



**Office of Musikot Municipality
Serigaun, Rukum (West)**

Terms of Reference (ToR)

for

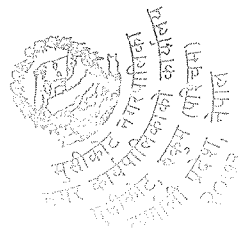
**Preparation of Detailed Project Report
(DPR)
of
Rural Roads**

Prepared By :

Rising Engineering Consultancy Services
Khalanga-5, Rukum (West)



Srawan 2075



Background

With the rapid development and Construction of rural roads in Rukum (West), large number of new roads are being constructed without detailed survey /Design. Such type of roads arises many problems on construction, maintenance and operation.

Based upon the existing roads, it can be divided into two sectors; a. Urban Road and b. Rural Road. For the effective management and to keep all the information up to date, which ultimately demands for the Rural and Urban Road; DPR(Detailed Project Report) is much more necessary.

Rural/Urban Road DPR is a type of tool that deals with mainly the information of the Road, their Geometric Design and Parameters.

Main Objective

The main objective of this consulting work is to prepare Detailed Project Report (DPR) of 4 Rural/Urban Roads within Musikot Municipality.





Part I

Terms of Reference

1. Consultation with Office of Musikot Municipality for the preparation of rural/Urban Road DPR.
2. Carry out survey to generate required information as well as DPR of Roads mentioned below :
 - A. Musikot Nagar Chakrapath
 - B. Solabang Jhulkhet Ghattekhola Kwama Ghorkhani Road (Ward no. : 4,7,8)
 - C. Chautara Dopai Bagkhor Road (Ward no. : 13,14)
 - D. Ratapahar Bhalakcha Jhulkhet Road (Ward no. : 7,11)
3. Survey/Design should consider the 4 roads of **Musikot Municipality** along with its Geometry and Other Design Parameters like; Design Speed, Topography, Traffic Factors, Design Capacity, Carriageway, Shoulders, Roadway, Hairpin bends, Camber, Vertical Alignment (gradient), Horizontal Alignment, Lay Bys & Passing Zone, Carriageway/Footpaths etc.
4. Each item listed on point no. 3 should be carried out in detail as far as applicable.
5. For the detail information, consulting body can communicate with any administrative bodies as well as local people.
6. Report should be submitted in the Standard Formate.
7. Submit draft report to Musikot Municipality for comments.
8. Submit final report to **Musikot Municipality** after incorporating necessary modifications and comments.



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9. The final reports satisfy the needs and the comment by Municipality on the draft report presented.

10. Report:

The consultants shall submit reports in both soft and hard copies (Drawings on A3 size papers). The copies of the reports required as follows;

- | | | |
|--------------|---|-----------------|
| Draft report | - | 2 (Two) copies |
| Final report | - | 4 (Four) copies |

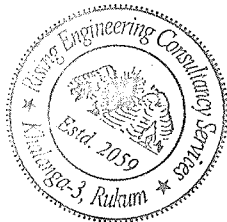
11. Time Schedule:

The consultant shall commence the work within **2.5 months** from the date of signing agreement. The reports shall be submitted to the office as under

- | | | |
|--------------|---|--|
| Draft report | - | within 2 months from the date of signing agreement |
| Final report | - | within 15 days of receipt of office comments on the drafts report. |

12. Scope of Work:

- The Survey to be carries out for Collection of the data.
- The DPR to be generated as standard formate.
- To generate the database of the road for planning.





The Sample Detailed Project Report (DPR) and it's Contents.

