

AGREEMENT No 1 of 2007 - 08



**GOVERNMENT OF ORISSA**  
**WORKS DEPARTMENT**

**CONTRACT FOR CONSULTANTS' SERVICES**

**For**

***PPP Techno-Economic Feasibility Study and Transaction Advisor  
for Selected State Roads in the State of Orissa***

between

**Chief Engineer, World Bank Projects, Orissa  
on behalf of  
Works Department, Government of Orissa**

and

**M/s PricewaterhouseCoopers Pvt. Ltd.  
Building 8, 7<sup>th</sup> and 8<sup>th</sup> Floor  
Tower B, DLF cyber City,  
Gurgaon 122001**

**In Joint Venture with**

**M/s LEA Associates South Asia Pvt. Ltd.  
B-1/E-27, Mohan Co-operative Estate,  
Mathura Road, New Delhi 110044**

***Project Implementation Unit, Orissa State Roads Project  
Office of the Engineer-in-Chief (Civil), Orissa,  
Nirman Soudha, Keshari Nagar, Unit - V, Bhubaneswar - 751 001***

**Dated: 27<sup>th</sup> September, 2007**



उड़ीसा ORISSA

162675

**CONTRACT FOR CONSULTANTS' SERVICES**

for

***PPP Techno-Economic Feasibility Study and Transaction Advisor  
for Selected State Roads in the State of Orissa***

This CONTRACT (hereinafter called the "Contract") is made the 27<sup>th</sup> day of the month of **September, 2007**, between, on the one hand, Chief Engineer, World Bank Projects, Orissa on behalf of the *Government of Orissa* (hereinafter called the "Client") and, on the other hand a joint venture/consortium consisting of the following entities, each of which will be jointly and severally liable to the Client for all the Consultant's obligations under this Contract, namely,

**M/s PricewaterhouseCoopers Pvt. Ltd.  
Building 8, 7<sup>th</sup> and 8<sup>th</sup> Floor  
Tower B, DLF cyber City,  
Gurgaon 122001**

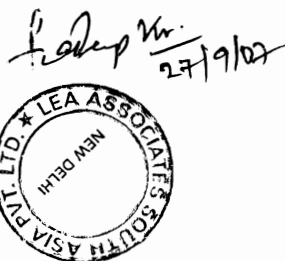
**In Joint Venture with  
M/s LEA Associates South Asia Pvt. Ltd.  
B-1/E-27, Mohan Co-operative Estate,  
Mathura Road, New Delhi 110044**

(hereinafter called the "Consultant").

WHEREAS

- (a) the Client has requested the Consultant to provide certain consulting services as defined in this Contract (hereinafter called the "Services");

Consultant



  
Chief Engineer  
World Bank Projects, Orissa

Chief Engineer,  
World Bank Project  
O/o the E.I.C. (Civil)  
Orissa, Bhubaneswar.

- (b) the Consultant, having represented to the Client that it has the required professional skills, and personnel and technical resources, has agreed to provide the Services on the terms and conditions set forth in this Contract;
- (c) the Client has applied for a loan from the International Bank for Reconstruction and Development (hereinafter called the "Bank") towards the cost of the Services and intends to apply a portion of the proceeds of this loan to eligible payments under this Contract, it being understood (i) that payments by the Bank will be made only at the request of the Client and upon approval by the Bank [or Association], (ii) that such payments will be subject, in all respects, to the terms and conditions of the agreement providing for the loan, and (iii) that no party other than the Client shall derive any rights from the agreement providing for the loan or have any claim to the loan [or credit] proceeds;

NOW THEREFORE the parties hereto hereby agree as follows:

1. The following documents attached hereto shall be deemed to form an integral part of this Contract:
  - (a) The General Conditions of Contract;
  - (b) The Special Conditions of Contract;
  - (c) The following Appendices:
    - Appendix A: Description of Services
    - Appendix B: Reporting Requirements
    - Appendix C: Key Personnel and Sub-Consultants
    - Appendix D: Breakdown of Contract Price in Foreign Currency- Not Used
    - Appendix E: Breakdown of Contract Price in Local Currency
    - Appendix F: Services and Facilities Provided by the Client
    - Appendix G: Form of Advance Payment Guarantee (Not Used)
2. The mutual rights and obligations of the Client and the Consultant shall be as set forth in the Contract, in particular:
  - (a) the Consultants shall carry out the Services in accordance with the provisions of the Contract; and
  - (b) the Client shall make payments to the Consultants in accordance with the provisions of the Contract.

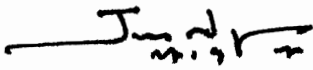
Consultant   


  
Chief Engineer  
World Bank Projects, Orissa  
  
Chief Engineer,  
World Bank Project  
O/o the E.I.C. (Civil)  
Orissa, Bhubaneswar.

IN WITNESS WHEREOF, the Parties hereto have caused this Contract to be signed in their respective names as of the day and year first above written.

For and on behalf of *Government of Orissa*

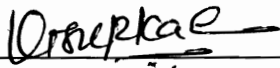


*Er. Jayamangal Nayak*  
**Chief Engineer, World Bank Project, Orissa**

**Chief Engineer,  
World Bank Project  
O/o the E.I.C. (Civil)  
Orissa, Bhubaneswar.**

For and on behalf of each of the Members of the Consultant

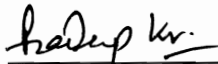
*PricewaterhouseCoopers Pvt.Ltd.*



*[Vishwas Udgirkar  
Executive Director]*



*LEA Associates South Asia Pvt. Ltd.*



*[Mr. Pradeep Kumar,]  
General Manager ( Traffic & Transportation )*



## II. General Conditions of Contract

### 1. GENERAL PROVISIONS

#### 1.1 Definitions

Unless the context otherwise requires, the following terms whenever used in this Contract have the following meanings:

- (a) "Applicable Law" means the laws and any other instruments having the force of law in the Government's country, or in such other country as may be specified in the Special Conditions of Contract (SC), as they may be issued and in force from time to time.
- (b) "Bank" means the International Bank for Reconstruction and Development, Washington, D.C., U.S.A., or the International Development Association, Washington, D.C., U.S.A.
- (c) "Consultant" means any private or public entity that will provide the Services to the Client under the Contract.
- (d) "Contract" means the Contract signed by the Parties and all the attached documents listed in its Clause 1, that is these General Conditions (GC), the Special Conditions (SC), and the Appendices.
- (e) "Contract Price" means the price to be paid for the performance of the Services, in accordance with Clause 6;
- (f) "Effective Date" means the date on which this Contract comes into force and effect pursuant to Clause GC 2.1.
- (g) "Foreign Currency" means any currency other than the currency of the Client's country.
- (h) "GC" means these General Conditions of Contract.
- (i) "Government" means the Government of the Client's country.
- (j) "Local Currency" means the currency of the Client's country.
- (k) "Member" means any of the entities that make up the joint venture/consortium/association, and "Members" means all these entities.
- (l) "Party" means the Client or the Consultant, as the case may be, and "Parties" means both of them.
- (m) "Personnel" means persons hired by the Consultant or by any Sub-Consultants and assigned to the performance of the Services or any part thereof.

Consultant



Handwritten signature of the Chief Engineer  
**Chief Engineer**  
 World Bank Projects, Orissa  
**Chief Engineer,**  
**World Bank Project**  
**O/e the E.I.C. (Civil)**  
**Orissa, Bhubaneswar.**

- (n) "SC" means the Special Conditions of Contract by which the GC may be amended or supplemented.
- (o) "Services" means the work to be performed by the Consultant pursuant to this Contract, as described in Appendix A hereto.
- (p) "Sub-Consultants" means any person or entity to whom/which the Consultant subcontracts any part of the Services.
- (q) "In writing" means communicated in written form with proof of receipt.

**1.2 Law  
Governing  
Contract**

This Contract, its meaning and interpretation, and the relation between the Parties shall be governed by the Applicable Law.

**1.3 Language**

This Contract has been executed in the language specified in the SC, which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Contract.

**1.4 Notices**

**1.4.1**

Any notice, request or consent required or permitted to be given or made pursuant to this Contract shall be in writing. Any such notice, request or consent shall be deemed to have been given or made when delivered in person to an authorized representative of the Party to whom the communication is addressed, or when sent to such Party at the address specified in the SC.

**1.4.2**

A Party may change its address for notice hereunder by giving the other Party notice in writing of such change to the address specified in the SC.

**1.5 Location**

The Services shall be performed at such locations as are specified in Appendix A hereto and, where the location of a particular task is not so specified, at such locations, whether in the Government's country or elsewhere, as the Client may approve.

**1.6 Authority of  
Member in  
Charge**

In case the Consultant consists of a joint venture/ consortium/ association of more than one entity, the Members hereby authorize the entity specified in the SC to act on their behalf in exercising all the Consultant's rights and obligations towards the Client under this Contract, including without limitation the receiving of instructions and payments from the Client.

**1.7 Authorized  
Representa-  
tives**

Any action required or permitted to be taken, and any document required or permitted to be executed under this Contract by the Client or the Consultant may be taken or executed by the officials specified in the SC.

Consultant



Handwritten signature of the Chief Engineer and a printed block of text:
   
Chief Engineer
   
World Bank Projects, Orissa
   
Chief Engineer,
   
World Bank Project
   
O/o the E.I.C. (Civil)
   
Orissa, Bhubaneswar.

**1.8 Taxes and Duties** The Consultant, Sub-Consultants, and their Personnel shall pay such indirect taxes, duties, fees, and other impositions levied under the Applicable Law as specified in the SC, the amount of which is deemed to have been included in the Contract Price.

**1.9 Fraud and Corruption**

**1.9.1 Definitions** It is the Bank's policy to require that Borrowers (including beneficiaries of Bank loans), as well as Consultants under Bank-financed contracts, observe the highest standard of ethics during the selection and execution of such contracts. In pursuance of this policy, the Bank:

- (a) defines, for the purpose of this provision, the terms set forth below as follows:
- (i) "corrupt practice" means the offering, receiving, or soliciting, directly or indirectly, of any thing of value to influence the action of a public official in the selection process or in contract execution;
  - (ii) "fraudulent practice" means a misrepresentation or omission of facts in order to influence a selection process or the execution of a contract;
  - (iii) "collusive practices" means a scheme or arrangement between two or more consultants, with or without the knowledge of the Borrower, designed to establish prices at artificial, noncompetitive levels;
  - (iv) "coercive practices" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in a procurement process, or affect the execution of a contract;

- 1.9.2 Measures to be Taken**
- (b) will cancel the portion of the loan allocated to a contract if it determines at any time that representatives of the Borrower or of a beneficiary of the loan were engaged in corrupt, fraudulent, collusive or coercive practices during the selection process or the execution of that contract, without the Borrower having taken timely and appropriate action satisfactory to the Bank to remedy the situation;
- (c) will sanction a Consultant, including declaring the Consultant ineligible, either indefinitely or for a stated period of time, to be awarded a Bank-financed contract if it at any time determines that the Consultant has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for, or in executing, a Bank-financed contract;

Consultant



Handwritten signature of J. N. Das  
**Chief Engineer**  
 World Bank Projects, Orissa  
**Chief Engineer,**  
**World Bank Project**  
**O/o the E.I.C. (Civil)**  
**Orissa, Bhubaneswar.**

- 1.9.3 Commissions and Fees** (d) will require the successful Consultant to disclose any commissions or fees that may have been paid or are to be paid to agents, representatives, or commission agents with respect to the selection process or execution of the contract. The information disclosed must include at least the name and address of the agent, representative, or commission agent, the amount and currency, and the purpose of the commission or fee.

