1. Country and sector issues
1.1. Andhra Pradesh (AP) is one of the progressive states of India – its economic, social, health and education indicators are better than the national average and on par with its neighboring states of Karnataka, Kerala and Tamil Nadu. As per the latest census information the population of AP is about 76 million with about 75 percent living in rural areas. Only about 15 percent of the population is below the official poverty line when compared with the country average of about 26 percent. The per capita income of the State is more or less at par with the National average. Though the contribution of primary sector to the State’s GDP is about 25 percent, a majority of the population relies on agriculture for its livelihood. The secondary sector contributes about 25 percent and the tertiary sector, which comprises services, contributes about 50 percent. The contribution of tertiary sector, which also includes the transport services, has been on the rise over the past decade.

1.2. Government of AP (GOAP) has undertaken steps towards better fiscal and economic management and reducing revenue and fiscal deficits, and accelerating economic growth. Some of the important steps taken include the passing of the Fiscal Responsibility and Budget
Management (FRBM) Act 2005 and adopting the Fiscal Correction Path. The state government has rationalized Stamps, Registration and Motor Vehicles taxes by bringing down the rates which have resulted in better compliance and collections. Computerization and e-governance initiatives of the State are also increasing transparency and streamlining record keeping and other procedures; consistent with the Right to Information Act passed by the GOI in 2005. AP is the first state to initiate the process of e-procurement and about 90 percent of the state’s public procurement is done electronically.

1.3. The capacity and quality of the state core road network has improved considerably in recent years. The total road network in the state is 188,568 km long and the road network managed by the Roads and Buildings Department (RBD) in AP is about 68,510 km long and this includes national highways, state highways (SH), major district roads (MDR) and some rural roads. Of these, SH and MDR account for roughly 60 percent of the network. In 1997, from among the SH and MDR, GOAP selected about 10,000 km of roads with high traffic and strategic importance and declared them as the Core Road Network (CRN), and established the Road Development Corporation (RDC) to manage the CRN. About 7,500 km of the CRN have been improved in recent years, either through the first AP State Highway Project (APSHP), which helped improve 3,100 km of state roads, or GOAP’s own funding. In the SH network, double lane roads have increased from 52 percent to 68 percent over the past six years.

1.4. While maintenance spending has increased, it is still not adequate. GOAP spent about Rs.3.7 billion for maintaining existing road assets in the year 2004-05 as against the Rs.5.68 billion estimated requirement per the Finance Commission’s norms for road maintenance. The total provision for State’s road sector in the budget for 2006-07 is Rs.12.1 billion of which the provision for road maintenance is about Rs 4.6 billion (as against a Finance Commission norm of Rs.7.1 billion for the State). This has increased to Rs. 8.3 billion by 2007-08. There is still a gap between the actual needs and the resources provided for capital and maintenance interventions. A recently concluded Road Funding Assessment study suggests that the present road funding requirements for the state, maintenance and upgrading will continue to grow and the present and planned GOAP level of funding will not be adequate, resulting in a growing funding gap. In addition, the RBD and RDC lack expertise in the latest techniques for planning network improvements and maintenance contracting. It is therefore critical for the road agency to focus on developing more effective capacities for road asset management, ensure suitable funding and optimal leverage and efficient utilization of available funds.

1.5. GOAP is keen to use Public Private Partnerships (PPPs) to develop the state’s infrastructure, including high-traffic roads. GOAP passed an Infrastructure Act 2001, and established state-level agencies, including Infrastructure and Investment Department, Infrastructure Corporation of Andhra Pradesh (INCAP), and a PPP Cell in the Department of Finance. GOAP has so far implemented 43 projects, the majority of which have been in the tourism and roads sectors. In order to facilitate development of more road projects on PPP basis, GOAP issued orders for implementation of the toll policy, which sets out the rules for collection fees from users of State Roads and bridges. The toll policy is essentially similar to the toll policy applicable to National Highway projects, with a few notable exceptions.