Vol I : Main Report

TABLE OF CONTENTS

PROJECT INFORMATION

SUBMISSION INFORMATION

ACKNOWLEDGEMENT

SYNOPSIS

ABBREVIATION

SALIENT FEATURES OF THE PROJECT

Name of project:

Location:

Geographic Location:

Starting Point:

End Point:

Geographical Feature

Terrain

Climate

Geology

Hydrology

Meteorology

Classification of Road

Classification

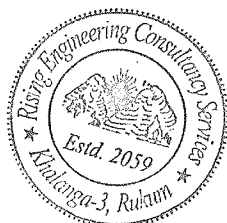
Surface

Longitudinal Grade

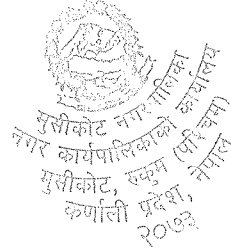
Connection With Road Network:

Alignment Details:

Structures:



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Design Parameters:

Cross-Section:

Pavement:

Total Project Cost (Without Bridge Cost and Property Acquisition) :

Total Project Cost (With Bridge Cost and Property Acquisition) :

Studied Alignment:

Conclusion:

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LIST OF TABLES

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1.1 Introduction

1.2 Location

1.3 Significance

1.4 Connection with road network

1.5 Map Study

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2.1 Influence Area

2.2 Socio-economic data of the influenced area

2.2.1 Population

2.2.2 Land Use Pattern

2.2.3 Utility Services

2.2.4 Economic Activity

2.2.5 Health

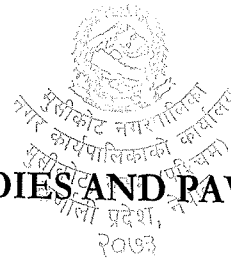
2.2.6 Education

2.2.7 Transport and Communication Network

2.2.8 Administrative Facilities



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CHAPTER 3: TRAFFIC STUDIES AND PAVEMENT DESIGN

- 3.1 Traffic Data
- 3.2 Existing Roads and Traffic flow
- 3.3 Traffic Estimation
- 3.4 Passenger Car Unit and Traffic Coefficient
- 3.5 Pavement Design
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- 4.1 The Survey Team
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 - 5.2.6 Proposed Bridge Location





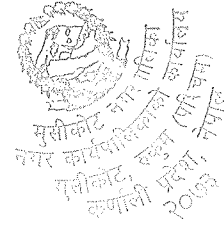
- 5.2.7 Retaining and Protection Works Requirement
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 - 5.3.1 Naturally Available Material
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- 6.7 Horizontal Curves
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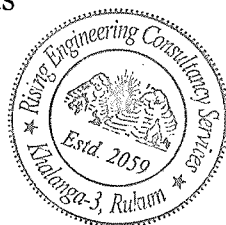
- 6.11 Passing Bays
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- 6.16 Outward Cross Slope
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- 6.19 Sub-Surface Drains
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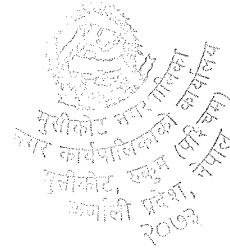
- 7.1 General
- 7.2 Field visit by Environmentalist
- 7.3 Public participation in the field
- 7.4 Identification of Impacts due to Proposed Road Related Activity
- 7.5 Environmental Management Action Plan
- 7.6 Related Legislations

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8.5 Bidding Documents

8.6 Project Objectives and Scope Development

8.7 Summary of quantity estimate and project cost:

ANNEXES

Annex I : Topographic, Google, SRN and District Maps

Annex II : Photographs of preliminary site visit, DCP test and detailed survey.

Annex III : References

- BM Data and Station Data
- List of Passing Zones
- Contact Persons

Vol II : Detailed Cost Estimate

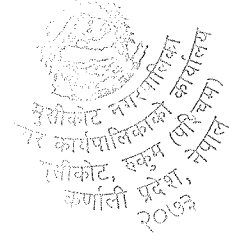
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1. ABSTRACT OF COST
2. RATE ANALYSIS
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 - b. Earthwork Excavation of Side Drain
 - c. Embankment Filling
4. DETAILED ESTIMATE OF
 - a. Earthwork Excavation of Foundation of Retaining Wall
 - b. Back Filling of Retaining Wall
 - c. Earthwork Excavation of Foundation of Breast Wall
 - d. Back Filling of Breast Wall



