	Reports	Period	Remarks
1	Inception Report	After 2 weeks of signing the contract	2 copies
2	Field Report	After 1.5 months of signing the contract	2 copies
3	Draft Report	After 2.5 months of signing the contract	2 copies
4	Final Report	After 3 months of signing the contract	6 copies & 2 soft copies in USB

6. Indicative Reporting Outline is as follows;

Foreword

Acknowledgement

Approval of the Municipality Council on MTMP

Table of contents

Abbreviations

Executive Summary

1. Introduction

Background

Objective of MTMP

Scope and Limitation of MTMP

Approach and Methodology

2. Review of existing infrastructure situation (or MTMP if existing)

Assessment of existing infrastructure situation (or MTMP if existing) and visionary city development plan.

Constraints in the implementation of MTMP

3. Indicative Development Potential Map

Summary Municipality Profile

List of Development Potential Areas

Briefs on Development Potential Areas

Ranked List of Growth Centres, environment sensitive areas

Indicative Development Potential Map (IDPM)

4. Municipality Inventory Map of Road Network

List of municipality Roads *(with coding)*

Briefs on municipality Roads *(Salient features, condition, required intervention, population served, major potentiality, trade, link to city/service centers and other socio-economic benefits, etc.)*

List of ward Roads *(with coding)*

Briefs on ward roads *(Salient features, condition, required intervention, population served, agricultural production, trade, other socio-economic benefits, etc.)*

List of Main Trails with coding)

Briefs on Selective Main Trails *(Salient features, condition, required intervention, population served, agricultural production, trade, other socio-economic benefits, etc.)*

Municipality Inventory Map of Road network (MIM)

5. Perspective Plan of municipality Transport Network

Process and Procedure for collection of demand

Scoring System for Screening, Grading and Prioritization

List of Feasible New Linkages *(with perspective weighted score and code)*

Briefs on Feasible New Linkages *(Salient features, population served, agricultural production, trade, other socio-economic benefits, etc.)*

Possible inter-municipality/district linkages *(write about the linkages that are synchronized with the linkages of adjacent municipality/districts)*

Perspective Plan of municipality Transport Network with the respective score and ranking

6. First Five Year Municipality Transport Master Plan

Five Year Projected Financial Plan

Sharing of Funds *(Indicate the annual shares of funding for various interventions)*

Year-wise Targets *(Indicate the annual targets for various interventions)*

Prioritized Municipality Roads for MTMP period *(with code & required interventions)*

Prioritized Ward Roads for MTMP period *(with code & required interventions)*

Prioritized Main Trails for MTMP period *(with code & required interventions)*

Prioritized Main l Bridges MTMP period *(with code & required interventions)*

First Five Year District Transport Implementation Plan

7. Conclusion

Other Relevant Issues *(please briefly discuss other important issues, if any)*

Conclusion

7. Organisation of Workshops

The Consultant shall be responsible to organise and conduct all workshops mentioned in the ToR. All costs incurred for the workshops (including allowances for participants, stationeries, refreshments etc) shall be borne by the consultant as per the quoted cost.

8. Proposal Submission

The consultants shall submit technical and financial proposals under two-envelope system . The technical and financial proposals must be enclosed in separate wax sealed envelopes, clearly mentioning the type of proposal (Technical and Financial) and name of the task on the envelope. Then both the sealed envelopes must be enclosed in an outer waxed sealed envelope, clearly stating the name of proposal, purchaser's address and the firms' name and address.

9. Payment Schedule

The payment schedule will be as per the following:

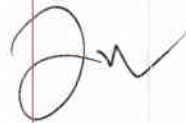
After approval of inception report = 20% of the total contract amount.

After approval of the field report = 25% of the total contract amount.

After approval of the draft report = 30 % of the total contract amount.

After approval of the final report = 25% of the total contract amount.

Final payment shall only be made after seeking concurrence for IDD, MoFALD.



