Chapter No. 05:

Performance Evaluation of MSRDC.

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Introduction:

About 600 million people of India live in nearly 6 lakh villages scattered all over the country. Access roads provide the means to bring the rural population on to the main stream. Notwithstanding the efforts made, over the years, at the State and Central level, through different programmes, about 40 per cent of habitations in the country are still not connected by all weather roads. As a Poverty reduction strategy, PMGY was launched as a 100 per cent centrally funded programme for Rural Roads Development in India. The rural connectivity is expected to have many positive impacts on economy, agricultural, employment and social services to rural masses. India is distinguished for its geographical diversities with mountains, hills, rivers terrains, forest, wet lands, deserts and scattered habitations in remote areas. Also, there exists a wide range in the sub-grade soil types, rainfall, traffic pattern and availability of construction materials. These natural barriers create problems for developing a standard uniform technique to serve the requirements at all the sites. This requires adoption of different technologies based on site specific conditions. For the construction of Rural Roads, Indian Roads Congress has brought out Rural Road Manual IRC 20-2002 for design and construction. The design is based on the CBR value of the soil sub-grade and the 10 years projected cumulative traffic with an assumed 6 per cent traffic growth per year. Based on this concept, normally two layers of WBM with 75 mm thickness is laid over the
granular sub-base with suitable material having minimum 15 per cent CBR. However, there are situations in many states where the prescribed standards are not available at normal leads resulting in longer haulage and higher costs.¹

At over 3 million km, India’s road network is one of the largest in the world. With ambitious expansion plans being envisaged, it is estimated that the total investment required between 1995-96 and 2005-06 for development of National and State Highways alone would be around Rs 1.18 Lakh crore. Maharashtra State is in the forefront in industrialization in India, accounting for a major share of the total industrial units and investments. However in terms of road infrastructure, the State has still a long way to go. The total road length per 100 sq. km. of area in Maharashtra is about 117 km as compared to overall average of 126 km in India and has increased slowly since independence. Meanwhile the density of motor vehicles per lack of population has grown multifold and is one of the highest in India. The lack of quality roads has been a major bottleneck for the accelerated economic development of Maharashtra. The Maharashtra State Road Development Corporation Limited (MSRDC) was setup for the purpose of completion of select road projects through a time bound program. With the completion of these projects, the traffic congestion problem is expected to be considerably eased.
Systematic and planned investment in the basic infrastructure boosts not only the growth of the economy but also assures its sustainable development. Infrastructure plays an important role in socio-economic development. Physical infrastructure which covers power, transport & communication, facilitates economic growth and has direct impact on quality of life. The ultimate goal of infrastructure development is to deliver infrastructure services of high quality at competitive & affordable prices and its success must be judged by the quality, quantity and prices that the end users are charged for these services in comparison with the global standards on each of these three fronts. In the last few years, there has been considerable increase in private investment in infrastructure sector. An overview of some of the physical infrastructure facilities in the State are given below.

**The Maharashtra State Road Development Corporation Limited (MSRDC):**

MSRDC was established by the Government of Maharashtra, through a Government Resolution dated July 9, 1996 and was incorporated on August 2, 1996 as a limited Company under the Companies Act, 1956. Board of Directors consists of official and non-official members including experts. The major objectives of the Corporation area -

a) to promote and operate road, airport, mass-transit system, township and other infrastructure projects
b) to plan, investigate, design, construct and manage those road projects and their area development;

c) to enter into contracts in respect of the works and any other matters transferred to the Corporation along with assets and liabilities;

d) to invite tenders, bids, offers and enter into contracts for the purposes of all the activities of the Corporation;

e) to promote participation of any person or body or association of individuals, whether incorporated or not, in planning, investigation, designing, construction and management of roads projects and area development;

f) to undertake schemes or works, either jointly with other corporate bodies or institutions, or with Government or local authorities, or on agency basis in furtherance of the purposes for which the Corporation is established and all matters connected therewith.

g) to undertake any other project and other activities entrusted by the State Government in furtherance of the objectives for which the Corporation is established.

The Corporation has undertaken the following projects-

a) Flyovers in and around Mumbai Metropolitan Region (Andheri fly-over)
b) Mumbai Pune Expressway.
c) Bandra Worli Sea link Project.
d) Road Improvement projects in Maharashtra.
e) Rail Over Bridges.
f) Public works projects undertaken in various parts of Maharashtra.
g) Thane-Godbundar road improvement project.
h) Nagpur-Aurangabad-Sinnar-Ghoti-Mumbai Road Project.
i) Four-laning of NH-4.
j) Public works projects in the road sector in Marathwada, Vidarbha and other parts of Maharashtra.