## 2. COMMENCEMENT, COMPLETION, MODIFICATION AND TERMINATION OF CONTRACT

- 2.1 Effectiveness of Contract** This Contract shall come into effect on the date the Contract is signed by both Parties or such other later date as may be stated in the SC. The date the Contract comes into effect is defined as the Effective Date.
- 2.2 Commencement of Services** The Consultant shall begin carrying out the Services not later than the number of days after the Effective Date specified in the SC.
- 2.3 Expiration of Contract** Unless terminated earlier pursuant to Clause GC 2.6 hereof, this Contract shall expire at the end of such time period after the Effective Date as specified in the SC.
- 2.4 Modifications or Variations** Any modification or variation of the terms and conditions of this Contract, including any modification or variation of the scope of the Services, may only be made by written agreement between the Parties. However, each Party shall give due consideration to any proposals for modification or variation made by the other Party.

### 2.5 Force Majeure

- 2.5.1 Definition** For the purposes of this Contract, "Force Majeure" means an event which is beyond the reasonable control of a Party and which makes a Party's performance of its obligations under the Contract impossible or so impractical as to be considered impossible under the circumstances.
- 2.5.2 No Breach of Contract** The failure of a Party to fulfill any of its obligations under the contract shall not be considered to be a breach of, or default under, this Contract insofar as such inability arises from an event of Force Majeure, provided that the Party affected by such an event (a) has taken all reasonable precautions, due care and reasonable alternative measures in order to carry out the terms and conditions of this Contract, and (b) has informed the other Party as soon as possible about the occurrence of such an event.

Consultant

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*Handwritten signature*



*Handwritten signature*

**Chief Engineer**  
World Bank Projects, Orissa  
**Chief Engineer,**  
World Bank Project  
O/e the E.I.C. (Civil)  
Orissa, Bhubaneswar.



**2.5.3 Extension of Time** Any period within which a Party shall, pursuant to this Contract, complete any action or task, shall be extended for a period equal to the time during which such Party was unable to perform such action as a result of Force Majeure.

**2.5.4 Payments** During the period of their inability to perform the Services as a result of an event of Force Majeure, the Consultant shall be entitled to continue to be paid under the terms of this Contract, as well as to be reimbursed for additional costs reasonably and necessarily incurred by them during such period for the purposes of the Services and in reactivating the Service after the end of such period.

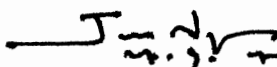
## 2.6 Termination

**2.6.1 By the Client** The Client may terminate this Contract in case of the occurrence of any of the events specified in paragraphs (a) through (f) of this Clause GC 2.6.1. In such an occurrence the Client shall give a not less than thirty (30) days' written notice of termination to the Consultant, and sixty (60) days' in the case of the event referred to in (e).

- (a) If the Consultant does not remedy a failure in the performance of their obligations under the Contract, within thirty (30) days after being notified or within any further period as the Client may have subsequently approved in writing.
- (b) If the Consultant becomes insolvent or bankrupt.
- (c) If the Consultant, in the judgment of the Client has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.
- (d) If, as the result of Force Majeure, the Consultant are unable to perform a material portion of the Services for a period of not less than sixty (60) days.
- (e) If the Client, in its sole discretion and for any reason whatsoever, decides to terminate this Contract.
- (f) If the Consultant fails to comply with any final decision reached as a result of arbitration proceedings pursuant to Clause GC 8 hereof.

Consultant



  
**Chief Engineer**  
World Bank Projects, Orissa  
**Chief Engineer,**  
World Bank Project  
O/o the E.I.C. (Civil)  
Orissa, Bhubaneswar.

- 2.6.2 By the Consultant** The Consultants may terminate this Contract, by not less than thirty (30) days' written notice to the Client, such notice to be given after the occurrence of any of the events specified in paragraphs (a) through (c) of this Clause GC 2.6.2:
- (a) If the Client fails to pay any money due to the Consultant pursuant to this Contract and not subject to dispute pursuant to Clause GC 7 hereof within forty-five (45) days after receiving written notice from the Consultant that such payment is overdue.
  - (b) If, as the result of Force Majeure, the Consultant is unable to perform a material portion of the Services for a period of not less than sixty (60) days.
  - (c) If the Client fails to comply with any final decision reached as a result of arbitration pursuant to Clause GC 8 hereof.
- 2.6.3 Payment upon Termination** Upon termination of this Contract pursuant to Clauses GC 2.6.1 or GC 2.6.2, the Client shall make the following payments to the Consultant:
- (a) payment pursuant to Clause GC 6 for Services satisfactorily performed prior to the effective date of termination;
  - (b) except in the case of termination pursuant to paragraphs (a) through (c), and (f) of Clause GC 2.6.1, reimbursement of any reasonable cost incident to the prompt and orderly termination of the Contract, including the cost of the return travel of the Personnel and their eligible dependents.

### 3. OBLIGATIONS OF THE CONSULTANT

#### 3.1 General

- 3.1.1 Standard of Performance** The Consultant shall perform the Services and carry out their obligations hereunder with all due diligence, efficiency and economy, in accordance with generally accepted professional standards and practices, and shall observe sound management practices, and employ appropriate technology and safe and effective equipment, machinery, materials and methods. The Consultant shall always act, in respect of any matter relating to this Contract or to the Services, as faithful advisers to the Client, and shall at all times support and safeguard the Client's legitimate interests in any dealings with Sub-Consultants or third Parties.

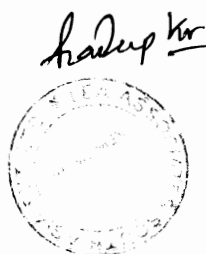
Consultant



Handwritten signature of the Chief Engineer and a stamp: Chief Engineer, World Bank Project, Orissa, World Bank Project, O/o the E.I.C. (Civil), Bhubaneswar.

- 3.2 Conflict of Interests** The Consultant shall hold the Client’s interests paramount, without any consideration for future work, and strictly avoid conflict with other assignments or their own corporate interests.
- 3.2. Consultants Not to Benefit from Commissions, Discounts, etc.** The payment of the Consultant pursuant to Clause GC 6 shall constitute the Consultant’s only payment in connection with this Contract or the Services, and the Consultant shall not accept for their own benefit any trade commission, discount, or similar payment in connection with activities pursuant to this Contract or to the Services or in the discharge of their obligations under the Contract, and the Consultant shall use their best efforts to ensure that the Personnel, any Sub-Consultants, and agents of either of them similarly shall not receive any such additional payment.
- 3.2.2 Consultant and Affiliates Not to be Otherwise Interested in Project** The Consultant agrees that, during the term of this Contract and after its termination, the Consultant and any entity affiliated with the Consultant, as well as any Sub-Consultants and any entity affiliated with such Sub-Consultants, shall be disqualified from providing goods, works or services (other than consulting services) resulting from or directly related to the Consultant’s Services for the preparation or implementation of the project.
- 3.2.3 Prohibition of Conflicting Activities** The Consultant shall not engage, and shall cause their Personnel as well as their Sub-Consultants and their Personnel not to engage, either directly or indirectly, in any business or professional activities which would conflict with the activities assigned to them under this Contract.
- 3.3 Confidentiality** Except with the prior written consent of the Client, the Consultant and the Personnel shall not at any time communicate to any person or entity any confidential information acquired in the course of the Services, nor shall the Consultant and the Personnel make public the recommendations formulated in the course of, or as a result of, the Services.
- 3.4 Insurance to be Taken Out by the Consultant** The Consultant (a) shall take out and maintain, and shall cause any Sub-Consultants to take out and maintain, at their (or the Sub-Consultants’, as the case may be) own cost but on terms and conditions approved by the Client, insurance against the risks, and for the coverage, as shall be specified in the SC; and (b) at the Client’s request, shall provide evidence to the Client showing that such insurance has been taken out and maintained and that the current premiums have been paid.

Consultant



*[Handwritten Signature]*  
**Chief Engineer**  
 World Bank Projects, Orissa  
**Chief Engineer,**  
 World Bank Project  
 O/o the E.I.C. (Civil)  
 Orissa, Bhubaneswar.

- 3.5 Consultant's Actions Requiring Client's Prior Approval** The Consultant shall obtain the Client's prior approval in writing before taking any of the following actions:
- (a) entering into a subcontract for the performance of any part of the Services,
  - (b) appointing such members of the Personnel not listed by name in Appendix C, and
  - (c) any other action that may be specified in the SC.
- 3.6 Reporting Obligations**
- (a) The Consultant shall submit to the Client the reports and documents specified in Appendix B hereto, in the form, in the numbers and within the time periods set forth in the said Appendix.
  - (b) Final reports shall be delivered in CD ROM in addition to the hard copies specified in said Appendix.
- 3.7 Documents Prepared by the Consultant to be the Property of the Client**
- (a) All plans, drawings, specifications, designs, reports, other documents and software submitted by the Consultant under this Contract shall become and remain the property of the Client, and the Consultant shall, not later than upon termination or expiration of this Contract, deliver all such documents to the Client, together with a detailed inventory thereof.
  - (b) The Consultant may retain a copy of such documents and software. Restrictions about the future use of these documents, if any, shall be specified in the SC.
- 3.8 Accounting, Inspection and Auditing** The Consultant (i) shall keep accurate and systematic accounts and records in respect of the Services hereunder, in accordance with internationally accepted accounting principles and in such form and detail as will clearly identify all relevant time changes and costs, and the bases thereof, and (ii) shall periodically permit the Client or its designated representative and/or the Bank, and up to two years from the expiration or termination of this Contract, to inspect the same and make copies thereof as well as to have them audited by auditors appointed by the Client or the Bank, if so required by the Client or the Bank as the case may be.

#### 4. CONSULTANT'S PERSONNEL

- 4.1 Description of Personnel** The Consultant shall employ and provide such qualified and experienced Personnel and Sub-Consultants as are required to carry out the Services. The titles, agreed job descriptions, minimum qualifications, and estimated periods of engagement in the carrying out of the Services of the Consultant's Key Personnel are described in Appendix C. The Key Personnel and Sub-Consultants listed by title as well as by name in Appendix C are hereby approved by the Client.

Consultant



*[Handwritten Signature]*  
**Chief Engineer**  
 World Bank Projects, Orissa  
 Chief Engineer,  
 World Bank Project  
 O/o the E.I.C. (Civil)  
 Orissa, Bhubaneswar.

- 4.2 Removal and/or Replacement of Personnel**
- (a) Except as the Client may otherwise agree, no changes shall be made in the Key Personnel. If, for any reason beyond the reasonable control of the Consultant, such as retirement, death, medical incapacity, among others, it becomes necessary to replace any of the Key Personnel, the Consultant shall provide as a replacement a person of equivalent or better qualifications.
- (b) If the Client finds that any of the Personnel have (i) committed serious misconduct or have been charged with having committed a criminal action, or (ii) have reasonable cause to be dissatisfied with the performance of any of the Personnel, then the Consultant shall, at the Client's written request specifying the grounds thereof, provide as a replacement a person with qualifications and experience acceptable to the Client.
- (c) The Consultant shall have no claim for additional costs arising out of or incidental to any removal and/or replacement of Personnel.