FORMAT 'A'
Inventory of Transport Linkages
(existing)

Municipality :

Ward :

Roads/Trails

S. No.	Nodal point	Name of Transport Linkage	Digital name	Class and Category	Total Length (km)	Total Width (m)	Carriageway Width (m)	Road surface (km)			Type of cross structure	Road Condition Upgrading and Repairs needed
								BT	GR	ER		
Example	Municipality BLDG	Sangam Marg	a1'	A	1.5	14	4				Bridge, culvert-2	Filling up of pot holes; formation of camber; cleaning of side drains and gravelling.
1												
2												
3												
4												
5												



a1

a111

a111

a112

a112

a1
2

a13
1

a1
3

Completed by :
.....
(Name)..
.....
.....
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(De
signation)

af. ✓

FORMAT 'B'
(Compatible with DoLIDAR DTMP Approach manual)
Request for Transport Linkage
To be filled by the Wards

1. Name of the ward demanding the Projects:
2. Type of transport linkages requested and respective Order-of-Priority (Indicate the class, if known):

Code	Name of Transport Linkage	Class	Type of Project (Tick <input type="checkbox"/> the appropriate box)				Order-of-Priority *
			New Construction	Upgrading	Rehabilitation	Periodic Maintenance	
a			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
e			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

* 1 for the highest priority, 2 for second highest and so on.

Please follow the below-mentioned classification when filling the above table.

Main collector Road.....A

Collector Road..... B

Tole RoadC

Other Road..... D

3. The above Order-of-Priority was fixed and minuted by the ward meeting held on
4. Benefiting Settlements:

Code**	Name of Settlements benefited by the Linkage (Indicate the households or the population)
a	
b	
c	
d	

e	
---	--

** Use the same code as in 2.

5. Type of benefits and reason for the given Priority:

Code**	Explain what type of benefit it offers, and why ward has given a particular priority to this Linkage
a	
b	
c	
d	
e	

** Use the same code as in 2.

6. Involvement of other Agencies:

Code**	Are there other agencies (external donor, NGOs, INGOs, other line agencies of GoN) involved in this project at present ? Or has the VDC requested them for support ? Outline their nature and level of involvement (existing or expected).
a	
b	
c	
d	
e	

** Use the same code as in 2.

7. Other Development Plans/Projects of Ward:

In addition to transport sector, list what other development projects are planned in the ward and indicate their priority.

S. No.	Name of Planned Development Project	Priority Order	Remarks (location, importance, supported by etc.)
1			
2			
3			
4			
5			
6			
7			

8. Ward's role as committed in the Requested Transport Linkage Projects (Tick ☒ the appropriate box):

(a) The ward agrees to mobilise the people and its resources:

- for cash contribution (indicate percentage of total estimate)% ☐
- for free labour (indicate the limit) up to NRs. ☐
- for free contribution of land (with required right of way) ☐
- for Food-for-Work ☐
- for routine maintenance ☐
- others (specify) ☐

(b) The ward certifies that the above furnished information are true. ward meeting held on has reviewed and approved the request and information contained in this form. One copy of this form is kept at ward office, for records.

.....
Signature of ward Chairman

(Name :)

Date :

.....
Signature of ward Secretary

(Name :)

Date :

GUIDELINES 'B'
for preparing Municipality Inventory Map of Road Network (MIM)

A. Objective :

The objective of Municipality Inventory Map of Road Network is to show all existing municipality roads and structures with their present conditions.

B. Steps :

1. Collect technical data of all existing transport linkages on FORMAT 'A'.
2. Identify the class of each transport linkage with reference to instruction given in annexes-1.
3. Identify the interventions (rehabilitation, upgrading or periodic maintenance) required by each linkage.
4. Plot all existing transport linkages on the approved Municipality Indicative Development Potential Map by using the below mentioned *legend*.

C. Legend :

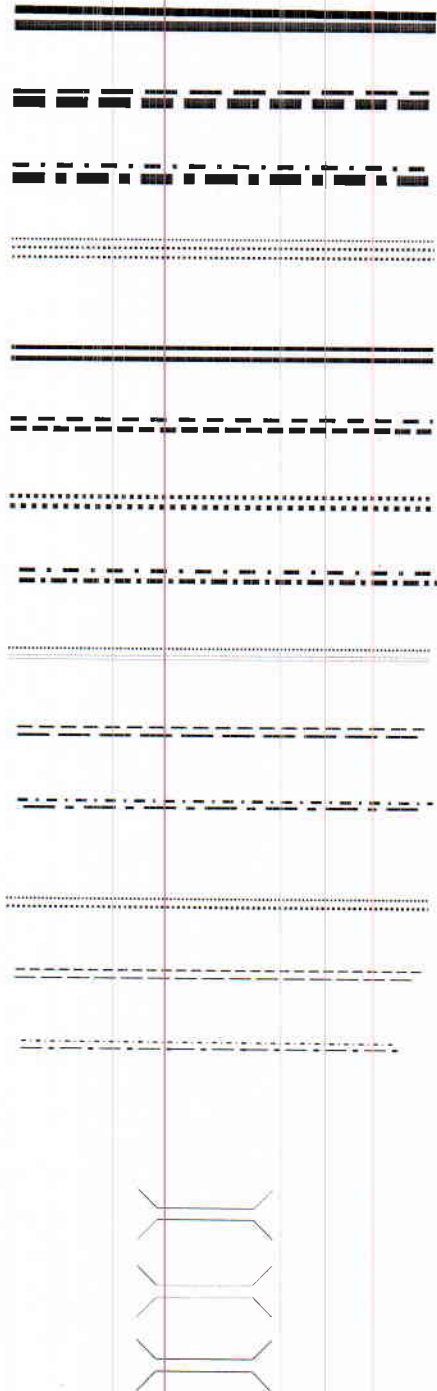
The symbols given in the next page are recommended for use while preparing Municipality Inventory Map (MIM), Perspective Plan of Municipality Road Network and Municipality Transport Master Plan (MTMP).