MSRDC is contemplating projects for road improvement in the Marathwada region (Marathwada Vikas Karyakram), road improvements around Nagpur and other parts of Vidhraba and small projects involving part financing projects at an advanced stage of completion in different parts of the stage with a view to improve cash-flows. Integrated Road development projects in Latur, Pune, Nagpur, Aurangabad, Amravati, Solapur, Baramati, Kolapur, Nanded, Nandurbar. MSRDC also co-coordinating development of following projects:

A. Multi-modal international hub airport at Nagpur.
B. Mass Rapid Transit system and railway sidings projects at Thane, Nagpur and other locations.
C. Development of New Mahabaleshwar.
D. Mumbai Trans-harbour link.
A brief outline of the major projects being undertaken by the Corporation is provided below:

1. **Flyovers in and around Mumbai Metropolitan Region:** The Government of Maharashtra plans to construct a total of 50 flyovers in the Mumbai Metropolitan region. Initially, 46 flyovers/works were handed over to MSRDC as BOT projects for 30 years by the PWD, Government of Maharashtra. Thereafter, the Corporation took up three more flyovers/works at Konkan Bhavan, Chedda Nagar and Mahim from the Government of Maharashtra and has taken the Airoli bridge project from CIDCO, taking the total number of proposed flyovers/works to 50. Out of the 50 flyover projects, 36 flyovers have been completed to date (including the Andheri flyover which is likely to save significant valuable public time) and four flyovers are under progress. MSRDC has also completed five subways to smoothen movement of traffic.  

2. **Mumbai-Pune Expressway:** The Mumbai Pune Expressway project has been awarded as a BOT project for 30 years to MSRDC by Government of Maharashtra. The scope of the project is to construct a six lane fenced expressway with twin tube tunnels, construction of major and minor bridges, cross drainage works, pedestrian crossings, underpasses, overpasses, interchanges and Rail Over Bridges.
thereon. To ensure completion of the work in time and high quality, modern machinery was used in the construction of the Expressway such as Large size Crushers, Slip form paver, Concrete Batching plants, Heavy Dumper etc. Initially, the Mumbai Pune expressway project envisaged construction of an expressway between Konnear Panvel and Dehu road, a distance of 84 km. In order to improve the traffic movement the Corporation subsequently added the Panvel Bypass Project of 9.75 km to it. This extension in conjugation with the flyovers on Sion-Panvel Highway would provide the much needed rapid transit access from Sion to Dehu Road. An access has been provided to the Truck Terminus at Kalamboli to facilitate truck movement.

3. **The Bandra Worli Sea Link Project:** This project would provide a user-friendly link between the island and the suburbs of Mumbai city and will give a much needed relief to the existing congested Mahim-Dadar-Worli link. The link forms a part of the proposed Western Freeway. The project, of a total length of 5.6 km, starts from the Interchange at Mahim Intersection and connects to the Khan Abdul Gaffarkhan road at Worli end and Lovegrove Junction. It consists of an 8 lane bridge of 4 km including a cable stayed portion of 500 meters and Bandra side approach of 1.6 kms. Around the approach road to the bridge, a promenade
and park will be developed to enhance the environment. A modern toll plaza of 16 lanes with automated toll collection system is planned. The project is being constructed as a Toll Project with an overall cost of Rs. 669 crores. The Government of Maharashtra will contribute Rs 100 crore towards construction of the project.

4. **Road Improvement Projects**: MSRDC has taken up integrated road improvement projects in the cities viz. Aurangabad, Pune, Nagpur and Latur. The total construction cost of the projects is estimated at Rs 759 crore which will be spread out between financial years 2001 and 2005. The projects encompass construction of flyovers, rail over bridges, road improvements, widening of bridges and construction of subways. The Corporation will earn revenue not only through the collection of toll, but also by way of cess on petrol and diesel collected in the respective cities. In addition, the Government and the local municipal corporation / development bodies will contribute to the project cost in Nagpur and Aurangabad.

5. **Four-Laning of the NH-4 Section from Satara to Kagal**: To improve the National Highway networks all over the country, Government of India has announced the Golden Quadrangle Project, which includes the improvement of National Highways connecting the 4
metropolitan cities i.e. Delhi, Chennai, Mumbai and Kolkata. Four laning of NH4 Section from Satara to Kagal is the part of it. The NH4 running between Mumbai- Pune – Satara – Kolhapur – to Kagal – up to Maharashtra State border is the important highway carrying heavy traffic in Western Maharashtra. This corridor is very vital as it connects most of the South India to Mumbai City. NHAI has awarded the work of four laning of Satara – Kolhapur – Kagal up to Maharashtra state border section of NH4 (km. 592.24 to km. 725.00) to MSRDC for implementation. The project consists of four laning of the highway, construction of new bridges, culverts etc, widening of existing bridges, construction of flyovers and subways at congested junctions, service roads in the sugar factory areas. It is proposed to provide concrete pavement for the newly widened carriage and strengthening of the existing carriageway with black topping.

6. **Nagpur-Aurangabad-Ghoti- Sinnar Highway**: Nagpur is presently connected to Mumbai through the National Highways (NH6 and NH3). However the need has been felt to connect other towns in the Vidharba and Marathwada regions to Mumbai and accordingly the Nagpur-Aurangabad -Sinnar-Ghoti-Mumbai Highway was envisaged. The project has been taken up by MSRDC in two phases Phase 1: Improving the entire
route length to National Highway standard Phase 2: Widening and strengthening the road to a 4 lane Highway in select stretches The total length of the proposed road would be around 700 km and the construction cost of the two phases for MSRDC is expected to be Rs. 760.02 crore. The construction program would be suitably phased considering traffic build up and toll accrual. The Government will contribute Rs 150 crore towards construction of the project spread out in annual installments of Rs 30 crore.