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5. DETAILED ESTIMATE OF ROAD WORKS
- Sub-grade Layer
 - Sub-base Course
 - Base Course
 - Wearing Course
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 - Gabion Breast Wall
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8. DETAILED ESTIMATE OF CROSS DRAINAGE STRUCTURES
- Pipe Culvert
 - Causeway
 - Slab Culvert
9. DISTRICT RATE 2075/76



Vol III A : Drawings (Plan and Profile, A3 Size Paper)

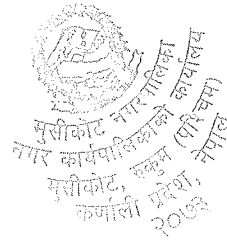
Vol III B : Drawing (Cross Sections, A3 Size Paper)

General Design Parameters

- Carriageway Width : 3.75 m
- Shoulder width : 0.75 m on each side
- Road width : 5.25 m
- Drain : 0.60 m to 1.00 m
- Right of way : 7.5 m on either side from road centre line
- Design Capacity : 200 in each direction
- Design Speed, Ruling : 25
- Design Speed, Minimum : 20



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- Ruling Gradient : 7%
- Limiting Gradient : 10%
- Exceptional Gradient : 12%
- Setback Distance : 3 m on either side from Road Centerline

(Other Design Parameters as per Nepal Rural Road Standards (2055) Ist Revision 2069 (2012))

Part II

1. Completion Period

Time is of the essence. The assignment has to be completed within **2.5 month** after signing the contract and it has to be performed in a professional way by adhering to strict quality standards.

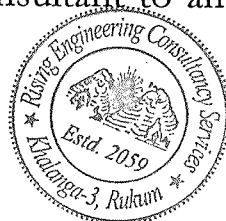
2. Terms of payment

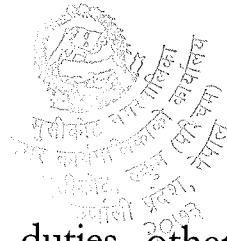
Payment will be made according to the following schedule:

- First Payment : 20% - After submitting the Draft report.
Final Payment : 80% - After submitting the Final report.

3. Force Majeure

- a) In case of force majeure, the consultant shall be entitled for an extension of the completion time as found appropriate by Municipality. Force majeure is understood to be natural disasters, fires, strikes, lockouts, sabotage, breakdowns and accidents of all kinds, was a war-like conditions, riot, civil commotion or due to circumstances beyond the control of the consultant.
- b) Apart from an extension of the time of completion, force majeure does not entitle the consultant to any compensation for damage of loss suffered.





4. Duties and Taxes

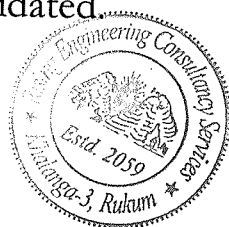
- a) The consultant shall pay all tariffs, duties, other taxes or charges levied by the Government/Municipality or other agencies at any stage during the execution of the work.
- b) Income tax shall be levied on the consultant. Deduction for income tax will be done from each installment of the payment in advance as per the rules and regulations of GoN.

5. Work Inspection

- a) Before the award of the contract, the designated Municipality staff shall be entitled to visit the office of the consultant to verify the status and soundness of the consulting firm to carry out the job. The designated Municipality staff shall also be entitled to visit the office of the consultant during implementation, from time to time to inspect the work in progress. The consultant will be required to submit a periodic progress report in writing when requested by Municipality.

6. Termination of Contract

In the event that work progress of quality is not satisfaction, Municipality shall have the option of withdrawing the contract partly or wholly. Justification for such action will be provided within seven days in advance in writing. The portion of contract value that has not been paid when such action is taken will be retained by Municipality as liquidated.

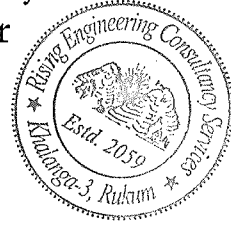


Part III

Working Team

The working team for office works should necessarily consist of following key personnel together with adequate supporting manpower.

- a. Civil Engineers
- b. Sub engineers/Surveyors
- c. Computer Operator



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