Legend

- ◆ Road Class 'A' : Main Collector Road
- needs no intervention
- ◆ Road Class 'A' : Main Collector Road
- needs rehabilitation
- ◆ Road Class 'A' : Main Collector Road
- needs periodic maintenance
- ◆ Road Class 'A' : Main Collector Road
- new construction
- ◆ Road Class 'B' : Other collector Road
- needs no intervention
- ◆ Road Class 'B' : Other collector Road
- needs rehabilitation
- ◆ Road Class 'B' : Other collector Road
- needs upgrading
- ◆ Road Class 'B' : Other collector Road
- needs periodic maintenance
- ◇ Road Class 'B' : Other collector Road
- new construction
- ◆ Road Class 'C' : Main Tole Road
- needs no intervention
- ◆ Road Class 'C' : Main Tole Road
- needs periodic maintenance
- ◆ Road Class 'C' : Main Tole Road
- new construction
- ◆ Road Class 'D' : Other Road
- needs no intervention
- ◆ Road Class 'D' : Other Road
- needs periodic maintenance
- ◆ Cross-drainage structures
- need no intervention
- ◆ Cross-drainage structures
- need intervention
- ◇ Cross-drainage structures
- new construction

Symbol



- ◆ These symbols should be used when preparing the **Municipality Inventory Map of Road Network**.
- ◇ These symbols should be used when preparing the **Perspective Plan of Municipality Road Network**.

[Handwritten signature]

Coding of Municipality Roads

- The following guidelines shall be followed when coding. Each transport linkage will have a nine-digit code unique for a particular linkage.

- First digit (numbers varying from 1 to 5) represent the development region**

1 Eastern Development Region

- Second and Third digits (numbers varying from 01 to 75) represent the district.**

2 **4** Kavrepalanchok

- Fourth digit (a letter M) indicates Municipality**

M Municipality

- Fifth and Sixth digits (numbers varying from 01 to 99) represent the particular name of municipality in the district.**

0 **1** Dhulikhel

- Seventh digit (a letter from A to D) indicates the class of transport linkage.**

A Road Class 'A' - Collector Road

- Next three digits (numbers varying from 001 to 999) represent the particular transport linkage.**

1 **2** **4** **M** **0** **1** **A** **0** **0** **1** Sangam Marg

A..... Road Class 'A' – Main Collector Road
 B..... Road Class 'B' – Other Collector Road
 C..... Road Class 'C' – Tole Road
 D..... Road Class 'D' – Other Road

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Table 1 : Code Numbers for Districts

(In accordance with the DISTRICT CODES adopted by the Department of Roads)