1.6. At the national level, India has a large PPP program which has accelerated rapidly since 2004. India’s transport PPP program, with investment commitments of over $10.5 billion during 2006 and 2007, is now one of the largest programs in emerging economies. However, in the context of the current global financial crisis, the adverse impact of reduction in availability of debt and risk capital has reportedly slowed down India’s PPP program. The Government of India
GOI and Reserve Bank of India (RBI) have taken several measures to increase availability of funds for PPP infrastructure projects. RBI has reduced the repo rate and credit reserve ratio and relaxed norms for external commercial borrowings, and the central government has allowed India Infrastructure Finance Company Limited (IIFCL) to raise long-term funds through issues government-guaranteed, tax-free bonds, and channelizing them through a re-financing window. In addition, the GOI is discussing with the World Bank a proposed line of credit to the IIFCL of about US$1.2 billion. In the meantime, debt and equity investors have adopted a cautious approach, resulting in higher thresholds for financial attractiveness. Therefore, to be able to attract private partners and achieve financial closures in the future, the structuring of PPP transactions needs to be more financially robust, with adequate cushion to withstand large revenue variations.

1.7. The state has a serious and deteriorating road safety problem which has become a significant public health issue. It is reported that the number of road accidents have increased about 50 percent since 2001, with 13,450 road deaths in 2007 according to police reports. The combination of rapidly growing motorization levels and higher speeds, as a result of better quality of highways, has lead to a growing incidence of accidents, and unless strict measures are taken by the relevant agencies the situation is likely to deteriorate further. The lack of coordination between the multiple agencies involved is a serious issue.

2. Objectives

2.1. The development objective of the project is to improve the state government’s road sector institutional capacity to provide better quality, capacity and safe roads to users in a sustainable manner.

3. Rationale for Bank Involvement

3.1. Bank involvement in the project is in line with the importance accorded by GOAP and nationally to transport infrastructure in boosting economic development. This second road sector project in the state will deepen the Bank’s engagement in the sector and create conditions for sustainability by focusing on issues of road sector financing, private sector participation, preservation of assets, road safety and HIV/AIDS. More specifically the project aims at (i) creating a sustainable framework for road infrastructure development and asset preservation to reduce transport costs and ensure reduction in fuel consumption and emissions through better quality roads, (ii) creating ‘safe’ roads and an institutional and policy framework conducive to the achievement of this agenda, and (iii) developing public sector capacity for improved service delivery in line with the Transport Sector Strategy of the Bank. The Bank can also contribute significantly through sharing of global best practices and innovations in road sector management.

3.2. The project supports the India Country Strategy (CAS) for FY2009-12 outcomes for sustained and inclusive growth by removing road infrastructure bottlenecks for private sector activities and government service delivery. Improvements in road transport will catalyze agricultural and industrial development and improve access to markets, jobs and services to the people of AP, including the poor. In line with the CAS focus, the project aims at supporting the development of institutional arrangements to secure sustainable development results in the road sector. This project also supports the state’s vision for Andhra Pradesh to improve the investment climate and agricultural, mining and IT potentials of the state. In addition, the project supports GOAP’s Road Policy 2005- 2015 for providing efficient, safe and environmentally sustainable road network in support of economic development and poverty reduction in the state.
3.3. The project also contributes to enhancing country systems through the Governance and Accountability Action Plan (GAAP) and Institutional Strengthening Action Plan (ISAP) with a view to adopting the improved system for future program-wide support in the sector. The GAAP lays emphasis on improving information disclosure and quality control mechanisms through the harnessing of existing legislation such as the Right to Information Act and third party monitoring by local engineering schools. The GAAP also incorporates citizen inputs through actions to address citizen complaints and through mandatory user satisfaction surveys. As such, these actions would contribute to enhancing systems, procedures and processes before, during and after project implementation, which will ensure sustainability of investments and better value for public money as well. As part of the Institutional Strengthening Component, the project also provides resources for improving the state’s safeguard policies and procurement and FM systems. The aim is to increase competition and transparency in procurement, and to upgrade the implementing agency’s financial management systems through better delegation of financial powers and use of new tools.