## 5. OBLIGATIONS OF THE CLIENT

- 5.1 Assistance and Exemptions** The Client shall use its best efforts to ensure that the Government shall provide the Consultant such assistance and exemptions as specified in the SC.
- 5.2 Change in the Applicable Law Related to Taxes and Duties** If, after the date of this Contract, there is any change in the Applicable Law with respect to taxes and duties which increases or decreases the cost incurred by the Consultant in performing the Services, then the remuneration and reimbursable expenses otherwise payable to the Consultant under this Contract shall be increased or decreased accordingly by agreement between the Parties, and corresponding adjustments shall be made to the amounts referred to in Clauses GC 6.2 (a) or (b), as the case may be.
- 5.3 Services and Facilities** The Client shall make available free of charge to the Consultant the Services and Facilities listed under Appendix F.

## 6. PAYMENTS TO THE CONSULTANT

- 6.1 Lump-Sum Payment** The total payment due to the Consultant shall not exceed the Contract Price which is an all inclusive fixed lump-sum covering all costs required to carry out the Services described in Appendix A. Except as provided in Clause 5.2, the Contract Price may only be increased above the amounts stated in Clause 6.2 if the Parties have agreed to additional payments in accordance with Clause 2.4.

Consultant



*[Handwritten Signature]*  
**Chief Engineer**  
 World Bank Projects, Orissa  
**Chief Engineer,**  
**World Bank Project**  
**O/o the E.I.C. (Civil)**  
**Orissa, Shubaneswar.**

- 6.2 Contract Price** (a) The price payable in foreign currency/currencies is set forth in the SC.
- (b) The price payable in local currency is set forth in the SC.
- 6.3 Payment for Additional Services** For the purpose of determining the remuneration due for additional services as may be agreed under Clause 2.4, a breakdown of the lump-sum price is provided in Appendices D and E.
- 6.4 Terms and Conditions of Payment** Payments will be made to the account of the Consultant and according to the payment schedule stated in the SC. Unless otherwise stated in the SC, the first payment shall be made against the provision by the Consultant of an advance payment guarantee for the same amount, and shall be valid for the period stated in the SC. Such guarantee shall be in the form set forth in Appendix G hereto, or in such other form, as the Client shall have approved in writing. Any other payment shall be made after the conditions listed in the SC for such payment have been met, and the Consultant has submitted an invoice to the Client specifying the amount due.
- 6.5 Interest on Delayed Payments** If the Client has delayed payments beyond fifteen (15) days after the due date stated in the Clause SC 6.4, interest shall be paid to the Consultant for each day of delay at the rate stated in the SC.

## 7. GOOD FAITH

- 7.1 Good Faith** The Parties undertake to act in good faith with respect to each other's rights under this Contract and to adopt all reasonable measures to ensure the realization of the objectives of this Contract.

## 8. SETTLEMENT OF DISPUTES

- 8.1 Amicable Settlement** The Parties agree that the avoidance or early resolution of disputes is crucial for a smooth execution of the Contract and the success of the assignment. The Parties shall use their best efforts to settle amicably all disputes arising out of or in connection with this Contract or its interpretation.
- 8.2 Dispute Resolution** Any dispute between the Parties as to matters arising pursuant to this Contract that cannot be settled amicably within thirty (30) days after receipt by one Party of the other Party's request for such amicable settlement may be submitted by either Party for settlement in accordance with the provisions specified in the SC.

Consultant



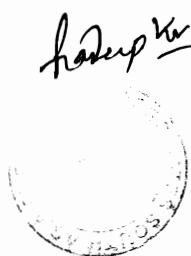
Handwritten signature of the Chief Engineer and a stamp for 'World Bank Project, Orissa'.

Chief Engineer  
World Bank Project, Orissa  
World Bank Project  
O/o the E.I.C. (Civil)  
Orissa, Bhubaneswar.

### III. Special Conditions of Contract

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
{1.1(a)}	{The words "in the Government's country" are amended to read "in India".
1.3	The language is : English
1.4	<p>The addresses are:</p> <p>Client: <b>Works Department, Government of Orissa</b></p> <p>Attention: <b>Er.Jayamangal Nayak, Chief Engineer, World Bank Projects</b></p> <p>Facsimile: + 91 – 674 – 239 6783</p> <p>E-mail: <a href="mailto:osrp@sify.com">osrp@sify.com</a>; <a href="mailto:piuosrp@gmail.com">piuosrp@gmail.com</a></p> <p>Consultant:<b>PricewaterhouseCoopers Pvt. Ltd.</b>  <b>Building 8, 7<sup>th</sup> and 8<sup>th</sup> Floor</b>  <b>Tower B, DLF cyber City,</b>  <b>Gurgaon 122001</b></p> <p>Attention: <b>Vishwas Udgirkar</b></p> <p>Facsimile: + 91-124-4620557</p> <p>E-mail: <a href="mailto:vishwas.udgirkar@in.pwc.com">vishwas.udgirkar@in.pwc.com</a></p>
1.6	The Member in Charge is <b>PricewaterhouseCoopers Pvt. Ltd.</b>
1.7	<p>The Authorized Representatives are:</p> <p>For the Client: Chief Engineer, World Bank Projects, Orissa</p> <p>For the Consultant: Vishwas Udgirkar, Executive Director, PricewaterhouseCoopers Pvt.Ltd.</p>

Consultant



  
 Chief Engineer  
 World Bank Projects, Orissa

Chief Engineer,  
 World Bank Project  
 O/o the E.I.C. (Civil)  
 Orissa, Bhubaneswar.

<p><b>1.8</b></p> <p><b>1.8.1</b></p> <p><b>1.8.2</b></p>	<p><u>For domestic consultants/personnel and foreign consultants/personnel who are permanent residents in India</u></p> <p>The consultants and personnel shall pay the taxes, duties, fees, levies and other impositions levied under the existing, amended or enacted laws during life of this contract and the client shall perform such duties in regard to the deduction of such tax as may be lawfully imposed.</p> <p><u>For Foreign Consultancy firms</u></p> <p>The Client warrants that the Client shall reimburse the Consultants for any indirect taxes, duties, fees, levies and other impositions imposed, under the Applicable Law, on the Consultant, the Sub-Consultants and the Personnel in respect of:</p> <p>(a) any payments whatsoever made by the Client directly to the Consultant, Sub-Consultants and the Personnel (other than nationals or permanent residents of the Government's country), in connection with the carrying out of the Services;</p> <p>(b) any equipment, materials and supplies brought into the Government's country by the Consultant or Sub-Consultants for the purpose of carrying out the Services and which, after having been brought into such territories, will be subsequently withdrawn there from by them;</p> <p>(c) any equipment imported for the purpose of carrying out the Services and paid for out of funds provided by the Client and which is treated as property of the Client;</p> <p>(d) any property brought into the Government's country by the Consultant, any Sub-Consultants or the Personnel (other than nationals or permanent residents of the Government's country), or the eligible dependents of such Personnel for their personal use and which will subsequently be withdrawn there from by them upon their respective departure from the Government's country, provided that:</p>
	<p>(1) the Consultant, Sub-Consultants and Personnel, and their eligible dependents, shall follow the usual customs procedures of the Government's country in importing property into the Government's country; and</p> <p>(2) if the Consultant, Sub-Consultants or Personnel, or their eligible dependents, do not withdraw but dispose of any property in the Government's country upon which customs duties and taxes have been exempted, the Consultant, Sub-Consultants or Personnel, as the case may be, (i) shall bear such customs duties and taxes in conformity with the regulations of the Government's country, or (ii) shall reimburse them to the Client if they were paid by the Client at the time the property in question was brought into the Government's country.</p>

Consultant



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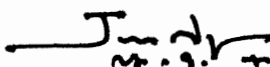
**Chief Engineer**  
World Bank Projects, Orissa  
**Chief Engineer,**  
World Bank Project  
O/o the E.I.C. (Civil)  
Orissa, Bhubaneswar



2.1	<p>The Effective Conditions are the following:</p> <p>[a] approval of the Contract by the Bank</p> <p>(b) Consultant confirming the client that the key professional as per manning scheduled have been mobilised and that the office in Bhubaneswar is fully functional.</p>
2.2	<p>The date for the commencement of Services is 15 days after signing of contract .</p>
2.3	<p>The time period shall be [ 12 monthss] or such other period as the parties may agree in writing.</p>
3.4	<p>The risks and the coverage shall be as follows:</p> <p>(a) Third Party motor vehicle liability insurance in respect of motor vehicles operated in the Government's country by the Consultant or its Personnel or any Sub-Consultants or their Personnel, with a minimum coverage as per Motor Vehicles Act 1988;</p> <p>(b) Third Party liability insurance, with a minimum coverage of [Rs. 5,00,000];</p> <p>(c) professional liability insurance, with a minimum coverage of [Rs. 3,00,00,000 ];</p> <p>(d) employer's liability and workers' compensation insurance in respect of the Personnel of the Consultant and of any Sub-Consultants, in accordance with the relevant provisions of the Applicable Law, as well as, with respect to such Personnel, any such life, health, accident, travel or other insurance as may be appropriate; and</p> <p>(e) insurance against loss of or damage to (i) equipment purchased in whole or in part with funds provided under this Contract, (ii) the Consultant's property used in the performance of the Services, and (iii) any documents prepared by the Consultant in the performance of the Services.</p>
3.7 (b)	<p>The Consultant shall not use these documents and software for purposes unrelated to this Contract without the prior written approval of the Client.</p>
6.2(a)	<p>The amount in foreign currency or currencies is NIL</p>

Consultant



  
**Chief Engineer**  
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**Chief Engineer,**  
**World Bank Project**  
**O/o the E.I.C. (Civil)**  
**Orissa, Bhubaneswar.**