**MSRDC - Accounts/Finance Department:**

MSRDC Ltd is an incorporated entity formed by incorporation as public limited company under provisions of The Companies Act, 1956. Various transactions undertaken by MSRDC are accounted and audited in terms of provisions of the Companies Act 1956 and Memorandum of Association and Articles of Association under which Company has been incorporated. Entire share capital of MSRDC is held presently by Government of Maharashtra and its nominees. Thus, it is a government company as defined under Section 617 of the Companies Act 1956. MSRDC maintains its books of account to meet the requirements of Section 209 of the Companies Act 1956 so as to give true and fair view of the state of affairs of the company. The accounts maintained by the company to meet the provisions of Section 209 are audited by statutory
Statutory Auditors audit the books of accounts maintained by Corporation and present their audit report annually as per requirements of section 227 of the Companies Act 1956. MSRDC prepares its account and financial statements at historical cost on the basis of going concern so as to comply in all material aspects with applicable accounting principles in India, the mandatory accounting standards issued by Institute of Chartered Accountants of India and the relevant provisions of the Companies Act 1956. Significant accounting policies followed by the company in preparation of its accounts is annexed herewith. MSRDC is using accounting software package named ‘Tally’ for day to day accounts related works. All books of accounts and vouchers are computerized. Annual accounts compiled in terms of above provisions and auditor’s report issued by statutory auditors and comments of Comptroller and Auditor General of India in terms of provisions of section 619(4) are placed on the table of legislature from time to time. MSRDC also plans to commence hosting its annual accounts and audit reports on its web site.

**Basis of Preparation of Accounts:** Financial statements have been prepared at historical cost on the basis of a going
concern so as to comply in all material aspects with applicable accounting principles in India, the mandatory Accounting Standards issued by the Institute of Chartered Accountants of India and the relevant provisions of the Companies Act 1956. The Company generally follows the mercantile system of accounting and recognizes income and expenditure on accrual basis, except those with significant uncertainties such as Interest on delayed payment of toll, Interest on Machinery and Mobilization Advance etc. Difference between the actual results and estimates are recognized in the period in which the results are known or materialized.

(A) Fixed Assets: Fixed Assets are stated at Original cost of acquisition/construction, including freight, duties, taxes and other expenses incidental to installation, acquisition or improvement. Lease hold assets which are transferred to the Corporation by GOM (hereinafter referred to as “GOM”) at nominal cost are shown at revalued cost, including Lease Premium paid.

Fixed Assets:
- Expenditure incurred and advances given for acquisition of fixed assets during the period of construction of projects and are carried forward under the respective project accounts as Capital Work in Progress and includes expenses incurred and incidental to implementation of projects.
• Net Interest paid on borrowed funds for projects in accordance with Accounting Standard - 16 on Borrowing Costs issued by the Institute of Chartered Accountants of India.

• Expenditure on renewal and/or modernization of fixed assets, resulting in significant improvement in productivity or operation efficiency is capitalized with assets concerned.

(B) Depreciation: *Depreciation is provided as follows:*

• Leasehold assets are being amortized over the period of Lease.

• Build Operate Transfer (BOT) projects assets and assets where the toll collection period is dependent on the recovery of costs, are amortized on a pro-rata basis over the period beginning from the month the asset is put to use till the time the Corporation is entitled to collect revenue under the Concession agreement/arrangement.

• Other assets are depreciated on straight Line Method at the rates and in the manner provided for in Schedule XIV to the Companies Act, 1956. Depreciation on revalued component of the Fixed Assets is transferred from the revaluation reserve account.
- Depreciation on additions/disposals of the fixed assets during the year is provided on pro-rata basis according to the period during which assets are put to use.

(C) Investments: Long term Investment are stated at cost. Provisions for diminution in the value of investment are made in case diminution is considered other than temporary. Current Investments are stated at lower of cost or Market value.

(D) Prior Period Adjustments: As per the Accounting Standard – 5, issued by the Institute of Chartered Accountants of India, Prior Period Adjustments as a result of errors or omission in the preparation of Final Statements of one or more prior periods are separately disclosed in Profit and Loss Account.

(E) Revenue Recognition:

(F) Toll Collection:
- Toll receipts, net of claims and expenses towards repairs and maintenance thereof, transferred by the GOM in respect of the 44 bridges to the Corporation, has been treated as a Capital Receipt and Credited to Capital Reserve in terms of Accounting Standard - 12 on Accounting of Government Grants issued by the Institute of Chartered Accountants of India. The underlying assets on which the GOM has collected toll are not accounted for
in the books of account, as they do not belong to the corporation.

- Toll income in respect of the completed projects, belonging to the Corporation is recognized as income on accrual basis except those with significant uncertainties.

- Income from toll securitization is accounted on time basis.

- Toll income in respect of projects, wherein the cost incurred exceeds 25% of Project Cost is recognized as income wherever authorized.

