I. BASIC INFORMATION

A. Basic Project Data

<table>
<thead>
<tr>
<th>Country</th>
<th>India</th>
<th>Project ID:</th>
<th>P155522</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent Project ID (if any):</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Project Name: Bihar Rural Roads Project (P155522)
Region: SOUTH ASIA
Estimated Appraisal Date: 25-Oct-2016
Estimated Board Date: 19-Dec-2016
Practice Area (Lead): Transport & ICT
Lending Instrument: Investment Project Financing
Borrower(s): Government of India
Implementing Agency: Bihar Rural Roads Development Agency

Financing (in USD Million)

<table>
<thead>
<tr>
<th>Financing Source</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>BORROWER/RECIPIENT</td>
<td>100.00</td>
</tr>
<tr>
<td>International Development Association (IDA)</td>
<td>235.00</td>
</tr>
<tr>
<td>Total Project Cost</td>
<td>335.00</td>
</tr>
</tbody>
</table>

Environmental Category: B - Partial Assessment

Concept Review Decision: Track II - The review did authorize the preparation to continue

Is this a Repeater project? No

Other Decision (as needed):

B. Introduction and Context

Country Context
Bihar is one of the low income states of India. Its per capita income (INR 13,488) is much lower
than the national average (INR 42,778) (As of 2012. Real GSDP per capita at 2005 prices), which is accentuated by the fact that there exists a wide variation in per capita income across districts. A densely populated and largely rural and agrarian state, Bihar has one of the highest incidences of poverty in the country with 34 percent of its population living below the poverty line. The state is also lagging on socio-economic parameters, with the Human Development Index (HDI) recorded at 0.447 (Inequality Adjusted Human Development Index for India’s States 2011, UNDP), among the lowest in India. With the bifurcation of the state in 2000, the vast mineral sector and other big industries went to Jharkhand. Since then, the state has taken several initiatives towards increasing investment in infrastructure, particularly in the transport network, strengthening the social sector, and focusing on good governance, all of which has resulted in its economy growing at about 12 percent per annum in the 11th Plan period. However, it continues to face several challenges including inadequate infrastructure, weak human capacity, low productivity in agriculture, and deeply entrenched poverty. The 12th Five Year Plan aims to achieve a high growth rate (7 percent) in the agriculture and allied sectors, to develop infrastructure at a faster pace, to emphasize the development of the social sector further, and to make a sustained effort towards reduction of poverty and equitable regional development. In particular, it recognizes the importance of improvement in rural connectivity in bringing the benefits of modern agriculture to farmers.

**Sectoral and Institutional Context**

About 90 percent of the total length of roads reported in Bihar is classified as rural roads, a substantial proportion of which continues to be unpaved. Despite recent efforts to improve the length and the quality of the rural road network, the state continues to remain far behind the all-India average in terms of road length per unit population, as well as on the quality of the network.

The Government of Bihar (GOB) launched the Mukhaya Mantri Gram Sampark Yojna (MMGSY) in 2013 to provide connectivity to 32,199 habitations with population between 250 and 500 through the construction and improvement of 37,908 km roads. These habitations are not covered under the nationwide Rural Roads program (the Pradhan Mantri Gram Sadak Yojana or PMGSY).

The Rural Works Department (RWD) is responsible for managing the rural road network in Bihar. GOB has also established Bihar Rural Roads Development Agency (BRRDA) to manage MMGSY, PMGSY and other programs, implementation of which is done by RWD.

Key road sector issues and challenges include neglect of maintenance and outdated engineering practices and business procedures, leading to overall low value for money, poor quality of engineering designs, high unit costs for road construction for relatively low-traffic, and overall low-service life, inefficient delivery of road programs, weak planning for investments, limited capacity of road agency and poorly developed construction industry including their limited exposure to international practices.

Several sector reform initiatives are already underway in the state, including development of a draft asset management strategy to avoid potential losses in road asset value of about US$300 million annually; the development of a maintenance policy; introduction of maintenance contracts and significant increase in maintenance funding; improved infrastructure of RWD field offices; initiatives for developing staff capacities; and the development of environmentally optimized road designs using local materials like river sand accumulated through floods, the disposal of which is a big environmental issue. The designs would lead to savings of about 20% in the road
construction costs.