6.2(b)	<p>The amount in local currency is:</p> <p><b>Consultancy fee for Phase I : INR 22,322,900.00</b></p> <p><b>Consultancy fee for Phase II ; INR 12,350,500.00</b></p> <p>The additional work for the fourth stretch Dhamra-Digochia is without any extra charge and no payment is linked to those deliverables.</p> <p><b>The amounts mentioned above are the amounts net of service tax. The service tax will be payable on actuals. As per the prevailing rate (@12.24%) as on 10<sup>th</sup> April, 2007 the estimates of service tax are as under:</b></p> <p><b>Phase I : INR 2,732,323.00</b>  <b>Phase II: INR 1,511,701.00</b></p> <p>In case the client decided to go ahead for less than 3 stretches in phase II the fees for phase II will be modified as under:</p> <p><b>Consultancy fee for Phase II ( In case of one stretch) : INR 8,613,804.00</b>  <b>Consultancy fee for Phase II ( In case of two stretches): INR 10,331,826.00</b></p> <p>Payment per completed deliverables to the satisfaction of the client for Phase II roads will be based on the payment percentages shown in clause 6.4 (a). In the event of more than one road transacted, the cost per road is taken as 50% of the total cost for two roads, and 33.3% in the case of three roads</p>									
6.4(a)	<p>The accounts are:</p> <p><b>For PricewaterhouseCoopers Private Limited</b>  <b>EEFC A/c No.51-222420-907 in Hongkong and Shanghai Banking Corporation Ltd,</b>  <b>25 Barakhamba Road, New Delhi 110001</b>  <b>SWIFT code HSBCINBB</b></p> <p><b>LEA Associates South Asia Pvt. Ltd</b>  <b>A/c No. OD-2986 in Canara Bank, Maharani Bagh Branch, 4 Siddharth Enclave</b>  <b>Commercial Complex, Ashram Chauk, New Delhi -110014</b>  <b>SWIFT code CNRBINBBMHB</b></p> <p>Payments shall be made according to the following schedule:</p> <p><b>Phase I:</b></p> <table border="1" data-bbox="344 1653 1449 1910"> <thead> <tr> <th>Firm</th> <th>Percent of fee payable</th> <th>Amount</th> </tr> </thead> <tbody> <tr> <td>PricewaterhouseCoopers Private Limited</td> <td>23.39%</td> <td>5,221,900.00</td> </tr> <tr> <td>LEA Associates South Asia Pvt. Limited</td> <td>76.61%</td> <td>17,101,000.00</td> </tr> </tbody> </table>	Firm	Percent of fee payable	Amount	PricewaterhouseCoopers Private Limited	23.39%	5,221,900.00	LEA Associates South Asia Pvt. Limited	76.61%	17,101,000.00
Firm	Percent of fee payable	Amount								
PricewaterhouseCoopers Private Limited	23.39%	5,221,900.00								
LEA Associates South Asia Pvt. Limited	76.61%	17,101,000.00								

Consultant



*Jim N. V. R.*  
**Chief Engineer**  
 World Bank Projects, Orissa  
 Chief Engineer,  
 World Bank Project  
 O/o the E.I.C. (Civil)  
 Orissa, Bhubaneswar.

**Phase II**

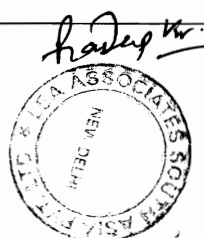
Firm	Percent of fee payable	Amount
PricewaterhouseCoopers Private Limited	66.50%	8,213,000.00
LEA Associates South Asia Pvt. Limited	33.50%	4,137,500.00

The following payment schedule is set for each phase of the contract. Payment will be made when deliverables are submitted to the satisfaction of Client and upon approval of the Review Committee and no objection by the World Bank.

**Phase 1: PPP Techno-Economic Feasibility study and Engineering Designs**

Deliverable	Percentage of Phase 1 Cost
Submission of Quality Assurance Plan (QAP) document to GOO	8
Acceptance of the Quality Assurance Plan (QAP) document by GOO	2
Submission of Inception Report to GOO	12
Acceptance of Inception Report by GOO	3
Submission of Technical Feasibility Report to GOO	12
Approval of Technical Feasibility Report by GOO	3
Submission of Strip Plan to GOO	8
Acceptance of Strip Plan by GOO	2
Submission of the Preliminary Project Report GOO	8
Approval of Preliminary Project Report by GOO	2
Submission of PPP Techno economic feasibility study report to GOO and a Bank Guarantee amounting to 15% of Contract Amount payable under Phase – 1 of the Services valid till six months.	12
Approval PPP Techno economic feasibility study report by GOO	3
Submission of Request for “in principle” approval for VGF to the satisfaction of GOO and DEA	15
Submission of Land Acquisition Report, Utility relocation plans and detail for clearances to GOO	8
Approval of Land Acquisition Report, Utility relocation plans and detail for clearances by GOO	2
Total	100

Consultant



*[Signature]*  
**Chief Engineer**  
 World Bank Projects, Orissa  
 Chief Engineer,  
 World Bank Project  
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 Orissa, Bhubaneswar.

<b>Phase 2: PPP procurement</b>	
<b>Deliverable</b>	<b>Percentage of Phase 2 Cost</b>
Submission of the RFQ documents to GOO	8
Approval of the RFQ documents by GOO	2
Submission of other bid documents (RFP, Draft Contract and Schedules) to GOO	20
Approval of other bid documents (RFP, Draft Contract and Schedules) by GOO	5
Submission of Value for money Report / Evaluation Report to GOO	12
Approval of Value for money Report / Evaluation Report by GOO	3
Submission of Contract agreement to GOO and a Bank Guarantee amounting to 10% of Contract Amount payable under Phase – 2 of the Services valid till six months.	12
Approval of Contract agreement by GOO	3
Success fee upon successful signing of contract	15
Submission of Request for final approval for VGF to the satisfaction of DEA and Training to the Client Staff on PPP Contract Management	20
<b>Total</b>	<b>100</b>

**6.5** Upon confirmation of satisfaction with the deliverable by the Client" payment shall be made within 30 days of receipt of the invoice and the relevant documents specified in Clause 6.4, and within 60 days in the case of the final payment.

The interest rate is: London Inter-Bank On-Lending Rate [LIBOR] plus 2% for foreign currency; and **8.5%** (Commercial Bank's prime lending rate of interest) for local currency.

<b>8.2</b>	<p>Disputes shall be settled by arbitration in accordance with the following provisions:</p> <p><b>Dispute Settlement</b></p> <p>8.2 (i) Any dispute, controversy, or claim arising out of or relating to this contract, or the breach, termination or invalidity thereof shall be settled by arbitration in accordance with following provisions:</p> <p>8.2 (ii) Each dispute submitted by a Party to arbitration shall be heard by a sole arbitrator or an arbitration panel composed of three arbitrators, in accordance with the following provisions:</p> <p>(a) Where the Parties agree that the dispute concerns a technical matter, they may agree to appoint a sole arbitrator or, failing agreement on the identity of such sole arbitrator within thirty (30) days after receipt by the other Party of the proposal of a name for such an appointment by the Party who initiated the proceedings, either Party may apply to the President, Indian Roads Congress,</p>
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Consultant



**J. N. S.**  
**Chief Engineer**  
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 Chief Engineer,  
 World Bank Project  
 O/o the E.I.C. (Civil)  
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	<p>New Delhi, for a list of not fewer than five nominees and, on receipt of such list, the Parties shall alternately strike names therefrom, and the last remaining nominee on the list shall be the sole arbitrator for the matter in dispute. If the last remaining nominee has not been determined in this manner within sixty (60) days of the date of the list, the President, Indian Roads Congress India, New Delhi, shall appoint, upon the request of either Party and from such list or otherwise, a sole arbitrator for the matter in dispute.</p> <p>(b) Where the Parties do not agree that the dispute concerns a technical matter, the Client and the Consultants shall each appoint one arbitrator, and these two arbitrators shall jointly appoint a third arbitrator, who shall chair the arbitration panel. If the arbitrators named by the Parties do not succeed in appointing a third arbitrator within thirty (30) days after the latter of the two arbitrators named by the Parties has been appointed, the third arbitrator shall, at the request of either Party, be appointed by Secretary, the Indian Council of Arbitration, New Delhi.</p> <p>(c) If, in a dispute subject to Clause 7.2 (ii) (b), one Party fails to appoint its arbitrator within thirty (30) days after the other Party has appointed its arbitrator, the Party which has named an arbitrator may apply to the Secretary, Indian Council of Arbitration, New Delhi, to appoint a sole arbitrator for the matter in dispute, and the arbitrator appointed pursuant to such application shall be the sole arbitrator for that dispute.</p>
	<p><b>8.3 Rules of Procedure</b></p> <p>Arbitration proceedings shall be conducted in accordance with procedure of the Arbitration &amp; Conciliation Act 1996, of India unless the Consultant is a foreign national/firm, where arbitration proceedings shall be conducted in accordance with the rules of procedure for arbitration of the United Nations Commission on International Trade Law (UNCITRAL) as in force on the date of this Contract.</p> <p><b>8.4 Substitute Arbitrators</b></p> <p>If for any reason an arbitrator is unable to perform his function, a substitute shall be appointed in the same manner as the original arbitrator.</p> <p><b>8.5 Qualifications of Arbitrators</b></p> <p>The sole arbitrator or the third arbitrator appointed pursuant to paragraphs (a) through (c) of Clause 7.2 (ii) hereof shall be an internationally recognized legal or technical expert with extensive experience in relation to the matter in dispute.</p>

Consultant



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**Chief Engineer**  
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**Chief Engineer,**  
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 D/o the E.I.C. (Civil)  
 Orissa, Shubaneswar

**8.6 Miscellaneous**

In any arbitration proceeding hereunder:

- (a) proceedings shall, unless otherwise agreed by the Parties, be held in **Bhubaneswar**.
- (b) the English language shall be the official language for all purposes; and [Note: English language may be changed to any other Language, with the agreement of both the parties.]
- (c) the decision of the sole arbitrator or of a majority of the arbitrators (or of the third arbitrator if there is no such majority) shall be final and binding and shall be enforceable in any court of competent jurisdiction, and the Parties hereby waive any objections to or claims of immunity in respect of such enforcement.



*Janak*

Chief Engineer  
World Bank Projects, Orissa  
Chief Engineer,  
World Bank Project  
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Orissa, Bhubaneswar.

## IV. Appendices

### Appendix A

#### Description of Services

### PPP Techno-Economic Feasibility Study and Transaction Advisor for Selected State Roads in the State of Orissa, India ORISSA STATE ROADS PROJECT

#### INTRODUCTION

The State Government of Orissa (GOO) through the Government of India (GOI) intends to apply for a loan from the International Bank for Reconstruction and Development (IBRD)<sup>1</sup> and intends to apply part of the proceeds of this loan to finance consultancy services for techno-economic feasibility and transaction advisor for selected PPP roads in the state.

As per the GOO's strategic vision for the provision, operation and maintenance of infrastructure in the state, the Orissa Works Department, termed here as the Client, has identified the need to upgrade and operate three of the high traffic mining /industrial roads in the state ( as mentioned below) through public private partnership arrangements. Accordingly, the department is taking steps for procurement of concessionaires to finance, construct, maintain and operate the roads by tapping into central government financing if required. In this context, the Client seeks to hire services of a consulting firm / transaction advisor to: (i) undertake the PPP techno-economic feasibility study for the three selected roads; and (ii) process the "in principle" approval for financing by the central government Viability Gap Fund (VGF) scheme. Subsequently, the Client envisages to engage the said consulting firm/ transaction advisor to manage the procurement process for the concessioning of the roads, and for processing the final VGF approval. However, the Client reserves the right to award or not the subsequent phase of the assignment for PPP transaction advisory services, on completion of the feasibility study and on obtaining the VGF in principle approval. The three roads being considered are:

1. Four laning of Sambalpur-Rourkela Road (SH-10) for a length of 165 km from Rourkela (NH-23) to Sambalpur (NH-42).
2. Widening of the existing single lane Joda-Bamberi Road (Expressway II) for a length of 18 km to 7 meters carriageway with 1.5m paved shoulder.
3. Widening of the existing single lane Koira-Tensa- Rajamunda Road for a length of 46 km to 7 meters carriageway with 1.5m paved shoulder.

Potential consultants are required to be familiar with relevant state and national regulations for PPP.

