



1. Project Data:		Date Posted : 01/11/2005	
PROJ ID: P009995		Appraisal	Actual
Project Name: State Highways I (Andhra Pradesh)	Project Costs (US\$M)	485.5	424.7
Country: India	Loan/Credit (US\$M)	350	332.9
Sector(s): Board: TR - Roads and highways (97%), Central government administration (3%)	Cofinancing (US\$M)	0	0
L/C Number: L4192			
	Board Approval (FY)		97
Partners involved :	Closing Date	01/31/2003	06/30/2004
Prepared by :	Reviewed by :	Group Manager :	Group:
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2. Project Objectives and Components			
a. Objectives			
The objectives of the project were to:			
(a) reduce transport costs and transport constraints on economic activity; and			
(b) improve the state's institutional capabilities to manage road programs and assets.			
b. Components			
The project consisted of the following components:			
<u>Widening and Strengthening of Priority Roads</u> (appraisal cost US\$ 400.6 million, actual cost US\$ 344.3 million). This included civil works for widening and strengthening of about 1,400 km of high-traffic volume State Highways (SHs) and Major District Roads (MDRs) of the State primary core network; consultancy services for engineering designs and supervision of works; and land acquisition, resettlement and rehabilitation assistance to the project affected people.			
<u>Maintenance of State Roads</u> (appraisal cost US\$73.7 million, actual cost US\$ 77.5 million): Reduce backlog of periodic maintenance on about 2,000 km of state highways and major district roads; pilot performance based road maintenance contracts on 900 km of roads to demonstrate more effective routine maintenance practices; and consulting services; and emergency maintenance of 20 km of national highway.			
<u>Institutional Reform and Strengthening</u> (appraisal cost US \$8.8 million, actual cost US\$ 0.58 million): This component included consultancy services for development and implementation of an institutional strengthening program for the Roads and Building Department (RBD); development and implementation of planned Road Fund; RBD staff capacity building and training program, equipment support, and other services.			
<u>Repayment of Project Preparation Facility</u> (appraisal cost US \$2.4 million, actual cost US\$ 2.35 million).			
c. Comments on Project Cost, Financing and Dates			
The appraisal estimate of the total project cost was US\$485.5 million, with an IBRD share of financing of US\$350.0 million. The ICR estimate of the project cost is US\$424.71 million. The reduction in cost is mainly due to appreciation of US\$ against the Indian Rupee, cancellation of one road improvement package, and savings under the consultancies and goods categories. At the request of the Government of Andhra Pradesh, the Bank had cancelled US\$17 million from the loan in June 2004. The loan period was extended twice (total duration of seventeen months) mainly to allow for the completion of 15 Railways Over Bridges (ROBs) and some small road sections involving land acquisition.			
3. Achievement of Relevant Objectives:			

The objective to reduce transport costs and transport constraints on economic activity was achieved through (a) the improvement in road condition; (b) reduction in congestion level, travel time, and fuel consumption; and (c) better connectivity of the minor roads with the state road. Appraisal targets for widening and strengthening of about 1,400 km of high-traffic volume State Highways (SHs) were met. Out of a total primary core network of 10,266 km, about 7,330 km of roads were improved during the project period (of which the project funded 3,150 km). Travel time was reduced by 30 to 50% and average travel speed has gone up to 60-70 km per hour from the 30-35 km per hour. Traffic increased substantially, the average traffic growth is about 20% per annum, much above the appraisal estimates of 7-8%.

The objective to improve the state's institutional capabilities to manage road programs and assets was modestly achieved. The RBD staff has improved their skills and business procedures through overseas and local training, and study tours. E-procurement for all civil works more than Rs. 500,000 in value was introduced. A Pavement Management System was established. Road safety engineering measures on RBD roads were implemented.

4. Significant Outcomes/Impacts:

1. Substantial improvement in the condition of road network. The primary core network in poor condition has been reduced from 70% to 28% during the project implementation. Also, the average roughness was reduced to about 2,200 mm per km compared to the pre-project level of more than 4,000 mm per km;
2. Several improvements in the core business processes of RBD were incorporated, including e-procurement, maintenance management, database planning, and quality assurance. RBD decided to scale-up performance based maintenance contracts to all districts starting FY04/05.
3. Private sector participation on BOT basis was also introduced. By project closing, 13 projects costing Rs.1,360 million were completed and 12 projects were under preparation.

5. Significant Shortcomings (including non-compliance with safeguard policies):

- Reforms such as reorganization of the RBD and operationalization of Road Fund, were not implemented.
- Initial implementation of the Environmental Management Plans was weak. This improved considerably through the training of contractors and tighter controls of contract conditions.
- In few cases, difficulties were encountered for tree plantation works due to (a) reluctance of contractors to undertake such works, and (b) inadequate time available under the contract for tree plantation and their subsequent care.

6. Ratings :	ICR	OED Review	Reason for Disagreement /Comments
Outcome :	Satisfactory	Satisfactory	
Institutional Dev .:	Modest	Modest	
Sustainability :	Likely	Likely	
Bank Performance :	Satisfactory	Satisfactory	
Borrower Perf .:	Satisfactory	Satisfactory	
Quality of ICR :		Satisfactory	

NOTE: ICR rating values flagged with '*' don't comply with OP/BP 13.55, but are listed for completeness.

7. Lessons of Broad Applicability:

Several important lessons are identified by the ICR. Five are repeated here for their broad applicability:

- Successful implementation of institutional reforms requires broader involvement of road agency staff and their acceptance of the reforms. The Borrower's commitment for the reforms should be carefully assessed and all crucial decisions should be ensured before a project starts. To ensure adequate focus on the reforms during project implementation, project funding could be divided into different phases, and each phase made contingent on progress with reforms/institutional development initiatives during project implementation, using measurable and agreed performance indicators.
- To ensure adequate enforcement of contract conditions by private sector consultants it is important to introduce a centralized system to share past performance (based on suitable rating criteria) of consultants and their staff amongst various road agencies.
- Capacity building for each contractor is critical. Training facilities for contractors staff, including construction workers and equipment operators should be established/strengthened. Also, training of contractors staff (preferably at the beginning of work) could be included as part of the contract.
- Progress milestones for road works should be fixed as percent road length completed or percent physical

progress, instead of completion of a full road section if the same is unlikely to be fully handed over to contractor due to land acquisition and other problems.

8. Assessment Recommended? Yes No

9. Comments on Quality of ICR:

The quality of the ICR is satisfactory. It is concisely written and the analysis is sound and it provides adequate data to rate the project.