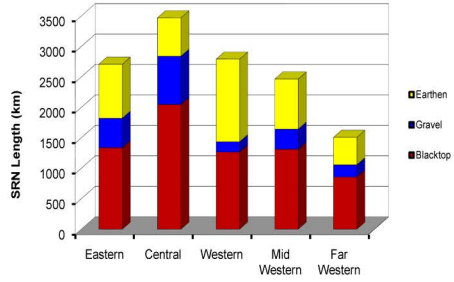
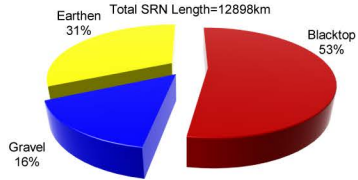
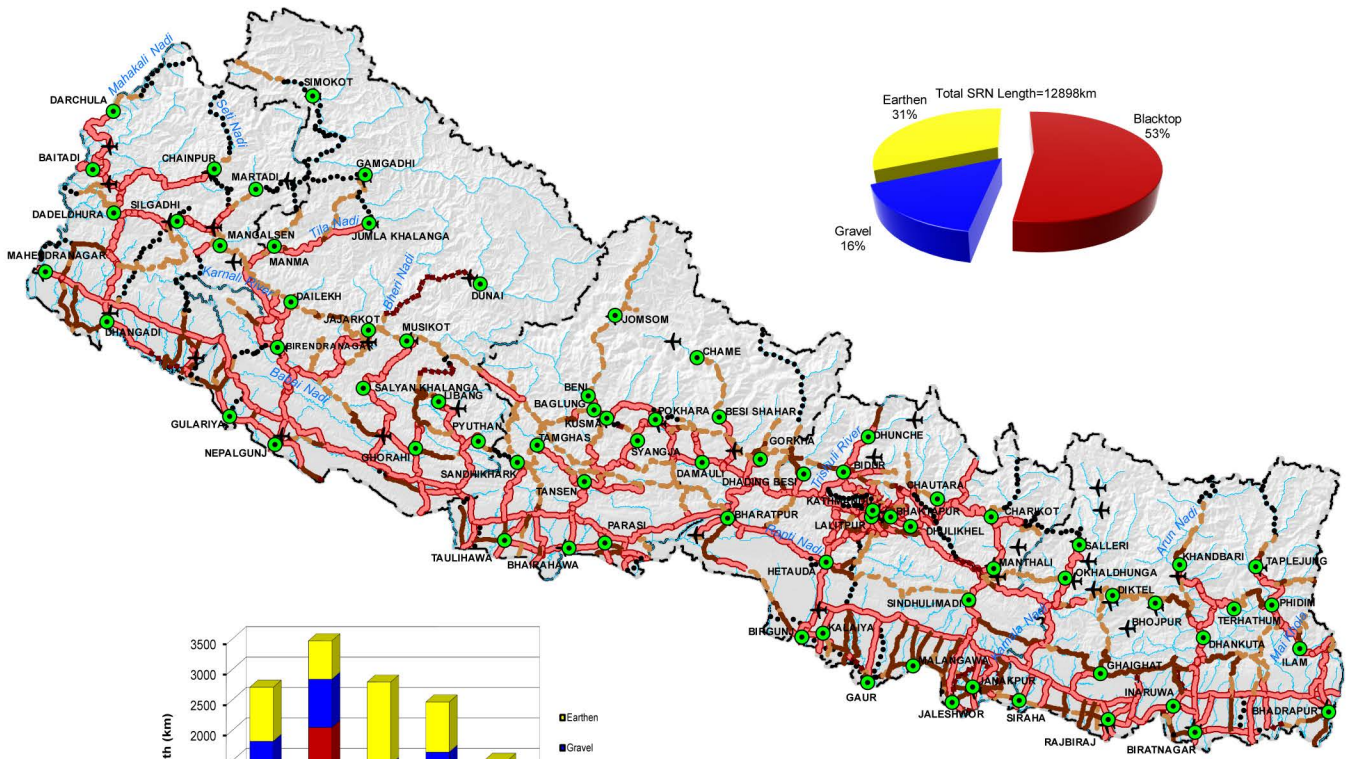




Government of Nepal  
 Ministry of Physical Infrastructure & Transport  
**Department of Roads**



**STATISTICS OF STRATEGIC ROAD NETWORK  
 SSRN 2015/16**

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Cover: Strategic Road Network of Nepal  
Pie Chart Showing Various Pavement Types of Strategic Road of Nepal  
Stacked Bar Chart Showing Strategic Road Length in Various Development Regions

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## Foreword

Better road planning is essential for safe, reliable and sustainable road development of the country. A good road data is of prime requirement for any effective road planning process. Availability of such data also reflects the performance of the road sector, which also helps in projecting overall growth of road network over the time. To disseminate this information Department of Roads (DoR) has been publishing Nepal Road statistics (NRS) every alternate years.