Cod e No.	District	Catego ry	Cod e No.	District	Catego ry	Cod e No.	District	Catego ry
1 EASTERN REGION			3 WESTERN REGION			5 FAR-WESTERN REGION		
<i>Mechi Zone</i>			<i>Gandaki Zone</i>			<i>Seti Zone</i>		
01	Taplejung	B	36	Gorkha	B	67	Bajura	C
02	Panchathar	B	37	Lamjung	B	68	Bajhang	C
03	Ilam	B	38	Tanahun	A	69	Achham	B
04	Jhapa	A	39	Syangja	A	70	Doti	B
<i>Koshi Zone</i>			40	Kaski	A	71	Kailali	A
05	Morang	A	41	Manang	C	<i>Mahakali Zone</i>		
06	Sunsari	A	<i>Dhaulagiri Zone</i>			72	Kanchanpur	A
07	Dhankuta	B	42	Mustang	C	73	Dadeldhura	C
08	Tehrathum	B	43	Myagdi	C	74	Baitadi	B
09	Sankhuwasava	B	44	Parbat	C	75	Darchula	B
10	Bhojpur	B	45	Baglung	B			
<i>Sagarmatha Zone</i>			<i>Lumbini Zone</i>					
11	Solukhumbu	C	46	Gulmi	B			
12	Okhaldhunga	B	47	Palpa	B			
13	Khotang	B	48	Nawalparasi	A			
14	Udayapur	B	49	Rupandehi	A			
15	Saptari	A	50	Kapilbastu	A			
16	Siraha	A	51	Arghakhanchi	C			
2 CENTRAL REGION			4 MID-WESTERN REGION					
<i>Janakpur Zone</i>			<i>Rapti Zone</i>					
17	Dhanusa	A	52	Pyuthan	B			
18	Mahottari	A	53	Rolpa	B			
19	Sarlahi	A	54	Rukum	B			
20	Sindhuli	B	55	Salyan	B			
21	Ramechhap	B	56	Dang	A			
22	Dolakha	B	<i>Bheri Zone</i>					
<i>Bagmati Zone</i>			57	Banke	A			
23	Sindhupalchowk	B	58	Bardiya	A			
24	k	A	59	Surkhet	B			
25	Kavrepalanchowk	A	60	Dailekh	B			
26	k	C	61	Jajarkot	C			
27	Lalitpur	A	<i>Karnali Zone</i>					
28	Bhaktapur	B	62	Dolpa	C			
29	Kathmandu	C	63	Jumla	C			
30	Nuwakot	B	64	Kalikot	C			
<i>Narayani Zone</i>			65	Mugu	C			
31	Makawanpur	B	66	Humla	C			
32	Rautahat	A						
33	Bara	A						
34	Parsa	A						
35	Chitawan	A						

CRITERIA 'B'
to prioritize transport linkage

Prioritization Criteria

S. No.	Criteria	Scoring Unit	Score	Remarks
1	Link providing service to large settlement areas/population	Population served/km	15-20	
2	Link providing service to areas with high potential for agriculture, horticulture, livestock production	Annual production equivalent to NRs...../km	5-10	
3	Link providing service to existing	Estimated annual transaction in these centres equivalent to NRs. /km	20-25	
	• commerce and business centres			
	• market sites (Local haat)			
	• tourist attraction areas			
	• areas having agro-based and cottage industries			
4	Link providing service to the existing service centres such as health centres, education centres (schools/campuses), offices (municipality office/Government office, etc.), communication centres (post office/telephone, etc.)	Population served by these service centres expressed as persons per km per year	15-20	
5	Link providing service to the potential growth or service centres identified by the municipality and shown in the Indicative Development Potential Map of the municipality, Waste Management Site	Anticipated number of people to be directly benefited by new growth or service centres expressed as persons per km per year	5-15	
6	Link providing service to the potential future development sites such as potential town development, land pooling; potential industrial area and or forming ring road to municipality etc. as indicated in the Indicative Development Potential Map of the municipality.	Anticipated annual financial turn-over from developing the sites expressed as NRs. /km	10-20	
7	Link providing service to the areas recognised by the municipality as areas for special consideration, such as areas inhabited by backward and poor ethnic groups/communities, isolated remote areas, historic sites, religious sites etc	<ul style="list-style-type: none"> • very important • important 	10-15	
8	Direct link with another linkage	less important <ul style="list-style-type: none"> • National Highway • Feeder Road • District Road • Village Road • Airport 	5-10	

100

GUIDELINES 'A'

for preparing Municipality Transport Master Plan (MTMP)

- 1 Prepare visionary city development plan with the consultation of stakeholders taking input from expert, if required.
- 2 GPS shall be used for collection of relevant data on road name, code, length, surface type, and width for road inventory followed by digitizing in GIS platform.
- 3 Nodal point such as municipality building, ward building, buss-park, historical place, play ground, health post, river crossing shall be taken as base for digital naming of the road, junctions with strategic and DRCN. The digital naming is given in road inventory format.
- 4 Municipality road are classified as¹
 - Main Collector Road ----- class A; RoW-14m
 - Other Collector Road ----- class B; RoW -10m
 - Main Tole Road ----- class C; RoW - 6m
 - Other Road ----- class D; RoW- 4 m