4. Description
4.1. The proposed project comprises the following components:

(a) **Road Improvement Component.** This component comprises two activities designed to upgrade and maintain the CRN: (a) upgrading about 422 km of priority state highways in two phases (277.7 km in Phase I and 147.2 km in Phase II) under public sector financing; and (b) maintenance of 6,073 km of the CRN under Long-term Performance-based Maintenance Contracts (LTPBMC).

(b) **PPP Enabling Support Component:** This component will assist APRDC in developing high density traffic corridors under PPP arrangement, via toll revenues and viability gap support from the Central and state governments in order to make the selected roads financially viable. There are five roads (Chittoor-Puttur, Kurnool-Devanakonda, Kandi-Shadnagar, Mydukur-Jammalamadugu and Jagityal-Peddapalli) totaling 863 km of roads selected for developing under PPP. The loan will finance the costs of (a) transaction adviser to assist APRDC to carry out feasibility study and to develop and transact the selected PPP roads; and (b) the services of NGOs for R&R implementation and independent engineer consultancy services for monitoring the implementation for the selected PPP roads. In terms of the viability gap support, the GOI will provide up to 20 percent of project cost as grant subsidy, and the GOAP (from its own budget) will provide up to 20 percent additional viability gap subsidy if required. The actual amount of Viability Gap support will be determined during the bidding process, where the winning concessionaire will propose the lowest subsidy requirement.

(c) **Institutional Strengthening component.** This component will (a) facilitate the full operationalization of the APRDC, with requisite capacity for its responsibilities in managing the CRN, and (b) provide targeted technical assistance, training and advisory services for the implementation of the Asset Management Program, the Governance & Accountability Action Plan (GAAP) and the Institutional Strengthening Action Plan (ISAP), plus associated monitoring and coordination.

(d) **Road Safety Component.** This component will help GOAP provide safer road corridors by initiating measures to reduce road accidents on major corridors by assisting the concerned GOAP agencies to (a) undertake ‘demonstration projects’ on selected CRN corridors, (b) carry out an extended black-spot improvement program, and (c) implement institutional and policy action plans for improving the state’s road safety responsibility framework and capacities.
5. Financing
Source: Borrower ($m.)
International Bank for Reconstruction and Development 400.20
320.30
Total 720.50

6. Implementation
6.1. The GOAP’s Roads and Building Department (RBD) will have the overall responsibility for the implementation of the project. The RBD is headed by a Principal Secretary and has several units, headed by chief engineers. One of these units, the Road Development Corporation (RDC) was established to manage the Core Road Network, under the leadership of a managing director and Chief Engineer (Core Road Network). The RDC has been designated as the Project Management Unit (PMU) to assist RBD in carrying out the day-to-day management of the project, including procurement, contract management, financial management, safeguard management, and implementation oversight. The RDC, also serving as the PMU, has successfully implemented the previous Bank-financed APSHP and the roads component of the AP Economic Restructuring Project (APERP), and since 2005 the RDC has been preparing the proposed project. The RDC staff is familiar with World Bank procedures for fiduciary and safeguard requirements, and FIDIC conditions. The Chief Engineer (CRN)/MD RDC has about 60 engineers and professional staff at its headquarters and supported by nine field divisions.

6.2. Financial Management: The financial management and fund flow arrangement, as well as other operational procedures, will follow the regular GOAP and RBD procedures, as agreed with the World Bank. However, GOAP’s long-term plan is for RDC to have its own financial, administrative and operational procedures, and thus make RDC a fully autonomous entity. As part of the institutional development component, the project is providing resources for making RDC to be fully operational. Once RDC is fully operational, completes its outstanding audits, and becomes an autonomous entity, the GOAP may decide to transfer project implementation responsibility to RDC.