Since 2004, the Nepal Road statistics (NRS) has been renamed as "**Statistics of Strategic Roads Networks (SSRN)**" focusing on data and information about strategic roads, while the local roads network (LRN) is now under the Department of Local Infrastructure Development and Agriculture Roads (DoLIDAR). The present version of the SSRN is an updated version of 2013/14 Road Networks. The Statistics on the bridges has been updated based on the Bridge Management System adopted by Department. This version of the SSRN is also available in digital format in CD-ROM and can also be accessed through the website at [www.dor.gov.np](http://www.dor.gov.np).

The listed roads in this SSRN document has been approved by cabinet level on 2069/02/12 BS (2012/02/25 AD). According to this record the **number of National Highways and Feeder Roads** recorded are **21 (twenty one)** and **209 (two hundred nine)** respectively. Moreover, the SSRN data is also available in web mapping system in more comprehensive form and the users will have easier access to road data on SRN Roads from the single web portal.

Geographical information System (GIS) has been used to create the present version of data towards making it more user friendly as well as wider application. The SSRN Data is now available in GIS format in "Route Feature Class" type calibrated to the known distance of the roads. It is expected that this system will be beneficial in further updating of road status as well as expansion of system including Road Inventory, Pavement Condition Surveys and Traffic Accident Data.

I believe that this document will provide valuable information to support future road planning, support other infrastructure development in the country as well as development of web based Road Inventory System in coming days. In this process, I would very much appreciate any valuable comments and suggestions for future improvement and updates.

Finally, I would like to thank all the personnel and agencies involved in preparation of this document.



**Devendra Karki**  
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**September, 2016**



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## **ANNEXES**

- Annex 1 - Historical Background of Department of Roads and Organization Chart
- Annex 2 - Link Details of SRN
- Annex 3 - Road-wise District Coverage
- Annex 4 - Schematic Diagram of Strategic Road Network 2015/16



## List of Abbreviations

ACQMP	Asset Management, Contract Management & Quality Control Project
ADB	Asian Development Bank
Adm.	Administration
AHMP	Arniko Highway Maintenance Project
BS	Bikram Sambat
BT	Blacktop
DoLIDAR	Department of Local Infrastructure Development and Agriculture Roads
DoR	Department of Roads
DR	District Road
ER	Earthen Road
FRN	Feeder Roads Major (National)
FRO	Feeder Roads Minor (Others)
GIS	Geographic Information System
GoN	Government of Nepal
GR	Gravelled Road
GTZ	German technical co-operation
HMIS	Highway Management Information System
IDA	International Development Agency
IRC	Indian Roads Congress
KFW/GIZ	German Bank for Reconstruction/ German Technical Cooperation
Km.	Kilometers
m	meter
MH	Mid Hill Road
MRCU	Maintenance and Rehabilitation co-ordination unit
MRM	Mahendra Raj Marga
NH	National Highway
NRS	Nepal Road Statistics
ODA	Oversees Development Association UK
PL	Planned Road
PM	Periodic Maintenance
PMC	Planning and Monitoring Cell
PR	Postal Road
PSC	Pre-stressed Concrete
RAP	Rural Access Programme
RCC	Reinforced Cement Concrete
RCSP	Road Connectivity Sector Project
RIP	Road Improvement Project
RTO	Road Transport Organisation
RMDP	Road Maintenance and Development Project
RMP	Road Maintenance Project
RMRP	Road Maintenance and Rehabilitation Project
RNDP	Road Network Development Project
RSDP	Road Sector Development Project
S.N.	Serial Number
SDC	Swiss Development Cooperation
SMD	Strengthened Maintenance Divisions
SRIP	Second Road Improvement Project
SRN	Strategic Road Network
SRTFP	Sub- Regional Transport Facilitation Project

SSRN	Statistics of Strategic Road Network
St.pg.	Steel plate Girder
Sup Str	Super Structure
SWRP-PIP	Sector Wide Road Program and Priority Investment Plan 2007
TESU	Traffic and Engineering Safety Unit
TRIP	Third Road Improvement Project
TRP	Tribhuvan Rajpath
UC	Under Construction
U.K	United Kingdom
UR	Urban Road
V.D.C.	Village Development Committee
WB	World Bank

## Introduction

### 1. General

The Department of Roads (DoR), Ministry of Physical Infrastructure and Transport have been publishing 'NEPAL ROAD STATISTICS' (NRS) since 1998 in two years interval.