**Cess:** Dues from GOM towards additional tax on petrol & diesel cuss are accounted on accrual basis.

**Dividend:** Dividend income is recognized when right to receive payment is established.

**Lease Rental:** Incomes from lease rental are accounted on time basis.

**(G) Borrowing Costs:** Borrowing Costs includes cost of Bonds issue, guarantee commission payable, interest on long term borrowings, loan processing charges, after deducting income from temporary investment, interest on advances to contractors and dividends received.
(H) Impairment of Assets: The Company identifies impairable assets based on cash generating asset for each project concept at the yearend in term of Para-5 to 13 of AS – 28 issued by ICAI for the purpose of arriving at impairment loss thereon, if any, being the difference between the book value and recoverable value of relevant assets. Impairment loss when crystallizes is charged against revenue of the year.

(I) Miscellaneous Expenditure: Miscellaneous Expenditure includes preliminary expenses and deferred Revenue expenditure: Preliminary expenses are amortized over a period of 10 years. Borrowing costs related to project assets which are substantially completed in parts and put to use before the full project assets is completed, are treated as deferred revenue expenditure to be amortized over a period of 5 years following the year in which the project is fully completed to achieve its entire economic potential.

(J) Contingent Liabilities: Contingent liabilities are disclosed by way of notes to the accounts.

(K) Retirement / Staff Benefits: Liability for companies contribution in respect of mandatory retirement and other staff benefits such as provident fund, family pension fund and pension contribution fund whenever applicable is accounted for on cash basis. Provision for Gratuity and leave Benefit is made on the basis of actuarial valuation.
(L) **Foreign Currency Transaction:** Transactions in Foreign Currencies are recorded at the Exchange Rate prevailing on the Transaction date.

(M) **Government Grants:** Government grants/support received from Government towards assets/projects undertaken by the Corporation are treated as Capital Reserve – Government grant. Some of the Government grants are received in the form of complete and incomplete assets, which are transferred to the Corporation. The costs of assets, which have been already incurred by the Government, are treated as Capital Reserve (Grant in Kind). In terms of Accounting Standard AS-12 on Deferred Government Grant issued by Institute of Chartered Accountant of India, the Corporation has recognized the proportionate amount of such grants towards depreciation in its profit and loss account.

(N) **Deferred Tax:** Deferred tax is recognized on timing differences; being the differences between the taxable incomes and accounting income that originate in one period and are capable of reversal in one or more subsequent periods. Deferred tax assets subject to the consideration of prudence are recognized and carried forward only to the extent that there is a reasonable certainty that sufficient future taxable income will be available against which such deferred tax assets can be realized. The tax effect is
calculated on the accumulated timing difference at the yearend based on the tax rates and laws enacted or substantially enacted on the balance sheet date.

**MSRDC - Commercial Department:**

The Commercial Unit has been established in January 2003 to monitor the various commercial activities of the Corporation. The Commercial Unit of MSRDC works under the supervision of Joint Managing Director. The Commercial Unit of the MSRDC is handling the commercial exploitation of various assets of MSRDC for revenue generation purpose. The Commercial Unit is dealing with contracts of pay & park schemes at the spaces below flyovers, advertisements in and outside Mumbai, beautification schemes of space below flyovers on Built, Operate & Transfer (BOT) Model, allotment of land for petrol pumps and wayside amenities, development of land along Mumbai Pune Expressway etc. As per the decision taken in the meeting of Cabinet Committee for Infrastructure, the Govt. of Maharashtra has authorized MSRDC to utilize space above and below flyovers to generate revenue from commercial exploitation of the said space below and above the flyover. MSRDC has been declared as an ‘Entrepreneur’ for the flyovers. The Corporation uses this revenue for recovery of expenses incurred for the execution of projects and formulation of such public purpose projects as directed by Govt. Pursuant to the said Government Resolution, the Commercial Section has started utilizing the space below
and above the flyovers in Mumbai Region which are as follows:

(A) Mumbai Region: MSRDC has constructed 32 flyovers and 4 subways in Mumbai Region. Apart from these, 5 flyovers were constructed by PWD. As per the Govt. Directives, the right for commercial utilization of space below and above these 5 flyovers is also vested with MSRDC. In Mumbai Region the commercial utilization is carried out by way of following kind of projects:

- **Pay & Park schemes and beautification schemes:** Wherever possible space below flyovers has been and is being utilized for pay & park scheme. The said pay & park scheme is in operation at 18 flyovers.

- **Advertisement:** MSRDC is utilizing the space above the flyovers for generation of revenue by way of advertisements on the flyovers, on electric poles & on kiosks. MSRDC has awarded contracts for advertisement on 33 flyovers, 3 toll plazas & 3 subways.

- **Beautification:** The beautification has been carried out by awarding contract by public tenders at 7 locations on BOT Basis. The contractors in return are allowed to display the small logos on the beautified sites.
(B) Mumbai Pune Expressway: On Mumbai Pune Expressway, MSRDC has allotted Food Malls and Petrol Pumps on lease to leading Oil Companies through competitive bidding.

- Advertisement: MSRDC has awarded advertisement rights at all the Underpasses and Unipoles by competitive bidding.