<sup>1</sup> Also referred as World Bank ( WB)

Consultant



Signature of Chief Engineer  
Chief Engineer  
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World Bank Project  
@/o the E.I.C. (Civil)  
Orissa, Bhubaneswar.

These terms of reference are part of the request for proposals for a consultancy firm/transaction advisor<sup>2</sup> representing a team of suitably qualified and experienced financial, technical and legal advisors to help the Client to:

- **Phase 1:** Undertake a comprehensive PPP techno-economic feasibility study for the three selected state roads and preliminary engineering design. Detailed engineering design will be undertaken by the Concessionaire.
- **Phase 2:** If required afterwards, provide transaction advisory services for the appropriate procurement of the contracts.

The scope of work is divided into these two phases. The transaction advisor is required to submit a bid for both phases, stating separately the cost for Phase 1 and Phase 2.

### SCOPE OF WORK

The scope of work for the transaction advisor is:

#### **Phase 1: PPP Techno-Economic Feasibility study and Preliminary Engineering Design.**

The main objective is to establish the technical, economical, and financial viability of the project and prepare preliminary engineering designs and preliminary project reports for the identified PPP roads. The viability of the project designed as a partially access controlled facility shall be established taking in to account the requirement with regard to rehabilitation, upgrading and improvement based on highway design, pavement design, provision of service roads whatever necessary, type of intersections, underpasses / flyovers /ROB's rehabilitation and widening of existing and / or construction of new bridges and structures, road safety features, quantities of various items of works and cost estimates vis-à-vis the investment and financial return through toll and other revenues.

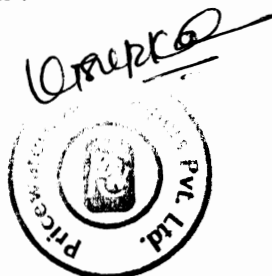
The transaction advisor will be required to produce a comprehensive feasibility study based on a preliminary project report for the proposed roads using several PPP modalities. This must enable the GOO to determine:

- full project life costs
- affordability limits
- risks and their costs
- optimal value-for-money methods of delivery.

**Phase 2: PPP procurement.** If, on the basis of the feasibility study, a PPP solution is decided on, and if the Client requires it, the transaction advisor will be required to provide the necessary technical, legal and financial advisory support for the procurement of private parties. This must be in compliance with all relevant national and state regulation and policies, and World Bank Guidelines (if finance is to be required from the Bank).

<sup>2</sup>Reference to 'consultancy firm/transaction advisor' includes the entire advisory team, or relevant members, under the management of a single lead advisor who shall contract with the Orissa Works Department (OWD). This team will be called "Transaction Advisor".

Consultant



Handwritten signature of the Chief Engineer and a circular stamp of the Orissa Works Department. The stamp contains the text 'ORISSA WORKS DEPARTMENT' and 'Bhubaneswar'.

Chief Engineer  
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Chief Engineer,  
World Bank Project  
O/o the E.I.C. (Civil)  
Orissa, Bhubaneswar.



## DELIVERABLES

### Phase 1: PPP Techno-Economic Feasibility Study and Preliminary Engineering Design Deliverables.

**1. PPP Techno-economic Feasibility Report.** The transaction advisor is required to produce, in close liaison with the Client, a comprehensive PPP feasibility study for the proposed roads, based on preliminary engineering designs. The feasibility study needs to clearly demonstrate affordability for the full project life and propose the optimal value-for-money solution for the GOO to achieve its desired outcomes. It must follow standard practice (and the contents shown in **Annexure I**) and include solution option analysis, project due diligence, value and risk assessment (including a comprehensive risk matrix), economic valuation and procurement plan. The feasibility study must be compiled in a single report (with relevant annexures), and delivered as both electronic and hard copy documents. All financial models must be in Excel format, and clearly set out all assumptions made, sensitivity analyses carried out, and model outputs. The financial models must be sufficiently adaptable for use by others at later stages. The feasibility study must be presented with a thorough executive summary and must be accompanied by a PowerPoint presentation that encapsulates all the key features of the study. The executive summary and PowerPoint presentation must be compiled in such a manner that they can be used by the GOO's management for decision-making purposes. Detailed requirements for project data and software are attached in **Annexure III**.

In order for the transaction advisor to be able to complete the detailed PPP techno-economic feasibility study, it must necessarily complete and deliver the tasks and reports listed in Annexure II, including: (i) Quality Assurance Plan (QAP); (ii) Inception Report (IR); (iii) Technical Feasibility Report; (iv) Strip Plan and Clearances; (v) Land Acquisition Report; and (vi) Preliminary Project Report following the specifications as described in Annexure II.

### 2. Presentation of the PPP Techno-economic Feasibility Study

The transaction advisor will deliver a presentation of the results contained in the feasibility study and engineering and other issues before the Review Committee.

### 3. PPP Project Agreement

GOO intends to use the Model Concession Agreement (MCA) for Build-Operate-Transfer (BOT) roads developed by GOI. Therefore, the transaction advisor is required to draft the specific PPP agreements for each of the three roads, based to the extent possible on the MCA. The Planning Commission, Govt. of India, is planning to release shortly a state-level model concession agreement pertaining to state BOT roads. Should this agreement be finalized in time, the transaction advisor would be asked to base the agreements on this new state-level MCA. Close liaison with the GOO management and the PPP unit of the GOI at DEA and Planning is required during drafting.

### 4. Submission of PPP Project Agreement and Project Report to the Central Government VGF funding

If the GOO decides to pursue a PPP solution for the road in question, the deliverables by the consultant must be of a standard that will be accepted by the Central Government (DEA and the Planning Commission as necessary) for the purposes of requesting VGF funding.

Consultant



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**Chief Engineer**  
 World Bank Projects, Orissa  
**Chief Engineer,**  
**World Bank Project**  
**O/o the E.I.C. (Civil)**  
**Bhubaneswar.**

Moreover, the transaction advisor will be required to submit the Project Agreement and the Project Report for obtaining the “in principle” approval by the empowered institution. The transaction advisor is therefore advised to be fully familiar with the requirements as stated in the two notifications issued by the Department of Economic Affairs (DEA) concerning: (i) the procedures for approval of central sector Public Private Partnerships; and (ii) the guidelines for forwarding proposals for financial support to Public Private Partnerships in infrastructure under the VGF (see Annex V for the Background on the VGF initiative). These are:

- F.No1/5/2005-PPP: Procedure for approval of Public Private Partnerships
- F.No.1/4/2005-PPP: Guidelines for forwarding proposals for financial support to Public Private Partnerships in infrastructure under the Viability Gap Funding Scheme

### 5. Preliminary Feasibility of Dhamra-Digochia Stretch

In addition to the three roads being considered for PPP techno-economic feasibility study, the Consultants shall carry out preliminary feasibility studies for the 35 km road stretch from Digochhia to Dhamra. The deliverable for this shall upto the Technical Feasibility Report as per Sl. 3 under Reports of Annexure I. This shall include traffic analysis, financial analysis, apart from the environmental and social screening of the corridor, the alignment plan and detailed reconnaissance. The alignment plan, including the tentative alignments for new /missing links shall be assessed based on navigational GPS surveys. The consultant shall work out the improvement costs based on detailed reconnaissance surveys. The detailed feasibility studies, including the preparation of documents for VGF and subsequently for PPP shall be prepared in-house by the counterpart staff of the PIU. The Client shall identify the counterpart staff at the inception stage of the project, to work together with the consultant team.

**Phase 2: PPP Procurement Deliverables.** If the GOO decides on a PPP procurement solution, the transaction advisor is required to work with the GOO to manage the procurement process for securing contracts with private parties. The transaction advisor will then have to deliver the following:

#### 1. GOO, GOI & WB Approval and Administration of the Bidding Process

The transaction advisor must prepare a complete set of procurement documents, complying with procurement law, policies and guidelines, and in accordance with the tendering systems of the GOO, GOI and the World Bank (if GOO intends to request financing of any required additional funding from the World Bank). The documentation must be consistent with the results of the techno-economic feasibility study and enable the Client to obtain necessary approvals from the PPP APEX Committee of GOO.

The transaction advisor must also give the Client all the necessary drafting, bidder communication and administrative support necessary for the entire procurement process to be conducted in accordance with law and policy, and to the highest standards of efficiency, quality and integrity.

Consultant



Handwritten signature of the Chief Engineer and a stamp of the Chief Engineer, World Bank Projects, Orissa, O/o the E.I.C. (Civil), Orissa, Shubaneswar.

### 1.1. Pre-qualification

The transaction advisor must design and administer a pre-qualification (request for qualification (RFQ)) process with the intention of:

- ensuring that the GOO's exact interest is communicated clearly to the market
- determining the extent and nature of interest in the private sector
- pre-qualifying a competitive number of competent consortia in an equitable and transparent way.

The desired result is that every pre-qualified bidder is capable of providing the facilities and services required by the GOO.

The transaction advisor must: prepare all the necessary RFQ documentation, including advertising material; set up and administer the process by which the GOO can pre-qualify the parties; and help the GOO evaluate and pre-qualify bidders.

### 1.2. Payment Mechanism

The transaction advisor must develop a rigorous payment mechanism that captures the elements of risk transfer established in the feasibility study.

### 1.3. Bid Evaluation Criteria and Bid Process Design

The transaction advisor must: set up a bid evaluation system and criteria; design a suitable bid process that will ensure comparable bids; devise effective systems for communicating with bidders; inspire market confidence; and incorporate all other requirements for the project. If appropriate, a system that allows for variant bids may be designed. Due regard must be given to the requirements of the central government VGF for using the lowest capital grant requested by the private sector as the bidding variable.

### 1.4. Request for Proposals (RFP)

The transaction advisor must prepare RFP documents in accordance with best industry practice and with GOO and the World Bank's requirements, consistent with the results of the PPP feasibility study. The RFP must concisely set out:

- the output specifications of the GOO
- requirements for compliant bids
- a risk profile as established in the feasibility study
- the payment mechanism
- the bid process
- evaluation criteria
- bidder communication systems.

### 1.5. GOO, GOI and WB Approval

The transaction advisor must compile all the documentation necessary for the GOO to obtain approvals of GOI & World Bank to enable the procurement process to begin. This also includes approval from the PPP APEX Committee of GOO.

Consultant



Handwritten signature of the Chief Engineer  
Chief Engineer  
World Bank Projects, Orissa  
Chief Engineer,  
World Bank Project  
O/o the E.I.C. (Civil)  
Orissa, Bhubaneswar.

### 1.6. Administration of the Bidding Process

If GOO is accessing the VGF, then bids shall be invited within four months of receipt of the “in principle” approval for VGF by DEA, unless the period has been formally extended by DEA as necessary. It is the responsibility of the transaction advisor to obtain this extension if required.

The transaction advisor is to provide all necessary administrative support to the GOO for the efficient and professional management of the bidding process. This includes managing a data room, facilitating structured engagement between the GOO and bidders, helping the GOO communicate effectively with bidders, and receiving bids.

## 2 Evaluation of Bids, Demonstrating Value for Money

### 2.1 Evaluation of Bids

The authorised staff of the GOO, helped by the transaction advisor, shall evaluate the bids.

