1. Key development issues and rationale for Bank involvement

**Background:** Assam is one of the poorer states of India. About 36% of its population of 27 million lives below the poverty line and per capita income (Rs. 13,925) is 40% below the national average (Rs. 23,308). The state is marked by poor road infrastructure, tenuous communication, low agricultural productivity, and low levels of industrial activity. In recent years, however, its economy and fiscal situation have started to improve. The current economic growth is about 4.5% per annum compared to 2% during 1990-2000. These improvements are mainly due to government incentives for agriculture and industry, central assistance, and various reforms introduced by the Government of Assam (GOA) to implement its development strategy jointly prepared with the Government of India (GOI) in 2002. Recently, the GOA has also enacted the **Assam Fiscal Responsibility & Budget Management Act, 2005** to achieve balance in its Revenue Account by 2008-09.

**Assam Development Strategy:** The GOA plans to increase annual economic growth to 6% and beyond in order to first narrow and then remove the disparity between Assam and the rest of the country by 2025. Its development strategy recommends reorienting spending priorities towards roads, electricity, irrigation, and rural infrastructure. An adequate road network is critically essential to realize the development plans for agriculture, industry, tourism, fisheries and other sectors as contained in the strategy. The North East Council also considers roads as a priority for the development of North East Region (including Assam).

**Road Network:** The Assam’s road network is poorly developed and has suffered from years of neglect, under-funding, inadequate maintenance, and flood damages – its current condition is an

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1 Significant evidence exists in the Chief Minister Budget Speech FY 05-06 – released by Govt. of Assam
2 Many reforms have been introduced under the ADB funded Assam Governance and Public Resource Management Project – Loan 2142
3 Assam Development Report – 2002 contains a comprehensive Assam Development Strategy
4 A Nodal Agency set-up by the GOI for development of 8 North East States including Assam – it allocates about half of its budget to road sector
obstacle to achieve the objective of Assam development strategy. The network totals 41,298 km and comprises 2,787 km of National Highways (NH), 2,719 km of State Highways (SH), 4,154 km of Major District Roads (MDR), and 31,638 km of rural roads. The 5,000 existing timber bridges need urgent replacement – many have already failed. Only 20% of the roads are paved compared to the national average of 58%. About 94% of the roads are still single lane and about 40% of SH and MDR have earth/gravel surface. Most roads have poor riding quality, weak pavements, inadequate capacity, and missing bridges – leading to high transport costs.

**Road Sector Funding:** Historically, the GOA’s funding has been meager for both road construction and maintenance. Recently, the NH and rural roads have started to receive significant funds – the latter from GOI/ADB (under PMGSY\(^5\)). The Bank has also been funding rural roads in Assam under the ARIASP\(^6\) and AACP\(^7\). The GOA’s maintenance funding has also started to increase (FY03/04 Rs.230 million – FY05/06 Rs. 800 million). While it is still only 30% of the requirements (about Rs. 2,600 million), the gap will significantly reduce if the GOA gets central grants of Rs. 825 million annually (during FY06/07 to FY 09/10) for road maintenance as recommended by the 12\(^{th}\) Finance Commission. However, a big funding gap for development of SH and MDR still exists – the available budget is less than Rs. 600 million annually but the GOA’s total estimated needs may exceed Rs. 35,000 million (figures to be reviewed during project preparation).

**Institutional Issues:** Weak sector management has aggravated the impact of sector under-funding. Assam’s road network is managed by its Public Works Department (PWD). Its outdated road engineering practices, business procedures, and core functions require substantial overhauling to improve its performance. The PWD has a long history of building, neglecting, and re-building its roads. Key issues include (i) weak planning and management of the road sector; (ii) lack of transparency and little importance given to economic priorities in road investment decisions; (iii) low productivity of about 8,000 existing maintenance gang labourers; and (iv) limited exposure of the PWD staff to modern road engineering practices.

**Borrowers Commitment/Road Sector Reform Initiatives:** To ensure fast track project preparation, the GOA has established dedicated “State Roads Divisions”. These Divisions have started to reclassify SH/MDR and identify a primary core road network, collect road inventory and condition data, and to prepare the designs of first year roads (identified through a Strategic Option Study). Under Bank-supported projects, the GOA has (i) established a maintenance policy and a Road Board; (ii) formulated an Institutional Development Action Plan and set-up nine dedicated units to introduce various reforms identified in the Plan; (iii) started to increase road maintenance funding and introduced annual maintenance plans; (iv) introduced standard pre-cast bridge designs to reduce construction time and costs; (v) announced a Road Sector Resettlement and Rehabilitation (R&R) policy; (vi) set-up a Road Safety Council; and (vii) started computerization of PWD’s core business procedures.

