

# Mumbai-pune expressway



**ASSIGN  
BUSTER**

The Mumbai-Pune Expressway has always been a project of high priority for the Maharashtra State Government. The traffic on the Mumbai-Pune section of National Highway 4 is expected to increase drastically. The distance between the two cities is some 180 km and it takes about five hours to cover it under good traffic conditions. However increasingly, and during the monsoon, traffic on the Mumbai-Pune road is very high and frequent accidents block the narrow and winding curves of the two lane highway. Landslides in the region are very frequent due to the monsoon rains. The resulting delays and traffic blockages turn a 5-hour journey to one that would involve anywhere between 10 to 15 hours. (Sulakshana Mahajan, 2002)

The Government of Maharashtra had been newly elected in 1995 and they were very keen on the early completion of the Mumbai Pune Expressway, as there was prestige value attached to it. It was decided in July 1996 to implement the project as a BOT(Build-Operate-Transfer) project and tenders were prepared appropriately, for which only one bid was received from Reliance India Limited which was rejected as it was double the government budget. In turn the project was awarded to MSRDC. (IITK Indian Institute of Technology Kanpur, 2007)

### **Feasibility Study:**

In 1990, the Government of Maharashtra appointed RITES and Scott Wilson Kirkpatrick of United Kingdom to carry out the feasibility study and they submitted the report with the estimated cost of 240 million USD. The Government then handed over the project to MSRDC in March 1997 on a Build Operate and Transfer basis (BOT) with permission to collect tolls for a period of 30 years. The Government of India received the clearance from the

Ministry of Forests and Environment in November 1997. In order to prepare detailed estimates, designs and bid documents the work was divided into eight phases and each phase was under the supervision of renowned international consultants. (IITK Indian Institute of Technology Kanpur, 2007)

**Features:**

- The Mumbai Pune Expressway also known as the Yashwantrao Chavan Expressway is India's first six lane high speed access controlled tolled expressway.
  
- Spanning a distance of 93kms it connects Mumbai, the financial capital of India and Pune, the neighboring industrial hub city.
  
- The project cost 350 million USD to construct and was completed under the guidance of MSRDC in a time period of 24 months.
  - \* The expressway has four lane wide tunnels at five locations with a total length of 5724m.
  - \* There are separate tunnels for traffic in each direction and these tunnels are provided with modern facilities for ventilation, lighting and fire fighting vehicles.
  - \* This work was entrusted to the Konkan Railway Corporation Ltd on 8 December 1997.

- **Benefits of the Expressway:**

Many aspects of the Expressway make it an engineering marvel.

- \* No signals along the 93km route and no blind curves.
- \* Reduction in accidents.
- \* Reduction in travel time.

- \* Saving of fuel consumption.
- \* Faster crossing of the Khandala Ghat.
- \* Reduction in pollution.

- **Issues faced in building the Highway:**

- The mountainous terrain around the area, posed a huge threat in building the Expressway.
- As five tunnels had to be constructed, there was a lot of difficulty in drilling through the mountains as the rock was extremely hard.
- Around 500 trees which got in the way of the construction had to be uprooted and transplanted into pits dug at other locations.
- Vast areas of rich, fertile land had to be cleared into farmlands in interior areas.
- Difficulty in accessing the work areas to supply raw materials.
- Nature of soil in the area caused problems in building roads, due to which concrete roads had to be built.
  - \* Environmental Concerns:
    - An Environment Impact Assessment was conducted by RITES and they identified the following concerns:

The construction of the Expressway would impact on the quality of water in the rivers flowing in nearby areas, which were being used for drinking and industrial Purposes. It would also result in loss of forests and rare flora, effect on wild life in the Ghats and lead to landslides in the future.

- The difficulties faced due to rehabilitation of the human settlements.

**Reasons for the successful implementation by MSRDC:****Workforce:**

MSRDC hired their workforce from Public Works Department and CIDCO (City and Industrial Development Corporation of Maharashtra), most of whom had extensive experience in the development of large-scale projects. They also took employees from the revenue department on deputation to help with the land acquisition process. (IITK Indian Institute of Technology Kanpur, 2007)

**Appointment of Project Management Consultants:**

A Steering Committee was set up in order to recommend different technical standards to be adopted, to prepare geometric standards, and to help MSRDC in deciding upon various provisions of tender documents and related matters. The Steering Committee proposed that Project Management Consultants (PMC) be appointed for preparing and ensuring consistency in design standards, cost estimates and tender documents, and to supervise the construction work as and when it began. In addition it was also thought that if the technical aspects of the projects were taken care of by PMC's, then MSRDC could concentrate on the task of coordinating the various administrative requirements such as getting clearances, raising finances etc.

Committees were to be formed to perform each of the tasks by drawing personnel from each of the PMC's to ensure consistency. Since the most important skill for a PMC was considered to be Technical Skill, the selection criteria were such that 75% importance was assigned to the technical bid and 25% to the financial bid. Another condition was imposed that 1 PMC will work on only 1 section of the Expressway to avoid excess load on a PMC. (IITK Indian Institute of Technology Kanpur, 2007)

**Facilities given by MSRDC to Consultants and Contractors:**

MSRDC and the Government of Maharashtra provided several facilities to contractors and consultants in order to ensure quick and efficient working. The expenditure on these services helped reduce production costs by 8-10% as a result of speedy completion of work. Some of the facilities given were like:

- \* Project Management Consultants had their own site offices set up with standard equipment like Xerox, telephone, printer provided at MSRDC's expense.
- \* Increase in the price of steel, bitumen and cement will be absorbed by MSRDC.
- \* Custom duty is to be reimbursed for import of new machinery.
- \* Land provided for site facilities was given to the contractor free of cost.
- \* As the stretch of construction was 93 kms, MSRDC prompted oil companies to set up petrol pumps.
- \* MSRDC took the responsibility to divert all utility services like telephone cables, water pipelines and electrical lines coming in the construction stretch.

- **Litigation:**

MSRDC adopted a very proactive stand towards litigation right from the start and they appointed a panel of experts for handling cases. They also made sure they responded to court orders in very less time which helped reduce the delays in re-seeking appropriate dates. (IITK Indian Institute of Technology Kanpur, 2007)

**References:**

- Roadtraffic-technology. com. (2009) Mumbai-Pune Expressway, India.  
Available from: <http://www.roadtraffic-technology.com/projects/mumbai/> [Accessed: 11/12/2009]

Maharashtra State Road Development Corporation Ltd. (2007) MSRDC – Project – Mumbai Pune Expressway. Available from: [http://www.msrdc.org/Projects/Mumbai\\_Pune\\_Expr.aspx](http://www.msrdc.org/Projects/Mumbai_Pune_Expr.aspx) [Accessed: 11/12/2009]

Wikipedia (2009) Mumbai Pune Expressway. Available from: [http://en.wikipedia.org/wiki/Mumbai-Pune\\_Expressway](http://en.wikipedia.org/wiki/Mumbai-Pune_Expressway) [Accessed: 11/12/2009]

ExpressIndia (2000) The Mumbai-Pune expressway. Available from: <http://www.expressindia.com/news/fe/daily/20000730/fec30031.html> [Accessed: 11/12/2009]

Dandekar/Mahajan EPW Paper (2001) MSRDC and The Mumbai-Pune Expressway: A Sustainable Model for Privatizing Construction of Physical Infrastructure? Available from: [http://sdmahajan.tripod.com/epw\\_paper.pdf](http://sdmahajan.tripod.com/epw_paper.pdf) [Accessed: 11/12/2009]