- Land Development along MPEW: There are pockets of land along MPEW i.e. Sanjgaon (about 25 he) and Kusgaon (about 24 he). These pockets of land will be leased out for longer contract period and a tender to that effect has been floated & will be finalized in due course.

(C) Road Development Projects (IRDP): The advertisement rights on IRDP Projects like IRDP Solapur, IRDP Baramati are also successfully utilized. The IRDP Projects of Pune, Amravati etc. are being explored for revenue generation.

MSRDC - Secretarial Department:

Secretarial Department is stationed at Head Office of the Corporation. It has got on its roll One Company Secretary, One Deputy Company Secretary, One Stenographer and One Peon.

- The functions and the duties of the Department, inter-alia, include-
1. To seek compile and provide agenda to the Board/Committee for the meeting of the Board of Directors/ Committee Members.

2. To seek, compile and dispatch notices of the General Meetings to the shareholders and others.

3. To draw minutes of the Board/Committee/General Meetings and seek approval of the Chairman.

4. To file returns with the Registrar of Companies.

5. To maintain/ preserve secretarial records required to be maintained under the Companies Act, 1956.

6. To advise the Board of Directors and Officers of the Corporation on the question, on demand/ requisition relating to the Companies Act, 1956.

7. To affix common seal as authorized by the Board, from time to time and

8. Bonds – matters relevant to rating of the Corporations’ Bonds, appointment of Rating Agency, R&T Agent, Trustees etc. including issue, allotment, payment of interest, redemption, attending to bondholders complaints/ correspondence etc.

9. Complying with NDSL/CDSL formalities.
MSRDC - Engineering Department:

MSRDC is a ‘Road Development Corporation’ and an undertaking of Government of Maharashtra, with a mandate to execute road development works in the state of Maharashtra. MSRDC embarked immediately to its task after formation and executed Projects of international significance by using State of art Technology. The Iconic structures like the Mumbai Pune Expressway and the Bandra-Worli Sea Link are the examples which exhibit MSRDC’s sincere efforts. It is not an exaggeration to state that these structures are like feathers in the cap of MSRDC. MSRDC staff, over a period of time, has invested huge intellectual resources in making these projects to see the light of the day and thus, it is an undisputed fact that MSRDC now houses engineers who are always ready to take up challenging tasks which underlines the fact that ‘Engineering’ is the base of development, progress, expansion and growth of the State and the whole Nation as well. Thus, MSRDC is proud of its qualified, experienced and efficient Engineers in its Engineering Cell. Having said so, MSRDC is now looking up for building similar structures which is being planned to have a Garland Expressway around Mumbai. MSRDC is looking ahead taking up more and more such massive projects, mainly on B.O.T. basis in the near future depending without deviating from its objectives, vision, and set an example to the engineers.
MSRDC - Toll Monitoring Department:

A separate Toll Monitoring Unit has been established from April 2002 to monitor the toll collection work. The PWD had earlier resolved that the toll collected would be remitted to the MSRDC. The PWD has subsequently raised the limit of levying the toll on the works costing Rs. 100.00 lakhs.

Duties and responsibilities of Toll Monitoring Unit:

- Submission of proposals to Government for issue of toll notifications and pursuance.
- Floating of tenders for collection of toll and fixing agencies.
- Monitoring the toll receipt.
- Scrutinizing claims of various toll collecting agencies and put for approval by competent Authority.
- Action against the defaulters as per contract conditions.
- Preparing para wise replies to the Court cases and follow-up till the verdict of court.
- Correspondence with regional C.E. & S.E.’s of Camp Offices of MSRDC regarding toll collection work.
- Correspondence with M.L.A.s, M.P.s and other people related with toll matters. Giving replies to queries under Public Information Act.
Performance Evaluation of MSRDC:

MSRDC has constructed 32 flyovers and 4 subways in Region. Apart from these, 5 flyovers were constructed by PWD. As per the Govt. Directives, the right for commercial utilization of space below and above these 5 flyovers is also vested with MSRDC. In Marathwada Region the commercial utilization is carried out by way of following kind of projects:

- **Pay & Park schemes and beautification schemes:**
  Wherever possible space below flyovers has been and is being utilized for pay and park scheme. The said pay and park scheme is in operation at 18 flyovers.

- **Advertisement:** MSRDC is utilizing the space above the flyovers for generation of revenue by way of advertisements on the flyovers, on electric poles and on kiosks. MSRDC has awarded contracts for advertisement on 33 flyovers, 3 toll plazas and 3 subways.

