



On the fast lane

About \$60 billion are needed to upgrade and expand the road network over the next five years, writes **Darrel Philip**

ZOOMING AHEAD: Big-ticket investments are flowing into the road sector



Roads form an important part of India's transportation system, as they carry 70 per cent of freight and 85 per cent of passenger traffic (annual growth projected at 12-15 per cent for passenger traffic, and 15-18 per cent for cargo traffic). India has a road network of 3.3 million km, the second largest in the world.

The focus of various governments to improve connectivity has brought about big-ticket investments in the road sector. Sources say that these improvements are essential if governments are to meet their objectives of achieving the targeted 10 per cent growth rates and reducing poverty.

In broad terms, the investment needs of expressways, national highways and state highways in the 10-year period 2001-2011 was revised thrice and estimated at \$7 billion, \$28 billion and \$17.4 billion. An investment of over \$50-60 billion is required over the next five years to improve road infrastructure (see table). "In order to facilitate investment in infrastructure, the government should encourage long term funding with long pay back periods, from insurance and pension funds," says Vijay Agarwal, chairman and managing director, Ace Construction and Equipment, a leading firm.

Spurred by the recent success in building and maintaining various infra-

structure capacities – roads, railways, ports, airports – policy makers are increasingly going in for public private partnerships (PPPs) as the preferred option of financing these projects. In the road sector even as the two phases of National Highways Development Project (NHDP) – the 5,846-km, four-lane, Golden Quadrilateral and the 7,300-km, four-lane, North-South, East-West corridors – have been rescheduled (to be completed by December 2009), the scope of the programme has been expanded to include more phases.

While phases I and II had been funded through fuel cess and budgetary grant, the PPP route will fund the construction of highways under NHDP phases III, IV, V, VI and VII. More than 80 per cent of the investment is expected to come from the private sector.

Says Ajit Gulabchand, chairman and managing director, Hindustan Construction Co (HCC): "More builders are rushing to fund construction of those stretches of highways that promise higher toll collection, in a way trying to recover their investment from toll collections." The government is in the process of finalising a toll policy for national highways with toll based on the cost of construction of roads.

Thus, the toll will neither be uniform nor based on the road length and for roads having high cost structures such as bridges, tunnels there

Funds for new roads (as on March 2007)

Scheme	Period 2001-2011		Period 2011-2021	
	Length (km)	Amount (Rs. million)	Length (km)	Amount (Rs. million)
A. Expressways	3000	300000	7000	700000
B. National Highways				
Four Laning/Six Laning	16000	640000	19000	760000
Two-Laning with hard shoulders	15000	187500	7000	87500
Strengthening Weak Pavements	20000	150000	24000	180000
Bypasses, bridges, over bridges, safety and drainage measures	Lump sum	72500	Lump sum	92500
Expansion of NH System	10000	150000	12000	180000
Total for National Highways		1200000		1300000
C. State Highways				
Four Laning/Six Laning	3000	100000	7000	250000
Two-Laning with hard shoulders	35000	280000	60000	500000
Strengthening Weak Pavements	30000	220000	40000	300000
Bypasses, bridges, over bridges, safety and drainage measures	Lump sum	100000	Lump sum	100000
Expansion of SH System	10000	50000	20000	100000
Total of State Highways		750000		1250000

\$1 = 43.75. Source: NHAI

STEPPING ON THE ACCELERATOR

India has an extensive road network of 3.3 million km, the second largest in the world. Highways/expressways constitute about 66,000 km (two per cent of all roads), but carry 40 per cent of road traffic.

The ambitious National Highway Development Project (NHDP) of the Indian Government is at an advanced stage of implementation in various phases. Key sub-projects under the NHDP include:

- The Golden Quadrilateral (GQ – a 5,846 km of 4-lane highways), connecting Delhi, Mumbai, Chennai and Kolkata, (phase I) is nearing completion.
- North-South & East-West Corridors (NSEW-7,300 km of 4-lane highways) connecting Srinagar to Kanyakumari (including the Kochi-Salem spur) and Silchar to Porbandar, (phase II) is to be completed by December 2009.
- Programme for 4-laning (phase III) of about 14,000 km of National Highways is underway; it covers stretches of NHs carrying high volume of traffic, connecting state capitals with NHDP phases I and II, and providing connec-

tivity to places of economic, commercial and tourist importance.