### 2.2 The Value-for-money Report

The results of the bidding and evaluation of bids must be presented in a single value-for-money report (with relevant annexures) that demonstrates clearly how value for money will be achieved with the preferred bidder. The report must clearly indicate the preferred and second-ranked bidders and provide explanations for the recommendations.

## 3. PPP Project Agreement Negotiations, Management Plan and Approvals


The transaction advisor shall assist the Client in the discussions for contract finalization with the preferred bidder. This will involve categorising issues appropriately, developing timelines for completion, and planning discussion tactics and processes for reaching agreement. The transaction advisor must ensure that all agreements reached are incorporated into all the financial, commercial and legal documentation, and must assist with drafting the necessary and related correspondence including minutes of discussions.

The final terms of the agreements, each as discussed and agreed with the preferred bidder, must be submitted by the Client, along with the PPP agreement management plan road-wise for approval of competent authority. The transaction advisor is responsible for compiling the necessary submissions for the Client to obtain this approval from the PPP Apex Committee of Orissa. In addition, the transaction advisor must, in close liaison with the Client, draft a comprehensive PPP agreement management plan for the GOO. This must include arrangements to have in place for management and monitoring of PPP contract during the entire duration of the contract.

The transaction advisor must ensure that a comprehensive legal due diligence of the accounting officer/authority has been completed. This will relate to legal compliance, competence and capacity to enter into the PPP agreement.

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#### 4. PPP Agreement Signature, Close-out Report and Financial Closure

The transaction advisor must help the Client/GOO with all functions related to signing the final agreement. The transaction advisor must also compile a comprehensive close-out report. The close-out report will be a confidential document of the GOO, and will also be lodged with GOI if required.

Financial closure signifies that all the procurement deliverables have been successfully completed, and that the transaction advisor's work is finished, if applicable.

#### 5. Final Approval for Central Government VGF

Within three months of the date of award (unless an extension has been formally received by DEA), the transaction advisor will ensure that the lead financial institution (or the party named as such from within the consortium of financial institutions) presents its project appraisal report and updated VGF formats for the approval of DEA.

The transaction advisor will also facilitate the tripartite agreement between GOI, the private sector and the lead financial institution, so that the VGF can be accessed.

#### 6. Training and Knowledge Transfer

During the 3 months allowed for the task 5 above, the transaction adviser will impart training in India to the designated officers of the Client and GOO in contract management of PPP Roads. The objective of the training would be to train the employees in contract administration/management of PPP roads. The training would consist of 10 members in two batches of 5 members each. The classroom training as proposed would cover both theory and practice. The theoretical training would cover understanding the PPP system and the practical training would analyzing a few case studies in PPP. In addition two workshops will be conducted at Bhubaneswar on PPP for 20 members in each workshop.

**Exposure Tour:** During this period of 3 months, the Consultant will also organize an exposure tour to South Africa, including preparation of agenda for study tour, contacting and agreeing with road agencies for the tour, arranging the logistics, travel plans and accommodation for the GOO officials. The costs of the study tour are included in the cost of the contract. The purpose of this tour is provide exposure to various PPP projects and provide an opportunity to Clients staff of sharing experience of the officials of road agencies in this country in implementing PPPs. Client would nominate 3 of its officers and the training would be for 5 working days

The client has agreed to the suggestion of the client to carry out the preliminary feasibility study of additional stretch (Dhamra-Do-Chaki). The Consultants have further agreed to provide guidance to the client team of designated personnel with the desired background to complete the remaining tasks required for getting VGF.

The Consultants will provide the necessary guidance to the client team for on-the-job learning to undertake the following tasks concerning the additional stretch (Dhamra-Do-Chaki):

- (i) Presentation of the PPP Techno-economic Feasibility Study;
- (ii) PPP Project Agreement;

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- (iii) Submission of PPP Project Agreement and Project Report to the Central Government VGF funding;
- (iv) GOO, GOI & WB Approval and Administration of the Bidding Process;
- (v) Evaluation of Bids, Demonstrating Value for Money;
- (vi) PPP Project Agreement Negotiations, Management Plan and Approvals;
- (vii) PPP Agreement Signature, Close-out Report and Financial Closure; and
- (viii) Final Approval for Central Government VGF.

### DURATION OF THE SERVICES

The consultancy will be carried out over a period of 12 months, as follows.

**Phase 1** : 1<sup>st</sup> – 9<sup>th</sup> months

**Phase 2** : 5<sup>th</sup> – 12<sup>th</sup> months.

In providing the services the consultants should use highly qualified technical resources in the preparation of preliminary engineering design and technical feasibility studies of the selected roads. The preliminary engineering design shall be carried out by the consultant using sound engineering skills, experience and expertise so as to ensure minimal deviations (of the order of maximum 20%) in the design quantity at the time of detail engineering design.

The Reports and other submissions to the Client required during the consultancy are as scheduled below:

Phase	Submission date / month	Report for the three identified stretches under the RFP
1	15 days from commencement	Quality Assurance Plan Document
	1 <sup>st</sup> Month	Inception Report
	3 <sup>rd</sup> Month	Technical Feasibility Report and Social and Environmental screening reports
	4 <sup>th</sup> Month	Strip plan
	5 <sup>th</sup> Month	Preliminary Project Report
	6 <sup>th</sup> Month	PPP Techno-economic Feasibility Report, Draft PPP Agreement
	7 <sup>th</sup> Month	Assistance for The Client in GOI Approval for VG funding
	9 <sup>th</sup> Month	Documents required for clearances and land acquisition report (LAR)
2	6 <sup>th</sup> Month	Bidding Documents for Pre-Qualification
	7 <sup>th</sup> Month	RFP
	8 <sup>th</sup> Month	Value for money Report / Evaluation Report
	9 <sup>th</sup> month	Assisting the Client in Project Agreement Signature and compilation of Close-out report with the bidder
	12 <sup>th</sup> Month	Final Agreement from VGF of GOI

The Technical Feasibility Report for the Dhamra-Digochia Stretch, as per the scope of work mentioned in para 5 of Phase I of the Deliverables shall be delivered in the 5<sup>th</sup> Month

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## MANAGEMENT OF CONTRACT

The Chief Engineer, World Bank Projects on behalf of the Client shall take full responsibility for managing the transaction advisor's work and for ensuring delivery on the project. The Chief Engineer, World Bank Projects will assign a project team to engage regularly with the transaction advisor for efficiently completing the various delivery items. Frequent meetings with the Transaction Advisor at site office or in Delhi are foreseen during project preparation. The project team will meet at least monthly and the transaction advisor will report progress to these meetings, as instructed by the Chief Engineer.

During entire period of services, the Transaction Advisor shall interact continuously with the Client and provide any clarifications as regards methods being followed and carry out modification as suggested by the Client. A programme of various activities shall be provided to the Client and prior intimation shall be given to the Client regarding start of key activities such as boring, survey etc. so that inspections of the Client officials can be arranged in time. In addition, the Client officers and other Government officers may visit the site at any time, individually or collectively to acquaint themselves with the field investigation and survey works.

The Chief Engineer, World Bank Projects can be contacted at:  
Project Implementation Unit, Orissa State Roads Project  
Office of the Engineer-in-Chief (Civil), Orissa, NIRMAN SAUDHA, Keshari Nagar  
Bhubaneswar – 751001

Telfax: 0674-2396783, e-mail :[osrp@sify.com](mailto:osrp@sify.com) ; [piuosrp@gmail.com](mailto:piuosrp@gmail.com)

### 3. Review Committee to Monitor Consultant's Works

A review committee consisting of the following officers of the GOO shall review the progress of the work and approve the reports to be submitted by the consultant.

1. Engineer-in-Chief-cum-Secretary to the Govt., Works Department, Chairman
2. Member Secretary, PPP Apex Committee, Member
3. Chief Engineer, D.P.I. & Roads, Orissa, Member
4. Chief Engineer, National Highways, Orissa, Member
5. Chief Engineer, World Bank Projects, Member Convener.

The Review Committee will co-opt experts to set their opinion on financial aspects of these projects.

The Review Committee will review the reports submitted by the Consultant, give suggestions and modifications, if any, within two weeks of receipt and would be sole authority to approve the reports. The Review Committee may also hold meetings with the Consultant as necessary to discuss reports submitted and review the progress etc.

The consultant would give detailed program of completion of each of the activity for which the Consultant is responsible. The program may be prepared in the form of bar charts/CPM chart/PERT charts or any other latest technique, which can be updated, with the help of available computer packages.

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**Annexure-I****Detailed Scope of Work for Techno-Economic Feasibility Study & Preliminary Engineering****TASKS**

**1. Primary Tasks.** General scope of services shall cover but not limited to the following major tasks. Details of surveys and investigations and engineering analysis to be undertaken shall be as outlined in Annexure-III:

- i. Review of all available reports and published information about the roads and the project influence area;
- ii. Environmental and social impact assessment, including such as related to cultural properties, natural habitats, involuntary resettlement etc;
  - (a) Public consultation including consultation with communities located among the road, NGOs working in the area, other stakeholders and relevant Govt. Depts at all the different stages of the assignment (such as inception stage, feasibility stage and preliminary design stage);
- iii Detailed reconnaissance;
- iv Identification of possible improvements in existing alignment and bypassing congested locations with alternatives, evaluations of different alternatives comparisons on techno – economic and other considerations and recommendations regarding most appropriate options;
- v. Traffic studies including traffic surveys and axle load survey and demand forecasting;
- vi. Inventory and conditions survey of roads;
- vii. Inventory and condition survey for bridges, cross drainage structures and drainage provisions;
- viii. Detailed topographic surveys using Total stations and GPS;
- ix. Pavement investigations;
- x. Sub – grade characteristics and strength: investigation of required sub-grade and sub-soil characteristics and strength for road and embankment design and subsoil investigation;
- xi. Preliminary design of road, its cross- sections, horizontal and vertical alignment and design of embankment of height more than 6m and also in poor soil conditions and where density consideration require, even lesser height embankment;
- xii. Preliminary design of structure, preparation of GAD for cross drainage structures and underpasses etc;
- xiii. Identification of the type and design of intersections;
- xiv. Preliminary design of complete drainage system and disposal point for storm water;
- xv. Value analysis/value engineering and project costing;
- xvi. Economic and financial analysis;
- xvii. Contract packaging and implementation schedule;
- xviii. Strip plan indicating the scheme for carriageway widening, location of all existing utility services (both over-and underground) and the scheme for the relocation, trees to be felled and planted and land acquisition requirements including schedule

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- for LA: reports documents and drawings arrangements of estimates for cutting of trees and shifting of utilities from the concerned departments;
- xix. Financial viability of project and different PPP financing options (BOT, BOOT, BOLT, etc);
- xx. Preparation of preliminary project report, cost of estimate, rate analysis, bill of quantities, bid documents for execution of civil works through PPP basis;
- xxi. Preliminary design of toll plaza and identification of their numbers and location and office cum residential complex including working drawings;
- xxii. Preliminary design of weighing stations, parking areas and rest areas;
- xxiii. Any other user oriented facility reroute toll facility;
- xxiv. Preparation of social plans for the project for the project affected people as per policy of the lending agencies / Govt of India / Govt. of Orissa R & R policy with following information
- Objectives of the Project
  - The need for the Resettlement in the Project and evaluation of measures to minimize resettlement.
  - Description and results of public consultation and plans for continued participation of PAPs .
  - Definition of PAPs and eligibility criteria.
  - Census and survey results number affected, how are they affected and what impact will they experience.
  - Legal and entitlement policy framework – support principles for different categories of Impact.
  - Arrangement for monitoring and evaluation (internal and external)
  - Implementation schedule for resettlement which is linked to the civil works contract.
  - A matrix of scheduled activities linked to land acquisition procedures to indicate clearly what steps and actions will be taken at different stages and the time frame.
  - The payment of compensation and resettlement during the acquisition process.
  - An itemized budget (replacement value for all assets) and unit costs for different assets.