6.3. Disbursement: Report Based disbursement will be used for actual expenditures as reported in the quarterly Financial Management Report.

6.4. Safeguard Management: All civil works component, upgrading, LTPBMC, PPP works will follow the Bank’s safeguard policies as described in Annex 10 of the Project Appraisal Document. The preparation consultants (for upgrading and LTPBMC components) and transaction advisers (for PPP components) will assist in the preparation of the various environment and social safeguard documents. Supervision consultants and RDC staff will ensure the contractors and PPP concessionaires will implement the provisions in the safeguard documents.

6.5. Procurement Arrangement: World Bank policy for procurement will apply for all works, services and goods for which loan funds will be used. For PPP works, the GOI/GOAP procurement procedures will apply as long as the viability gap support is wholly financed by GOI/GOAP.

7. Sustainability
7.1. The GOAP’s initiatives in the road sector coupled with the success of the first Bank project in AP, demonstrate its commitment to developing a robust highway network and infrastructure in the state. By opting for LTPMC and PPP mechanisms in road development, maintenance and
management, which implicitly incorporate sustainability, the state demonstrates a forward-looking agenda. In addition, the establishment of a RMS-based Asset Management Program, proposed creation of sustainable CRN funding, full operationalization of the RDC and other institutional strengthening and governance improvement measures to be undertaken as part of the project also address sector sustainability issues in the state.

8. Lessons Learned and reflected in the project design
8.1. Implementation of the second AP road project relatively shortly after the first one should provide continuity in key sector reform thrusts and thus help to establish a sustainable platform for improved performance in the road sector in the State. In the context of a (then) quite large, ambitious and complex first project, the borrower/implementing agency performance was rated satisfactory, though the extent of hard political decisions and actions then required on reforms and their institutional aspects was underestimated, and there were problems due to decision making being too centralized, insufficient ownership, and already stretched capacity among road agency staff. In recent years, however, the GOAP has recognized reforming the management and financing of the road sector would be crucial to achieve its overall goals for infrastructure development and economic growth in the state. As such, they have taken policy measures that show the government’s commitment in the reform program, including identification of the CRN, creating a line-item in the budget for CRN, and making RDC the focal point for the management of the CRN. These reforms will be deepened under the project.

8.2. Some of the key lessons learned from previous and ongoing Bank operations in highway projects in India as well as from the first AP Roads project include (i) need for upfront action, sustained effort and substantive client ownership to advance the institutional development initiatives; (ii) wider and active involvement and ‘buy in’ of the road agency staff in the reform process; (iii) building capacity of the road agency staff on an ongoing basis to improve the final delivery; (iv) avoid delays for land acquisition, shifting of utilities, and in obtaining clearances from various government departments by undertaking these activities before work commencement; (v) ensuring an adequate and assured flow of maintenance funding and developing capacities for systemic network planning and management for sector sustainability; (vi) increasing transparency in public procurement by establishing a centralized database system and publicizing contract award and procurement information, and performance of consultants and contractors; and (vii) ensuring sustained government attention to institutional development activities.

9. Safeguard Policies (including public consultation)

<table>
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<th>Yes</th>
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<tr>
<td>Environmental Assessment (OP/BP 4.01)</td>
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<td>Safety of Dams (OP/BP 4.37)</td>
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Projects in Disputed Areas (OP/BP 7.60) * [X]
Projects on International Waterways (OP/BP 7.50) [X]

10. List of Factual Technical Documents
---------- Inception Report (Environmental Assessment Study): The Louis Berger Group, Inc. February 2007
---------- Inception Report (Social Assessment Study): The Louis Berger Group, Inc. February 2007

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* By supporting the proposed project, the Bank does not intend to prejudice the final determination of the parties' claims on the disputed areas
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