**Relationship to CAS/CPS/CPF**
The project will support the objective of “poverty reduction and shared prosperity in India” of CPS 2013-2017 by contributing to its all three themes: integration, transformation and inclusion. It will integrate the scattered rural population, industries, and businesses in Bihar’s remote and backward locations with the rest of the state/country and markets through better rural connectivity, and help extend economic development to the state as a whole. It will be transformational in terms of its impact on modernization of the rural road sector. In terms of inclusiveness it will provide remote and poorer communities including women with better access to employment and economic opportunities, health, education and other social services.

**C. Proposed Development Objective(s)**

**Proposed Development Objective(s) (From PCN)**
The PDO for the project is to improve road connectivity in project districts and management of rural roads in Bihar.

**Key Results (From PCN)**

i) Share of rural population with access to an all-season road (percentage) – core indicator
ii) Direct project beneficiaries (number), of which female (percentage) – core indicator
iii) Improved asset management as measured by total asset value and other means
iv) Percent road network in good and fair condition
v) Value for money as demonstrated through use of cost-effective/environment friendly designs
vi) Improved delivery of road maintenance through use of innovative maintenance contracts
vii) Road length provided with the prescribed road safety engineering measures

**D. Concept Description**

The proposed project will focus on improving the delivery of MMGSY by enhancing its systems and procedures in addition to building on and carrying forward the on-going reforms in the rural roads sector of Bihar. This would be done by using the Bank’s technical and knowledge support for putting in place best practice examples for sector policies and financing strategies including effective participation of local communities and women in road programs, strategic planning, project preparation and implementation, cost-effective and environment friendly road construction and asset management. This would help to (a) enhance both the quality of delivery and value for money for MMGSY, PMGSY, and other programs (combined likely investments US$ 6 billion); and (b) improve the sustainability of the road assets including those being constructed under MMGSY and PMGSY, while avoiding their premature failure and loss of natural resources.

Component 1: Rural Roads Improvement (US$ 320 million; civil works): This component will support the construction and improvement of about 2,500 km rural roads including construction of some standalone bridges to provide all-season road access to about 1,100 habitations in identified project districts. This will include the use of improved design and construction practices, including environmentally optimized designs, suitable treatment of flood affected areas, and road safety improvements.

Component 2: Road Sector Modernization and Performance Enhancement (US$ 15 million; technical assistance and goods): This component will support the gradual transformation of RWD
into a modern road agency through the implementation of a Road Sector Modernization Plan (RSMP) in the following key areas: (a) Improved policy framework: strengthening of existing rural road policies and strategies, including a rural road vision; improving financing framework for maintenance of rural roads; and promoting participation of local communities in rural roads programs; (b) Modernization of Engineering Practices and Business Procedures: introducing modern project preparation and management practices; cost-effective and environmentally optimized designs; and a procurement and contract management manual; (c) Asset Preservation: establishing and implementing an asset management strategy to preserve the rural road network, including setting up an asset management system and evolving simple maintenance contracts for rural roads; (d) Institutional and Human Resource Development: strengthening RWD’s institutional structure; building capacities of staff as well as of the construction industry to keep them abreast of the latest road industry practices; and computerization of RWD offices; and (e) Road Safety Management: building capacity of RWD in managing road safety issues; integrating road safety in construction and maintenance programs through improved designs and retrofitting safety measures in the existing network through suitable engineering interventions.

II. SAFEGUARDS

A. Project location and salient physical characteristics relevant to the safeguard analysis (if known)

B. Borrower’s Institutional Capacity for Safeguard Policies

C. Environmental and Social Safeguards Specialists on the Team

Neha Pravash Kumar Mishra (GEN06)
Sangeeta Kumari (GSU06)

D. POLICIES THAT MIGHT APPLY

<table>
<thead>
<tr>
<th>Safeguard Policies</th>
<th>Triggered?</th>
<th>Explanation (Optional)</th>
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<tbody>
<tr>
<td>Environmental Assessment OP/BP 4.01</td>
<td>Yes</td>
<td>OP4.01 is triggered to ensure that all infrastructure investments are implemented using environmentally sound principles and practices. The planning, construction &amp; operation of rural roads will require mitigation measures to manage adverse environmental impacts. Impacts resulting from poor sub-project location and/or design; worksite safety management; drainage; impact on local flora &amp; fauna; and construction materials management are other aspects that will require attention. A diagnostic assessment, to be completed within 3 months, will establish need to modify current processes for MMGSY.</td>
</tr>
<tr>
<td>Natural Habitats OP/BP 4.04</td>
<td>No</td>
<td>OP 4.04 is not being triggered for this project as no interventions are envisaged in natural habitats,</td>
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including those defined as ‘critical’ under the policy.