Other national highways, feeder road and district core network passing through municipality shall have right of way to their respective standards.
Building line/set back shall be maintained 6m for roads having RoW equal and /or more than 20m and 2m for other roads.
- 5 During preparation of MTMP, the investment from total available resources under road sector for different classes of the road can be distributed as
 - Apportion 30% for maintenance at first and then remaining 30% shall be distributed as
 - a. Main Collector Road----- class A; ----- >= 40%
 - b. Other Collector Road -----class B; ----- <=30%
 - c. Main Tole Road -----class C; ----- <=20%
 - d. Other Road-----class D; ----- <=10%
- 6 Do not take urban road having road corridor width less than 3.75m.
- 7 Do not consider dead end road having length more than 150m.
- 8 Take road surface as asphalt concrete and RCC for metalled and Gravel and Earthen for others from the priority list of municipality and also based on its functionality and available resources.
- 9 Formulate municipality road coordination committee (MRCC) as follows:

• Infrastructure Development Committee Chair	Chairperson MRCC
• Executive Officer of municipality	Member
• Two elected or nominated Municipality members	Member
• One representative from different political parties	Member
• Chiefs of Lines agencies within the municipality (Max 3 nos from prevalent offices)	Member
• Representative from Women and ethnic minority groups	Member
• DTO representative	Member
• Planning section chief of municipality	Member
• Technical Section Chief	Member Secretary
- 10 Consult MoFALD/IDD/DoLIDAR during preparation if any difficulty.
- 11 Steps:

¹ Reference taken from Urban Development Standard Planning, 2014/MoUDB

- Hire the consultant
- Form the MRCC
- Prepare/Finalize visionary city development plan
- Finalize IMDPP
- Finalize MIM
- Finalize MTPP & MTMP

12. The standard cost for different intervention can be taken as:²

Table 1 Standard costs for different interventions

Activity	Unit	Unit cost (NPR)
Emergency maintenance	km	30,000
Routine maintenance	km	20,000
Recurrent maintenance (blacktop)	km	500,000
Recurrent maintenance (gravel)	km	400,000
Recurrent maintenance (earthen)	km	250,000
Periodic maintenance (blacktop)	km	200,000
Periodic maintenance (gravel)	km	250,000
Rehabilitation	km	800,000
Widening	m	25,000
Gravelling	km	2,200,000
Blacktopping	km	5,700,000
Bridge construction	m	600,000
Slab culvert construction	m	150,000
CC Causeway construction	m	100,000
Stone Causeway construction	m	10,000
Pipe culvert placement	unit	10,000
Masonry wall construction	m3	10,000
Gabion wall construction	m3	2,500
Lined drain construction	m	1,000
Track opening	km	4,000,000
Gravelling	km	2,200,000
Bridge construction	m	600,000

² Reference taken from DoLIDAR Approach Manual

Technical Capacity Development (TCD) training for Middle Level Engineering Staff of New Municipalities with specific on Urban Planning, NBC, Solid Waste Management and Urban Infrastructure Development

Time : 8:30AM to 5:30 PM

Session	1 st Day	2 nd Day	3 rd Day	4 th Day	5 th Day
Session I	Brief orientation on prevailing Rules/Regulations/Guide lines and role of Municipality in Urban service delivery	Procedures of Building Construction Permits (standardization and safety measures)	Design, Drawing ,Rate Analysis, Cost Estimate, Evaluation and work completion ReportsPreparation	Environment friendly Local Governance (EFLG)	Learning and sharing of Field visits .
Session II	Municipal Periodic Plan and Annual Plan Preparation (Basic elements of planning)	Procedures of building construction permits (color code of maps)	Quality and Workmanship of Public Works and Material testing Lab	Solid Waste Management (Reduce, Reuse, Recycle) and Partnership in PPP model	Accountabilityand Fiduciary Risk Reduction in Public Works
Lunch break	Lunch break	Lunch break	Lunch break	Lunch break	Lunch break
Session III	GON Land Use Policy, standardization and its use in municipality (zoning)	Low Cost Housing, Green Homes, Rain water harvesting	Public Procurement LBFAR/PPA/PPR provisions (contract notice to contract award.)	Field Visit to nearby Municipalityand TDC	Financing Techniques and Project Funding Matrix (PFM) preparation
Session IV	National Building Code (NBC) and related laws/ by-laws	Municipal Transportation Master Plan (MTMP) and Urban Infrastructure Development (Norms and standards of Roads, Culverts and Drainage)	Construction Contract with Users group (Formation, Contribution, Su pervision, Mode of Payment and Evaluation)	Field Visit to nearby Municipality and TDC	Action plan preparation and implementation Schedule (Group Work)
					Closing Session