This document 'STATISTICS OF STRATEGIC ROAD NETWORK' is the continuation of previous publications, and contains data and maps for the year up to the end of fiscal year 2072/073 BS (2015/2016 AD) of the Strategic Road Network (SRN).

This document has been organized as follows:

- Foreword from the Director General
- Contents/Abbreviations
- Road Network Data
- Map of the country with SRN 2015/16 AD
- Data and Maps of Development Regions, Zones and Districts
- List of Main Bridges along SRN
- Road-wise District Coverage
- Schematic Diagram of SRN, 2015/16 AD

### 2. Geographic Information System (GIS)

This document is prepared based on Geographic Information System (GIS). A well designed GIS permits the integration of data and has the ability to associate and manipulate diverse sets of spatially referenced data that have been geo-coded to a common referencing system.

The road GIS database has been prepared using calibrated route feature in Postgresql/PostGIS database. The start and end chainages are provided to each of the routes and the intermediate chainages are determined through interpolation. This way each of the routes presents the true (measured) lengths rather than the "shape" lengths straight from the geometry. A customized software has been developed to manage the route features in Postgresql/PostGIS database and to prepare the statistics of the roads for the districts by automatically generating true lengths clipped by the districts. The zonal & regional databases are created using the sum of the district database.

Most of road network have been created from the topographical maps of Nepal (1:25,000 & 1:50,000 scale). Since the topographical maps were based on 1992 & 1994 aerial photographs, there are many roads which alignment could not be obtained from the topographical maps. In these case, existing road alignment are prepared based on the actual survey data and GPS survey works. Similarly the planned and under construction roads are mapped based on the various feasibility and design reports.

### 3. Data Tables and Maps of Road Network

Data tables and maps of each Development Region have been compiled and presented separately. Data tables and maps of corresponding districts falling under the Development Regions are also presented in detail.

The SRN having road reference are based on the recent cabinet decisions.

The road categories included are:

- Existing SRN
- Under Construction SRN
- Planned SRN

- Postal Highway
- Mid Hill Highway

A brief details of each category mentioned above are given in following sub-sections.

### **3.1 Existing SRN**

Existing National Highways and Feeder Roads (2015/16) falling under Bituminous/Blacktop (BT), Gravelled (GR) and Earthen (ER) road categories have been thoroughly checked and incorporated in this document with their road reference number and link codes.

### **3.2 Under Construction SRN**

All roads falling under SRN which are presently under construction have been included in this document. The total length, estimated by concerned agencies, has been adopted. The actual length which would be known only after the completion of the construction has to be adjusted in the next publication of the document.

### **3.3 Planned SRN**

Department of Roads has planned to construct several roads having National Strategic Importance in coming years and they have been included here as Planned Roads. Further DoR is also planning and have put forward a proposal to include several existing roads of other categories into Strategic Road Network, and they are categorized as follows:

- Proposed National Highway from existing other road category
- Proposed Planned National highways
- Planned Feeder Roads
- Proposed Feeder Roads from Existing Other Road Category
- Proposed Planned Feeder Road

The estimated length of planned National Highways and Feeders Roads of above mentioned categories and maps have been included as Planned Roads in this document.

### **3.5 Postal Highway (PR)**

The information on the existing Postal Roads have been obtained from the cabinet approved list. The Postal Road Project Office is carrying out detailed study of the alignment of the Postal Highway which will be available soon. Based on preliminary study, the length of the PR will be about 963 Km which includes some of already designated Feeder Roads.

### **3.7 Mid Hill Highway (MH)**

The existing road network, under construction and planned roads falling under the Mid-Hill Highway category have been separately included.

### **3.8 Local Road Network (LRN)**

Numerous village roads, agriculture roads and district roads have been constructed in the recent years through effort of various organizations which falls under the jurisdiction of DoLIDAR and Municipalities. The DoLIDAR has prepared statistics of local road network and online GIS Data and Map and is available in the <http://rutims.dolidar.gov.np>.

**4. Data of Bridges**

The data of Bridges falling under SRN have been compiled from the Bridge Management System (BMS), which is also available online in [www.dor.gov.np](http://www.dor.gov.np).

**5. Availability of Digital Data**

The road network produced in hardcopy in the present document is also available in digital format in ESRI Shapefile format in route feature class along with the attribute tables. The present document is also available in PDF format and can also be downloaded from the [www.dor.gov.np](http://www.dor.gov.np). A web mapping portal is also available through the DoR website which provides interactive map viewing and data extraction.