2. **Project objective(s)**
The proposed project development objective is to provide **road users in Assam with good quality and better managed state highways and major district roads**. Progress will be monitored

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\(^5\) Pradhan Mantri Gram Sadak Yojana (PMGSY) - a Prime Minister Rural Roads Program

\(^6\) Assam Rural Infrastructure and Agriculture Support Project (ARISP) – completed in June 2004

\(^7\) Assam Agriculture Competitiveness Project (AACP) – on-going
through the following outcome indicators: (i) road condition, (ii) traffic speed, (iii) level of service, (iv) performance of road maintenance, and (v) business procedures of the PWD (using a multi criteria rating approach). Road User’s Opinion Surveys will be carried out at the project start, mid-term, and completion to measure perception of road users.

3. Preliminary project description

**Overall Approach:** An “Asset Management System” (AMS) would be developed for the primary core network consisting of SH and important MDR along with a computerized database to include simple road inventory and condition as well as traffic data\(^8\). The system will (i) identify the needs for road widening, pavement strengthening, bridges, and maintenance; (ii) prioritize these needs using a prioritization criteria, based on economic and other factors; and (iii) prepare a multi year rolling program for network improvement and an Annual Maintenance Plan (AMP)\(^9\) each year containing the identified needs. The available funds will be consolidated to implement these plans. The Bank would fund more than 75% of the network improvement programs for the initial 2-3 years. The GOA will fund the AMPs through its maintenance funds on an annual basis.

The proposed project would fund the following two components:

- **Component 1: Road Improvement (USD 220 million)** including (i) Civil works for a combination of road widening/upgrading and pavement rehabilitation/strengthening (within the existing Right of Way) of about 1200 km high priority core network roads including bridges and road safety engineering measures; (ii) consultancy services for engineering designs and supervision of works; and (iii) rehabilitation assistance to project-affected people, and HIV/AIDS awareness initiatives (as appropriate).

- **Component 2: Asset Management (US $10 m)** Technical assistance to (i) develop and operationalize a simple Asset Management System (AMS); (ii) implement the annual maintenance plans (AMPs) for the primary core network – prepared through the AMS and involving new/improved methods of execution of maintenance works; (iii) develop and implement an action plan to improve road transport services and operations; and (iv) implement PWD’s Institutional Development Action Plan to modernize and strengthen the PWD so that it can better manage its road assets. The Plan would include development of road sector policy/strategy, development of a Road Management Act, revision of new PWD code, strengthening of Road Board functions, and measures to increase PWD’s staff capacity/productivity. The GOA will fund the maintenance works under the AMPs through its maintenance funds.

4. **Safeguard policies that might apply**

Environmental assessment OP/BP 4.01. Natural Habitats OP/BP 4.04. Forests OP/BP 4.06. Cultural Property draft OP 4.11 OPN 11.03. (Environmental Assessment Category A) The proposed project would partly be situated in sensitive environmental settings of Assam characterized by recent geological origin, frequent seismic movements, rich evergreen forests, regular floods and wide floodplains, marshes, wetlands, folded hill ranges and old plateaus. The state is also a part of the Indo-Myanmar region IUCN Global Biodiversity hotspot. However,

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\(^8\) The data-base is being established under the Bank funded Computerization project.

\(^9\) Using an Road Asset Management System (RAMS)
many of the project interventions would involve road preservation and/or improvements on existing alignments and their consequent environmental impacts are likely to be minimal. The Borrower will undertake an environmental assessment, prepare an environmental management framework to mainstream the relevant state and regional environmental issues in the project, and prepare environmental management plans (and/or environmental codes of practice) to establish the required environmental mitigation and management measures.

**Involuntary Resettlement OP/BP 4.12/OP/BP 4.10.** The proposed road improvement works would mostly be along the existing alignments but may lead to land acquisition and displacement of adversely affected people. Some roads would pass through the tribal areas/scheduled areas governed by Autonomous Council. A social impact assessment (SIA) will be carried-out for a representative sample of project roads. A Resettlement Policy framework\(^\text{10}\) with an entitlement matrix for different types of impacts/losses will be prepared for the entire project. Resettlement Actions Plans will be prepared for each sub-project using that framework. Indigenous People Development Plans (IPDP) will be developed as required in consultation with representatives of the Council.

5. **Tentative financing**

<table>
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<th>(US$m.)</th>
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<tr>
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<td><strong>Total</strong></td>
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6. **Contact point**

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\(^{10}\) Consistent with the GOA’s Road Sector R&R policy – to the extent possible