**2. Estimation of Costs.** The Transaction Advisor shall prepare preliminary project cost, including the cost of environmental and social safeguards proposed based on MORTH's Standard Data book and market rate for the inputs. The estimation of quantities, based on preliminary designs, and costs would be worked out separately for each road. The project cost estimates so prepared are to be checked against rates for similar on – going works in India under Client / World Bank/ ADB financed road sector projects.

**3. Economic Analysis.** The Transaction Advisor shall carry out economic analysis for the roads. The analysis shall take in to account ongoing and planned road and transport infrastructure projects and future developments plans in the project areas. The benefits and cost streams should be worked out for the project using HDM-IV or other internationally recognized life–cycle costing model. The economic analysis shall cover but be not limited to be following aspects:

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- i. assess the capacity of existing roads and the effects of capacity constraints on vehicle operating costs (VOC)
- ii. calculate VOCs for the existing road situation;
- iii. quantify all economic benefits, including those from reduced congestion, travel distance, road maintenance cost savings and reduced incidence of road accidents;
- iv. estimate the economic internal rate of return (EIRR) for the roads. In calculating the EIRR, identify the tradable and non-tradable components of projects costs and the border price value of the tradable components;
- v. saving in time value.

Economic Internal Rate of Return (EIRR) and Net Present Value (NPV), “with” and “without time and accident savings” should be worked out based on these cost-benefit stream. Sensitivity of EIRR and NPV worked out for the different scenarios. Some indicative scenarios are given below:

Scenario-I	Base costs and base benefits
Scenario-II	Base costs plus 15% and base benefits
Scenario-III	Base costs and base benefits minus 15%
Scenario-IV	Base costs plus 15 % and base benefits minus 15 %

**4. Financial Analysis and Financing Options.** The values of input parameters, assumptions and calibration methodologies for financial analysis, and the rationale for their selection, shall be clearly stated and approved by the Client. Financial sensitivity shall be carried out to reflect different user fee scenarios and funding options. The Transaction Advisor shall suggest positive ways of enhancing the project viability and furnish different financial models for implementing on BOT (PPP) format.

## REPORTS


The Transaction Advisor shall submit to the Client **six copies each** of the reports and documents in bound volumes after completion of each stage of work as per the schedule listed. Further, the reports shall also be submitted in floppy diskettes / CD’s addition to the hard copies.

### **1. Quality Assurance Plan (QAP) Document**

Immediately upon the award of contract, the Transaction Advisor shall submit QAP document covering all aspects of field studies, investigations design and economic/financial analysis. The quality assurance plans/procedures for different field studies, engineering surveys and investigation, design and documentation activities should be presented as separate sections like engineering surveys and investigations, traffic surveys, material geo-technical and sub-soil investigations, road and pavement investigations, investigation and design of bridges & structures, environment and R&R assessment, economic & financial analysis, drawings and documentation; preparation, checking, approval and filing of calculations; identification, checking, approval and filing of calculations, identification and tracability of project documents etc. The staff plan shall be furnished and include the details of people who shall be responsible for carrying out/preparing and checking/verifying various activities forming part of feasibility study and project preparation, since inception to the

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completion of work. The field and design activities shall start after the QAP is approved by the Client.

The data formats proposed by the Transaction Advisor for use in field studies and investigations shall be submitted within 14 days after the commencement of services and be approved by the Client.

## 2. Inception Report (IR)

The report shall cover at least following major aspects:

- (i) Project appreciation;
- (ii) Detailed methodology to meet the requirements of the TOR, finalized in consultation with the OSRP officers; including scheduling of various sub-activities to be carried out for completion of various stages of the work; stating out clearly their approach & methodology for project preparation after due inspection of the entire project stretch and collection / collation of necessary information;
- (iii) Task assignment and Manning Schedule;
- (iv) Work programme;
- (v) Pro-forma for data collection;
- (vi) Design standards and proposed cross-sections;
- (vii) Key plan and Linear plan;
- (viii) Development plans being implemented and / or proposed for implementation in the near future by the local bodies and the possible impact of such development plans on the overall scheme for field work and design for the study;
- (ix) Quality Assurance Plan (QAP) finalized in consultation with the Client;
- (x) Draft design standards; and
- (xi) The requirements, if any, for the construction of bypasses should be identified on the basis of data derived from reconnaissance and traffic studies. The available alignment options should be worked out on the basis of available maps. The most appropriate alignment option for bypass should be identified on the basis of site conditions and techno-economic considerations.

## 3. Technical Feasibility Report

The Transaction Advisor shall commence the Technical Feasibility Study of the project in accordance with the accepted IR and the report shall contain the following:

- Executive summary
- Project description including possible alternative alignments/bypasses and technical/engineering alternatives
- Methodology adopted for the technical feasibility study
- Socioeconomic profile of the project areas
- Indicative design standards, methodologies and specifications
- Traffic surveys and analysis
- Environmental screening and preliminary environmental assessment
- Initial social assessment and preliminary land acquisition/resettlement plan
- Cost estimates
- Economic and financial analysis

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- Conclusions and recommendations

The basic data obtained from the field studies and investigations shall be submitted in a separate volume as an Appendix to Feasibility Report. The Final Feasibility study Report incorporating comments, revisions and modifications suggested by the Client & World Bank shall be submitted within 15 days of receipt of comments on draft feasibility study report.

#### 4. Strip Plan and Clearances

The Transaction Advisors shall submit the following documents:

- (i) Details of the center line of the proposed widened road along with the existing and proposed right-of-way limits to appreciate the requirements of land acquisition;
- (ii) The information concerning the area including ownership of land to be acquired for the implementation of the project shall be collected from the revenue and other concerned authorities and presented along with the strip plans;
- (iii) Strip plans showing the position of existing utilities and services indicating clearly the position of their relocation;
- (iv) Details for various clearances such as environment and forest clearances;
- (v) Separate strip plan showing shifting / relocation of each utility services in consultation with the concerned local authorities;
- (vi) The utility relocation plans should clearly show existing right-of-way and pertinent topographic details including buildings, major trees, fences and other installations such as water-mains, telephone, telegraph and electricity poles, and suggest relocation of the services along with their crossings the highway at designated locations as required and prepare necessary details for submission to the Service Departments;
- (vii) Detail schedules for acquisition of additional land and additional properties in consultation with the revenue authorities; and
- (viii) Land Acquisition Plan.

The strip plans and land acquisition plan shall be prepared on the basis of data from reconnaissance and detailed topographic surveys.

The Report accompanying the strip plans should cover the essential aspects as given under:

- (i) Kilometre-wise Land Acquisition plan (LAP) and schedule of ownership thereof and Costs as per Revenue Authorities and also based realistic rates.
- (ii) Details of properties, such as buildings and structures falling within the right-of-way and costs of acquisition based on realistic rates.
- (iii) Kilometre-wise Utility Relocation plan (URP) and costs for relocation per civil construction package as per concerned authorities.
- (iv) Kilometre-wise account in regard to felling of trees of different type and girth and value estimate of such trees based on realistic rates obtainable from concerned District forest office.

The strip plans shall clearly indicate the scheme for widening. The views and suggestions of the concerned State PWDS should be duly taken into account while working out the widening scheme (left, right or symmetrical). The widening scheme shall be finalized in consultation with the Client.

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Kilometre-wise Strip Plans for each section (Package) shall be prepared separately for each concerned agency and suggested by the Client.

### 5. Land Acquisition Report

The Land acquisition report shall be prepared and submitted for each road separately. The report shall include detail schedules about acquisition of land holdings as per revenue records and their locations in a strip plan and also the costs as per district authorities. Details shall be submitted in land acquisition proforma to be supplied by the Client. The land acquisition report shall be submitted in both **Oriya and English** languages.

The land acquisition report should be prepared in consultation with affected persons, non-governmental organizations and concerned government agencies and should cover land acquisition and resettlement plan and costs of resettlement and rehabilitation of such affected persons. It should also include plan of compensating afforestation, its land requirement with specific locations and cost involved for undertaking all activities in this regard.

### 6. Preliminary Project Report-PPR

The Draft PPR shall be prepared separately for each road and shall contain the following:

#### Volume-I: Preliminary Design Report

- Executive summary
- Project description
- Summary of EIA/IEE and Action Plan
- Summary of Resettlement Plan
- Updated cost estimates
- Updated economic and financial analysis
- Conclusions and recommendations

#### Volume-II: Design Report

- Road and bridge inventory
- Summary of survey and investigation data
- Proposed design basis, standards and specifications
- Proposed pavement design and preliminary bridge designs

#### Volume – III: Drawings

- Location map
- Layout plans
- Typical cross sections showing pavement details
- Drawings for cross-drainage and other structures
- Road junction designs
- Indicative land acquisition plans

#### Volume-IV: Environment Impact Assessment or Initial Environmental Examination and Environmental Management Plan

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## Volume – V: Resettlement Plan and Resettlement Action Plan

The basic data obtained from the field studies and investigations and input data used for the preliminary design shall be submitted in a separate volume as an Appendix to PPR. The Final PPR incorporating comments, revisions and modifications suggested by the Client shall be submitted within 15 days of the receipt of comments of the Client on the Draft PPR.

### 7. PPP Techno-Economic Feasibility Report

The PPP feasibility report shall contain in a concise way all the relevant information for GOO to make a decision on whether or not to proceed with the suggested PPP option for each road. The report will be based on previous submissions, but it will present the options for PPP and the reasons behind the recommendations. The contents of the PPP feasibility report shall be as follows:

#### (i) Introduction

- Executive summary
- Introduction
- Project background
- Approach and methodology to the feasibility study

#### (ii) Section 1: Very Brief Needs analysis

- Institution's strategic objectives
- Budget
- Institutional analysis
- Scope of the project

#### (iii) Section 2 : Solution options analysis

- Options considered
- Evaluation and assessment of each option
- Summary of evaluation and assessment of all options considered
- Recommendation of a preferred option

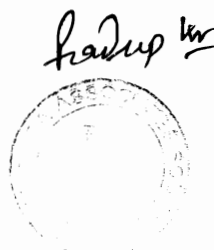
#### (iv) Section 3: Project due diligence

- Legal aspects
  - Use rights
  - Regulatory matters
- Site enablement
- Socio-economic
- Technical/Engineering design

#### (v) Section 4: Value assessment

- PPP reference
  1. - Technical definition of project
  2. - Discussion on costs (direct and indirect) based on detailed engineering designs
  3. - Discussion on revenue (if relevant) and assumptions made on revenue estimates
  4. - Discussion on proposed PPP type

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5. - Proposed PPP project structure and sources of funding
6. - Payment mechanism
7. - Discussion on all model assumptions made in the construction of the model, including inflation rate, discount rate, depreciation, tax and VAT
8. - Summary of results from the PPP-reference model: NPV
- Risk assessment
  9. - Comprehensive risk matrix for all project risks
  10. - Summary of the institution's retained and transferable risks
  11. - The NPV of all risks (retained and transferable) to be added onto the base PSC model
  12. - The NPV of all retained risks to be added onto the PPP reference model
- Risk-adjusted PPP-reference
  13. - Summary of results: NPV, key indicators
  14. - Sensitivity analyses
  15. - Statement of affordability
  16. - Statement of value for money
  17. - Recommended procurement choice
  18. Information verification
  19. - Summary of documents attached in Annexure 1 to verify information found in the feasibility study report

(vi) Section 5: Economic valuation

- Introduction and evaluation approach
- Assumptions
- Valuation results

(vii) Section 6: Procurement plan

**Annexures**

Annexure 1: PPP reference model

Annexure 2: Risk assessment and comprehensive risk matrix

Annexure 3: Document list (list of all documents related to the project, where they are kept, and who is responsible for ensuring that they are updated)

Annexure 4, 5, 6, 7 etc: Attach as annexures all other documents that have informed the feasibility study and that are of decision-making relevance to the project.