- **Beautification:** The beautification has been carried out by awarding contract by public tenders at 7 locations on BOT Basis. The contractors in return are allowed to display the small logos on the beautified sites.
Table No. 5.01:
On-going projects undertaken by MSRDC. (Rs. Crore)

<table>
<thead>
<tr>
<th>Name of the Project.</th>
<th>Estimated Project Cost</th>
<th>Expenditure up to 31st March, 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improvement of Nagpur-Aurangabad-Sinnar-Ghoti Road</td>
<td>722</td>
<td>711.88</td>
</tr>
<tr>
<td>Road Works in Nagpur</td>
<td>422</td>
<td>397.66</td>
</tr>
<tr>
<td>Road Works in Aurangabad</td>
<td>142</td>
<td>111.93</td>
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<tr>
<td>Widening of Nagpur-Katol-Jalalkheda Road</td>
<td>11</td>
<td>2.71</td>
</tr>
<tr>
<td>Road Works in Kolhapur</td>
<td>172</td>
<td>4.40</td>
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<td>Integrated Road Development Program – Achalpur</td>
<td>40.34</td>
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<tr>
<td>Integrated Road Development Program – Sangli</td>
<td>N.A.</td>
<td>0.12</td>
</tr>
<tr>
<td>Mass Rapid Transport System – Nagpur</td>
<td>N.A.</td>
<td>2.07</td>
</tr>
<tr>
<td>Mass Rapid Transport System – Thane</td>
<td>N.A.</td>
<td>6.28</td>
</tr>
<tr>
<td>Versova Bandra Sea Link Project</td>
<td>2,300</td>
<td>2.07</td>
</tr>
<tr>
<td>Modernization of Border Check</td>
<td>1,000</td>
<td>23.78</td>
</tr>
<tr>
<td>Water Transport Project</td>
<td>1,390</td>
<td>3.71</td>
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<tr>
<td>Western Freeway Sealink</td>
<td>4,143</td>
<td>11.78</td>
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<td>Mumbai Urban Transport Project</td>
<td>471.73</td>
<td>318.82</td>
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<td>Mumbai Urban Infrastructure Project</td>
<td>393.40</td>
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<tr>
<td>Extended – Mumbai Urban</td>
<td>2,065</td>
<td>207.64</td>
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<tr>
<td>Integrated Road Development</td>
<td>350</td>
<td>4.14</td>
</tr>
</tbody>
</table>
Importance of Road Sector in Indian Economy:

Road sector is hardly seen as a Game Changer for an economy. The transformation of an economy from lower income to upper middle income takes many decades. There are countries which have grown very fast with higher GDP growth rate for a few years but only very few countries could sustain the higher GDP growth rate for a decade. If one closely looks into their growth pattern, then one finds that one sector which has fueled these economies is none other than the road sector. In today’s scenario like any other fast growing economies, India has to constantly work at meeting the new challenges that arises from both outside and inside the country such as global financial crisis, international oil prices, scarcity of resources, etc. Therefore, road sector may also, like any other sector of the economy, have to perpetually re-evaluate the existing planning and policies so as to constantly change and move on the challenges of faster growth rate.²

The current global economic transition demands a visionary approach in the road sector. The planning framework in the road sector needs approach towards preparedness in short-medium range future, medium range future and medium to long term future. This will help in
assessing and assimilating impact of changing investment environment as well as impact of new technologies besides preparing the sector for plausible worst case scenario. This demand for having a planning framework which allow adapting and evolving a system that ensure either new sources of the material resources or there is enough incentive for innovations in developing the substitutes. However, growth will be hampered unless such institutional adaption and reforms are not thought of. The planning in the road sector demands preparedness towards tackling global environmental risks as well as global economic risks. It should have ability to adapt/or recover from economic and environmental risks, as today’s global challenge is for resource and efficient growth based development. The demand for resources is growing faster than the deposits of their reserves and therefore, there is an urgent need to explore innovative solutions to boost efficient practices and minimize unsustainable consumption patterns.

However, the risk management effectiveness in the road sector planning process is almost totally missing. The planning process in this sector cannot continue with risk – off mindset if we have to restore confidence in investors and grew globally with an aim to seize transformational opportunities that can improve chances of achieving our collective goal of development. The planning process may also consider the Debt Dynamics and Fiscal Consolidation so that a closer look to the same may help in dealing
effectively with fiscal contraction at different stages and at multiple levels to maintain the targeted growth in the sector. This may also require close scrutiny of credit information / details of the private sector/private sector companies. Such a process will help in assessment of risk taking behavior of different stakeholders as well as in maintaining fiscal sustainability in the medium term which will act as a stimulus to the economy. In case the organization increases the spending when it does not have fiscal room, it would undermine investors’ confidence and that would aggravate the situation. Therefore, the planning process should be such that it spread confidence not only in the investors / entrepreneurs but also among the community and other sectors of the economy. It may not be out of the place to mention that the road sector has not attempted to have investment from the other segments of the economy.
Road Development in Maharashtra:

Table No. 5.02:

Road length by type of roads in Maharashtra State.