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<thead>
<tr>
<th>OP/BP 4.36</th>
<th>TBD</th>
<th>While no significant conversion/degradation of forest resources is envisaged at this stage, the decision on whether to trigger OP 4.36 will be taken once more information on the location of sub-project is available.</th>
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<tbody>
<tr>
<td>OP 4.09</td>
<td>No</td>
<td>OP 4.09 is not being triggered for this project as biological/environmental control methods or reliance on synthetic chemical pesticides is not envisaged.</td>
</tr>
<tr>
<td>OP 4.11</td>
<td>Yes</td>
<td>Since some civil works are involved, so there is a possibility of ‘chance finds’ at work sites. Possible adverse impacts on any locally important cultural property would be examined, for appropriate mitigation during planning and implementation stages, to be provided in the ESMF.</td>
</tr>
<tr>
<td>OP 4.10</td>
<td>Yes</td>
<td>Some of the proposed project districts like Purnia and Katihar have pockets of Scheduled Tribe population. The ESMF for the project will cover provisions for such groups (including STs, SCs and women).</td>
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<tr>
<td>OP 4.12</td>
<td>Yes</td>
<td>Most MMGSY roads are constructed on existing earth and brick paved tracks, some have 3m pavement. In some stretches, only 6m of land width is available whereas requires the standard formation width of 7.5 m. In such cases, additional land will be required and the project would require to either voluntary donation of narrow strips from land owners with negligible impact or acquire land as per Land Acquisition, Rehabilitation and Resettlement (LARR) Act, 2013. The ESMF will provide process to assess and manage impacts due to additional land requirement.</td>
</tr>
<tr>
<td>OP 4.37</td>
<td>No</td>
<td>OP 4.37 is not being triggered for this project as there is no construction of new dams or activities that are concerned with safe functioning of existing dams.</td>
</tr>
<tr>
<td>OP 7.50</td>
<td>No</td>
<td>OP 7.50 will not be triggered for this project as there are no interventions planned/ proposed over or around an international waterway. There are also no activities that may affect the use of or pollute such a waterway.</td>
</tr>
<tr>
<td>OP 7.60</td>
<td>No</td>
<td>OP 7.60 is not being triggered as the project is not proposed in any disputed area.</td>
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E. Safeguard Preparation Plan

1. Tentative target date for preparing the PAD Stage ISDS
2. Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing should be specified in the PAD-stage ISDS.

III. Contact point

World Bank
Contact: Ashok Kumar
Title: Sr Highway Engineer

Borrower/Client/Recipient
Name: Government of India
Contact: Bhaskar Dasgupta
Title: Director

Implementing Agencies
Name: Bihar Rural Roads Development Agency
Contact: Ram Bujhawan Choudhary
Title: Additional Secretary, Government of Bihar

IV. For more information contact:
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Fax: (202) 522-1500
Web: http://www.worldbank.org/infoshop

V. Approval

<table>
<thead>
<tr>
<th>Task Team Leader(s):</th>
<th>Name: Ashok Kumar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved By</td>
<td></td>
</tr>
<tr>
<td>Safeguards Advisor:</td>
<td>Name: Maged Mahmoud Hamed (SA) Date: 13-Jan-2016</td>
</tr>
<tr>
<td>Practice Manager/</td>
<td>Name: Karla Gonzalez Carvajal (PMGR) Date: 21-Jan-2016</td>
</tr>
<tr>
<td>Manager:</td>
<td></td>
</tr>
<tr>
<td>Country Director:</td>
<td>Name: Onno Ruhl (CD) Date: 15-Sep-2016</td>
</tr>
</tbody>
</table>

1 Reminder: The Bank's Disclosure Policy requires that safeguard-related documents be disclosed before appraisal (i) at the InfoShop and (ii) in country, at publicly accessible locations and in a form and language that are accessible to potentially affected persons.