- Two-laning of 20,000-kms (phase IV) envisages upgradation of highways ensuring that their capacity, speed and safety match minimum benchmarks for national highways.
- Six-laning of 6,500 kms (NHDP-V) covers upgrading four-lane highways comprising the Golden Quadrilateral and certain other high density stretches, through PPPs on BOT basis.
- Development of 1,000 km of expressways (NHDP-VI), to be developed on a BOT basis. These expressways would be constructed on new alignments.
- Other Highway Projects (NHDP-VII) include the development of ring roads, bypasses, grade separators and service roads for full utilisation of highway capacity as well as for enhanced safety and efficiency.
- Accelerated Road Development Programme for the North East Region will provide connectivity to all the State capitals and district headquarters in the North-East.

would be a higher toll to ensure project viability. Also the issue of increasing toll by indexing it to 40 per cent of the wholesale price index has also been resolved, with policy stating that there would be a 3 per cent increase in toll rates annually. It is also likely that a separate toll policy would be formulated for expressways, which are a part of NHDP-VI as they would be constructed at higher costs.

However, all the projects are eligible for viability gap funding up to 40 per cent of the project cost, industry sources point out.

Recently, a \$5 billion infrastructure financing initiative for improving power supply, roads, ports and airports in India was instituted. The initiative, a collaboration between Infrastructure Development Finance Company Ltd (IDFC), Citigroup Inc, India Infrastructure Finance Company Ltd (IIFCL) and Blackstone Group Holdings, will deploy \$5 billion in capital for infrastructure projects.

Under the new financing plan the aim is to deploy about \$2 billion in equity capital and \$3 billion in long-term debt financing with maturities exceeding 10 years, according to the Indian Finance Ministry. The equity financing will be managed by IDFC and will invest in greenfield, brownfield and operating projects primarily in roads, power, airports, ports and industrial and commercial infrastructure.

IDFC, Citi and Blackstone will together invest \$250 million and the balance is expected to come from international investors as well as selected domestic institutional investors including IIFCL. The debt financing will be done through IIFCL in several tranches over the next three years for projects appraised by IDFC and also some banks and financial intermediaries.

While road maintenance is underfunded at present, government expenditure on roads is significant – 12 per cent of capital and 3 per cent of total expenditure. Says a spokesman of Larsen & Toubro, a prominent road developer: "In India the emphasis still, so far, is on providing connectivity, rather than ensuring mobility. Maintaining India's highway network will require approximate funding of \$1.62 billion, three



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CONCRETE SOLUTION: Billions of rupees are being invested to maintain roads

times the current level of expenditure.”

Industry experts argue that the government would rather expand network than maintain the roads as the number of vehicles has been growing at an average pace of 10 per cent per annum over the last five years.

A recent survey stated that while the substantial impact of the Golden Quadrilateral was already visible, the government needs to focus its attention on corridor management and road safety for which the NHAI has put in place a corridor management policy.

Having increased the budgetary support from \$2.16 billion to \$2.3 billion in 2006-07, the government has decided to develop 1,000 km of access controlled expressways built on a design, build, finance and operate model. Some

of the sections identified are Vadodara-Mumbai, Delhi-Chandigarh, Delhi-Jaipur, Delhi-Meerut, Delhi-Agra, Bangalore-Chennai and Kolkata-Dhanbad. The World Bank is currently conducting a study on phase V and VI of the NHDP which it is interested in financing on a priority basis. A special purpose company called L&T Vadodara Bharuch Tollway has been formed exclusively for the NHDP. Apart from six-laning of the highway, the company will also provide amenities and other infrastructure.

The first project to be awarded under the new model concession agreement (MCA) is the 4-6 laning of Delhi/Haryana border-Rohtak, including Bahadurgah and Rohtak bypasses under NHDP phase IIIA. While some phases of NHDP have still to be approved, phase V which pertains to

6-laning of the Golden Quadrilateral has been approved and the project is being awarded on a fast track basis as most of the land acquisition has been completed, and the project would entail substantial ‘negative grants’ improving the cash flow profile for NHAI.

Usually, the government gives a grant to the concessionaire (or developer) while putting up a project. However, in case of busy stretches, where the concessionaire can earn substantial amounts by way of toll, there is a ‘negative grant’ that the developer has to pay to the government, the reverse of a grant.

The government has also approved phase VI of the NHDP programme, which entails construction of expressways of 1,000 km at a cost of \$3.94 billion. Even for phase VII, which includes the construction of ring roads, bypasses, flyovers, the NHAI invited bids for consultancy services for preparation of feasibility cum preliminary design for providing four-lane ring roads in Bangalore city. The road and highway sector in India is witnessing frenzied activity, as demand from road-users is expanding at a frenetic pace. With thousands of new vehicles being registered every day, the need for additional road space will continue to grow over the coming years. 🌿

Highway Order Flows (as on December 2006)

NHDP Phases	Total Length (km)	Contracts awarded (km)	Contracts expected in 3 yrs (km)
GQ	5846	5846	-
NS-EW corridor	7200	5894	1306
Phase III-A	5498	1120	4378
Phase V	6500	148	6352
Others	1325	1284	41
On-going phases	26,369	14,292	12,077
Phase III-B	5500	-	2000
Total	31,869	14,292	14,077
Expected order flows			Rs 845 billion

\$1 = 43.75. source: NHAI