<table>
<thead>
<tr>
<th>Sr.</th>
<th>Year</th>
<th>National Highways</th>
<th>State Highways</th>
<th>Major District Roads</th>
<th>Other District Roads</th>
<th>Village Roads</th>
<th>All roads.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2001-02</td>
<td>3688</td>
<td>33212</td>
<td>46751</td>
<td>43696</td>
<td>89599</td>
<td>216946</td>
</tr>
<tr>
<td>2</td>
<td>2002-03</td>
<td>3712</td>
<td>33258</td>
<td>46817</td>
<td>43715</td>
<td>90248</td>
<td>217750</td>
</tr>
<tr>
<td>3</td>
<td>2003-04</td>
<td>3857</td>
<td>33419</td>
<td>46901</td>
<td>44237</td>
<td>92357</td>
<td>220771</td>
</tr>
<tr>
<td>4</td>
<td>2004-05</td>
<td>4109</td>
<td>33501</td>
<td>46950</td>
<td>45137</td>
<td>94657</td>
<td>224354</td>
</tr>
<tr>
<td>5</td>
<td>2005-06</td>
<td>4367</td>
<td>33571</td>
<td>48987</td>
<td>45226</td>
<td>99279</td>
<td>231430</td>
</tr>
<tr>
<td>6</td>
<td>2006-07</td>
<td>4367</td>
<td>33675</td>
<td>49147</td>
<td>45674</td>
<td>100801</td>
<td>233664</td>
</tr>
<tr>
<td>7</td>
<td>2007-08</td>
<td>4367</td>
<td>33800</td>
<td>49393</td>
<td>45886</td>
<td>102149</td>
<td>235595</td>
</tr>
<tr>
<td>8</td>
<td>2008-09</td>
<td>4367</td>
<td>33933</td>
<td>49621</td>
<td>46143</td>
<td>103604</td>
<td>237668</td>
</tr>
<tr>
<td>9</td>
<td>2009-10</td>
<td>4376</td>
<td>34102</td>
<td>49901</td>
<td>46817</td>
<td>104844</td>
<td>240040</td>
</tr>
<tr>
<td>10</td>
<td>2010-11</td>
<td>4376</td>
<td>34103</td>
<td>49936</td>
<td>46897</td>
<td>106400</td>
<td>241712</td>
</tr>
</tbody>
</table>


Table No5.02 provides the information about road length by type in Maharashtra state. It is concluded from the table that in the year 2001-02 National highways was 3,688 Km. in Maharashtra state increased up to 4,376 Km. in the year 2010-11; State highways was 33,212 Km. in the year 2001-02 was increased up to 34,103 Km. in the year 2010-11; The figures of major district shows 46,751 Km. in the year 2001-02 was increased up to 49,936 Km.; Other district roads was 43,696 Km. was increased up to 46,897 Km.; and Village road shows increase from 89,599 Km. in 2001-02 to 1,06,400 Km. in 2010-11 in Maharashtra State.
Road Development in Marathwada:

National Highways, State Highways, Major District Roads, Other District Roads and Village Roads constitute the road network in the state. The road development works in the State are carried out by Public Works Department (PWD) of the State Government, Zilla Parishads (ZP), Municipal Corporations / Municipal Councils/ Nagar Panchayats (NP), Cantonment Boards (CB), Maharashtra State Road Development Corporation (MSRDC), Forest Department, Maharashtra Industrial Development Corporation (MIDC) and City and Industrial Development Corporation (CIDCO). The total road length maintained by PWD and ZP (excluding internal road length maintained by local bodies) at the end of March, 2011 was 2.41 lakh km of which surfaced road length was 2.21 lakh km (91.5 per cent). The category-wise and region-wise road length maintained by PWD and ZP is given in Table No.5.03.
Table No. 5.03:
Road Length maintained by PWD and ZP in Maharashtra and Marathwada.

<table>
<thead>
<tr>
<th>Category</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Highway</td>
<td>4367</td>
<td>4376</td>
<td>4376</td>
</tr>
<tr>
<td>State Highway</td>
<td>33933</td>
<td>34102</td>
<td>34103</td>
</tr>
<tr>
<td>Major District Roads</td>
<td>49621</td>
<td>49901</td>
<td>49936</td>
</tr>
<tr>
<td>Other District Roads</td>
<td>46143</td>
<td>46817</td>
<td>46897</td>
</tr>
<tr>
<td>Village Roads</td>
<td>103604</td>
<td>104844</td>
<td>106400</td>
</tr>
<tr>
<td>Total</td>
<td>237668</td>
<td>240040</td>
<td>241712</td>
</tr>
<tr>
<td>Of which Marathwada</td>
<td>52385</td>
<td>53204</td>
<td>53468</td>
</tr>
</tbody>
</table>

Source: PWD Government of Maharashtra.

The above No. 5.03 shows the road length maintained by PWD and ZP in Maharashtra and Marathwada. It is concluded from the above table that in the year 2011 National highways maintained by PWD and ZP was 4,376 Km; State highways 34,103 Km.; Major district roads 49,936 Km.; Other District roads 46,897 km.; and Village roads 1,06,400 km. Out of 2,41,712 Km. 53,468 km roads was in Marathwada region.

Problems of Road Transport in Marathwada Region:

Road transport of the Marathwada region is facing a number of problems. Some of these problems are discussed below:

1. Most of the roads are unsurfaced (42.65%) and are not suitable for use of vehicular traffic. The poor
maintenance of the roads aggravates the problem especially in the rainy season. According to one estimate there is about per year loss of Rs. 200 crores on the wear and tear of the vehicles due to poor quality of roads. Even the State Highways suffer from the deficiencies of inadequate capacity, weak pavement, poor riding quality, distressed bridges, unabridged level crossings, congested cities (lack of by-pass roads), lack of wayside amenities and safety measures.

