

ROADWAYS

India ranks second in the world (next to the United State) in terms of road networks, aggregating to about 5.9 million km, as on March 2017. Country's road network consists of National Highways (NH), State Highways (SH), District roads, Rural roads, Urban roads and Project roads. Though the National Highways, which has about 1,14,158 km length and comprises only 1.94 per cent of the total length of roads, it carries over 40 per cent of the total traffic across the country. Road density of India is about 1.8km per sq.km. The length-wise distribution of roads as on 2016-17 is as under:

Category of Road	Length of Roads (km)	% share of Total Roads
National Highways (NHs)	1,14,158	1.94
State Highways (SHs)	1,75,036	2.97
District Roads	5,86,181	9.94
Rural Roads (including JRY Roads)	41,66,916	70.65
Urban Roads	5,26,483	8.93
Project Roads	3,28,897	5.58
Total	58,97,671	100

Development and maintenance of roads are undertaken by both Central and State Government agencies. Maintenance and development of National Highways are under the control of Ministry of Road Transport and Highways and executed through agencies such as National Highway Development Authority, National Highway Infrastructure Development Corporation Ltd., State Public Works Departments (two lane National Highways), and Border Road Organisation. State Highways and District roads are constructed and maintained by State PWDs. Rural roads are constructed by Panchayati Raj departments, State PWD/RWD departments, and National Rural Road Development Agency of Ministry of Rural Development.

National Highways are further been classified based on the number of lanes; Less than two lanes, two lanes and four lanes and more. Table below shows Line wise break up of National Highways for the two consecutive years 2015-16 and 2016-17.

Lane wise Category of National Highways	As on 31 st March, 2016	As on 31 st March, 2017	Year on Year growth
Less than Two Lane	20,703 (20.49)	28,901 (25.32)	39.61
Two-Lane	55,603 (55.05)	58,910 (51.60)	5.95
Four-Lane & Above	24,705 (24.46)	26,347 (23.08)	6.65
	1,01,011 (100)	1,14,158 (100)	13.02

(Figures in parentheses indicate percentage share in total length of NH)

State highways and district roads constitute the secondary system of road transportation in the country, Total length of State highways as on 31st March 2017 is 1,75,036kms Among all the states Maharashtra accounts for the largest share in the total length of State highway with a road length of 39000 kms, followed by Karnataka with 19556km, Gujarat with 17201kms, Rajasthan with 15019kms and Tamil Nadu with 12095kms.

District Roads comprising of major District Roads and Other Major Roads are also constitute another important secondary system of roads transportation executed and managed by state PWDs. These roads are the major connecting link between the Tahsil and District Headquarters and the State and National Highways. In the case of District roads also Maharashtra ranks first with 109530 kms followed by Uttar Pradesh with 55061 kms, Karnataka with 49923 kms and Tamil Nadu with 45379 kms.

Rural roads executed and maintained by Panchayati Raj institutions also have a significant contribution since 1950. As

on 2017 the total length of rural roads in India is estimated to have a length of about 41,66,916kms.

Urban roads in India include the municipal roads maintained by the Urban Development Department of States and Union Territories; roads in Railway zones; roads constructed by Military Engineering Services and Major and Minor Port roads. Total length of urban roads in India as on March 2017 is estimated 526483 kms with West Bengal claiming the largest share of 95240 kms of urban roads followed by Uttar Pradesh and Karnataka respectively.

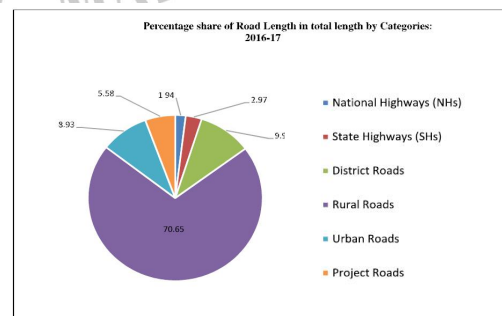
Project roads largely include roads built/coming under the purview of Central and State Government agencies and departments. These include roads maintained by Forest Departments, Irrigation Departments, Electricity Departments, roads in coal fields and coal mines, roads under the maintenance of Steel Authority of India, National Mineral Development Corporation, Sugarcane Departments of States and Union Territories and Border Road Organisation. Total length of Project roads in India account for a length of 328897 kms. Uttar Pradesh has the largest share of Project roads (42186kms) followed by Madhya Pradesh(36136kms) and Odisha (25831kms).

Of late, there has been many policy decisions at government level aiming to strengthen and speed-up the activities road infrastructure project execution and maintenance. Public Private partnership has been one of such major decisions that has visible records of successful implementation and completion. Table below shows yearwise investment done in the field of road development implemented through Public Private Partnership.(Figures in paranthesis indicate the percentage share in total)

Sr. No.	Year	Expenditure		
		Private Sector Investment	Public Sector Investment(including Plan, non plan and IEBR)	Total
1	2	3	4	5
1	2012-13	20304.66(48.35)	21693.74(51.65)	41998.4
2	2013-14	22515.05(42.56)	30385.64(57.44)	52900.69
3	2014-15	19232.44(38.83)	30295.26(61.17)	49527.7
4	2015-16	29770.00(30.97)	66369.14(69.03)	96139.14
5	2016-17	16028.64(17.37)	76275.26(82.63)	92303.9
CAGR (2012-13/2016-17)				21.8

Road Length and Road Categories:

Normally road length always increase with time. However, for certain category like State Highway, there may be a decrease in length which is attributed due to change in status. The Pai Chart below shows the percentage share of road length in total length of categories for the year 2016-17.



This write-up is prepared based on the report of Basic Road Statistics of India (2016-17) released by Ministry of Road Transport and Highways (Government of India, New Delhi).