2. One major problem on the roads is the mixing of traffic. Same road is used by high speed cars, trucks, two wheelers, tractors, animal driven carts, cyclists and even by animals. Even highways are not free from this malady. This increases traffic time, congestion and pollution and road accidents.

3. There are multiple check-posts, toll tax and octoroon duties collection points on the roads which bring down the speed of the traffic, waste time and cause irritation to transporters. Rate of road taxes vary from state to state and inter-state permits are difficult to obtain.

4. Way side amenities like repair shops, first aid centres, telephones, clean toilets, restaurants, rest places are lacking along the roads. There is very little attention on road safety and traffic laws are will fully violated.
5. There is very little participation of private sector in road development in Marathwada because of long gestation period and low-returns. The legislative framework for private investment in roads is also not satisfactory. The road engineering and construction are yet to gear themselves up to meet the challenges of the future.

6. There has been no stability in policy relating to highway development in the region. It has changed with the change of government. There are a number of agencies which look after the construction and maintenance of different types of roads. Since there is no co-ordination between these agencies their decisions are often conflicting and contradictory.

7. There is shortage of funds for the construction and maintenance of roads. Instead of giving high priority to this task the percentage allocation has decreased over the years. While percentage share of plan allocation was 6.9 per cent in the First Five Year plan it has come down to less than three percent in the Eighth Plan.

Road capacity in Marathwada is very low with most national highways having two lanes or less. Congestion of roads is a major problem with a quarter of all of highways being congested; poor quality of the roads and poor maintenance remains an impediment to the growth of the
sector with only minimalistic maintenance needs being met. This has led to the deterioration of roads and high transport costs for users. The demand for road freight transport is linked to expanding domestic supply and transport infrastructure is the key to its ability to keep pace with the demand. The road network in Marathwada though extensive is still inadequate and suffers from a number of deficiencies like inability to handle high traffic density, poor conditions of roads etc. The average productivity of a truck is an abysmal 200 kms a day which could be increased to 350 - 400 kms just by reduction in congestion.

Investment in transport must reflect the need to make up for existing capacity shortages and also to allow for growth in demand. Study show that transportation of goods by road is too much time consuming. Whether it is hand-woven saris from Aurangabad or cow’s milk from Osmanabad, getting any product from one point to another is an extremely painful experience. In fact as a result of the delays most of the perishable products, nearly 40 per cent, get spoiled before delivery. Another factor affecting the efficiency of road freight transport is that it is run mostly by the private operators most of whom own single truck. The trucking industry is handled by so many players such as truck drivers and owners who are sometimes different from operators, forwarders, booking agents, brokers, private financiers, etc. Transporters with fleets smaller than five trucks account for over two-thirds of the total trucks owned
and operated in India and make up 80 per cent of revenues.\textsuperscript{6}

The government policies on deregulation and other economic reforms have augmented road freight transport to some extent in the last decade. But lack of privatization has curtailed the availability of resources which can bring about a turnaround. The problems faced by this sector are multifarious and the issues and concerns require a multi-pronged solution. The government is taking steps to reform the transport sector which include increasing public funding for transportation in its Five Year Plans, launching National Highway Development Program, Accelerated Road Development Program for the remote areas. The government is also financing the development and maintenance of roads by creating a Central Road Fund (CRF). Finally steps are being taken to enhance sector capacity and improve efficiencies through clear policy directive for greater private sector participation (PPP).

**Road Sector Planning:**

The road sector is the highly sensitive to the traffic growth and traffic projection and in case they are not captured effectively, the risk increases especially when the project is on PPP mode. It may not be out of the place to mention that sustainability of a road alignment road facility so created heavily depends on the credibility of traffic growth projection. The solution lies in moving from the
linear approach to a network developmental approach so that the integrated traffic circulation plan can be achieved to facilitate faster implementation of road projects. There is also a solution based approach by way of developing Shelves of Projects with their inters priorities for implementation. Such a planning system may also help in effectively and optimally achieving land acquisition, shifting utilities & environmental clearances which are generally considered to be the major impediments if proper time process is not allocated to these activities.

The planning process should also account for the maintenance needs as an integral part of the road developmental project so that the concept of asset management can be practiced in an earnest manner, which may help in maximizing the return to the public and the society. The cost constraints in the maintenance activities of the road and the extremely challenging operational conditions necessitates introduction of cutting edge maintenance technologies which if adopted will improve overall road asset operational efficiency. However, the positives in the planning get eroded by delay in implementation of the projects. The delay in the road developmental project tantamount to deficiency in services and have other irreversible impact on the overall system. There is a need to have an inbuilt system of integrated self-setting key performance indicators in the overall implementation process. The planning process, therefore, for the road sector
projects should also capture the implementation process in a realistic manner and effectively captures the actionable areas. The planning in road sector may help in establishing the dreams of a society and its people by improving the quality of life and help in self-reliance at local levels. The Planning in road sector is a technical art and its complexities can be addressed only with right acumen and with positive approach. Not out of right practice comes right thinking, but out of right thinking comes right practices.
References:


2. Maharashtra State Road Development Corporation Limited Information Memorandum - Maharashtra State Road Development Corporation Limited, Mumbai.

3. https://www.msrdc.org