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**Annexure-II****Specifications for Surveys and Engineering Analysis for Feasibility Study Reports**

Survey, Investigations and Designs: The project is concerned mainly with the widening and improvement of existing roads. In this regard the project studies should be directed at upgrading the road's geometric standard and structural integrity, to the levels needed to meet the requirement of the forecast traffic. Re-alignments may be needed to improve geometry or other technical features.

New alignments/bypasses or substantial alignment deviation along with widening may also be needed. In these cases outline designs and the cost estimates of technically feasible alignment alternatives should be prepared, and the selection of the appropriate route made after an economic, environmental and social analysis.

Survey, investigations, design standards and methodologies, and preparation of the project shall generally be based on relevant latest MORTH and IRC codes and guidelines (IRC SP-19 may be referred to). The consultant will also compare with Transport Research Laboratory (TRL), U K, American Association of State Highway and Transportation Officials (AASHTO) and/or other internationally accepted standards and methods; and will recommend the most appropriate standards and methods to be adopted for this project.

Topographical surveys shall be undertaken with advanced instruments like Total Stations and GPS for the entire length of project roads. Horizontal control in the form of primary control points shall be established at every 10Km using GPS where feasible. In case GPS survey is not possible due to vegetation, closed loop traverse shall be done for horizontal control using Total stations. Secondary control points in the form of permanent benchmarks shall be established at least one per km with Total stations. Temporary benchmarks shall be established at every 250m using Total stations. Vertical control along the corridors shall be established with Auto Level and all the primary and secondary benchmarks shall be connected during the surveys. Detailed cross section surveys shall be undertaken with Total stations and cross sections shall be taken at 100m in straight portions and 25-50m in curve portions. All the man-made and natural features within a bandwidth of 45m for four laning and 30m for two lanes with paved shoulder improvements shall be covered during the surveys.

Special care should be taken to assess existing pavement conditions. To this end, the following test procedures shall generally be undertaken:

- (a) Pavement roughness shall be measured using a bump integrator or alternative calibrated equipment. Rutting, cracking and ravelling should also be measured and sections where excessive fattening/bleeding of bitumen has occurred should be noted down;
- (b) Measurements of road deflections shall be carried out utilizing the Benkleman Beam Deflection Test or Falling Weight Deflectometer or any other standard procedure with a frequency conforming to the sections of homogeneous roughness; BBD surveys shall be done at an interval of 100m in a staggered fashion along the corridors
- (c) When pavements are too distressed to give meaningful deflection results, then California Bearing Ratio tests should be carried out at intervals sufficient to indicate the extent and severity of the problem.
- (d) Test Pits to asses the condition of existing sub-grade and pavement crust layers shall be done at every 10kms.
- (e) A survey for assessing the surface, sub-surface and roadside drainage condition of the road section shall be conducted.

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- (f) Appropriate levels of subsurface investigations will be carried out for critical sections of roads and bridges to be able to make a reasonably accurate estimate of the designs and costs. Atleast One Borehole at Abutment and/or at Pier Location at major bridge and one borehole for minor bridge shall be undertaken where information on the existing bridge foundations is not available. Where exposed rock is available at bridge crossing only a test pit can be done to asses the sub-soil properties.
- (g) Proper surveys of quantities and quality of materials required like stone metal, sand gravel, earth etc will be done. Market surveys for costing of the inputs will done based on recently let out contracts and based on updated unit rates.

All the foregoing information shall be shown on a strip-map to facilitate the evaluation of the proposed pavement.

For low-lying road sections subject to flooding, the road embankment should be raised so that the formation (sub-grade) level has a free-board of about one meter above the highest recorded level or designated design criterion.

Traffic engineering analysis should identify requirements for improved road layout, signs and markings, and appropriate provision for pedestrians, non-motorized vehicles and other slow-moving transport. For junctions involving high traffic flows, the consultant should identify situations where improved layouts or grade separations should be considered now, or provided for in the future. Where appropriate and practicable, consideration should be given to segregation of slow-moving road users, provision of service roads, future development of way-side amenities and transport industry facilities. The traffic forecasting should focus on truck and rail mode split analysis for heavy industry cargo in addition to traditional traffic forecasting methodology considering the fact that the identified roads pass through mining belts of the state. A road safety review should be conducted and appropriate provisions made in the designs to enhance road safety and traffic flows.

All existing CD structures shall be assessed for sufficiency in width and strength and their capability of taking modern day wheel loadings. If required, special tests to assess residual concrete strength, reinforcement cover sufficiency, reinforcement corrosion, soil properties etc. should be undertaken for major and minor bridges. Based on the above points but not limited to them, decision regarding the reconstruction, strengthening or ‘do-nothing’ should be taken.

The consultant should specify plans to enhance the environmental aspects of the project through such measures as road side landscaping and tree planting, planting of bushes in the central median, and other relevant stabilizing/preservation measures for the road-adjoining areas. All possible steps must be taken to minimize the adverse environmental effects of the project; both during construction works and subsequently in road operations and these mitigation measures must be included into the cost of the project.

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**Annexure -III****Project Data and Software**

The floppy diskettes/CD's containing all basic as well as the processed data from all field studies and investigations, report, appendices, annexure, documents and drawings shall be submitted to the Client at the time of the submission of the Final Report. The data can be classified as follows:

i **Engineering Investigation and Traffic Studies:** Road inventory, condition, Roughness, Test pit (Pavement composition), Benkelman Beam Deflection, Material investigation including test results for sub grade soils, Traffic studies (traffic surveys), axle load surveys, subsoil Exploration, Drainage inventory, Inventory data for bridge and culverts indicating rehabilitation, new construction requirement etc. in MS EXCEL or any other format which could be imported to widely used utility packages.

ii. **Topographic surveys and Drawings:** All topographic data would be supplied in (x, y, z) format along with complete reference so that the data could be imported into any standard highway design software. The drawing files would be submitted in AUTOCAD (dxf or dwg format).

iii **Rate Analysis :** The Transaction Advisor shall submit the rate analysis for various works items including the data developed on computer in this relation so that it could be used by the Government later for the purpose of updating the cost of the project.

iv. **Economic and Financial Analysis:**

**Software:** The Transaction Advisor shall also hand over to the Client floppies /CD's containing any general software including the financial model, which has been specifically developed for the project.

The floppy diskettes/CD's should be properly indexed and a catalogue giving contents of all floppies/CD's and print-outs of the contents (data from field studies topographic data and drawings) should be handed over to the Client at the time of submission of the final Report.

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## Appendix B

## Reporting Requirements

The Reports and other submissions to the Client required during the consultancy are as scheduled below. Six copies of the reports :

Phase	Submission date / month	Report for the three identified stretches under the RFP
1	15 days from commencement	Quality Assurance Plan Document
	1 <sup>st</sup> Month	Inception Report
	3 <sup>rd</sup> Month	Technical Feasibility Report and Social and Environmental screening reports
	4 <sup>th</sup> Month	Strip plan
	5 <sup>th</sup> Month	Preliminary Project Report
	6 <sup>th</sup> Month	PPP Techno-economic Feasibility Report, Draft PPP Agreement
	7 <sup>th</sup> Month	Assistance for The Client in GOI Approval for VG funding
2	9 <sup>th</sup> Month	Documents required for clearances and land acquisition report (LAR)
	6 <sup>th</sup> Month	Bidding Documents for Pre-Qualification
	7 <sup>th</sup> Month	RFP
	8 <sup>th</sup> Month	Value for money Report / Evaluation Report
	9 <sup>th</sup> month	Assisting the Client in Project Agreement Signature and compilation of Close-out report with the bidder
	12 <sup>th</sup> Month	Final Agreement from VGF of GOI

The Technical Feasibility Report for the Dhamra-Digochia Stretch, as per the scope of work mentioned in para 5 of Phase I of the Deliverables shall be delivered in the 5<sup>th</sup> Month

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## Appendix C

**Key Personnel and Sub-consultants  
(Refer Clause 4.1 of the Contract)**

Name of the Staff	Positions Assigned	Task Assigned
Avdesh Singh	Lead Transaction Advisor/PPP Financial Expert	<ol style="list-style-type: none"> <li>1. Setting up targets, coordinate, plan and execute the assignment</li> <li>2. Providing his expert opinions in every phase.</li> <li>3. Coordinate with the Client for the deliverables and other support</li> <li>4. Take ultimate charge of and responsibility for the quality of all deliverables</li> </ol> <p>As the PPP Specialist, Financial Expert and Team Leader, Avdesh would have a key role in:</p> <ol style="list-style-type: none"> <li>1. Analyzing the results of the team continuously and suggest appropriate correctives to the methodology if required</li> <li>2. Analyze the findings and present it in reports, presentations, etc.</li> <li>3. Take on board periodic feedback from the Client</li> <li>4. Bring to bear his international PPP expertise and assist in finalization of the PPP agreements and requests for VGF</li> <li>5. Define and finalize the assumptions for undertaking the financial viability models of the projects.</li> <li>6. Define the structuring of the projects</li> <li>7. Assist in reviewing and signing of agreement leading to the financial close</li> </ol>
Amrit Pandurangi	Expert Transaction Advisor	<ol style="list-style-type: none"> <li>1. Providing expert advice on all the aspects of PPP transactions.</li> <li>2. Wherever required, participate in the important presentations, discussions, meetings.</li> <li>3. Review of all the deliverables more importantly the PPP transaction documents.</li> </ol>
Vishwas Udgirkar	PPP Contract Management & Procurement Specialist	<ol style="list-style-type: none"> <li>1. Overall responsible for all the activities involved in contract management</li> <li>2. Coordinate between all the team members and the client to achieve efficiency without compromising in quality in the project.</li> <li>3. Support to the team leader in execution of the project.</li> <li>4. Organize local resources for carrying out of all tasks related to the study – especially the survey of PPP projects</li> </ol> <p>As the Contract Management &amp; Procurement Specialist, Vishwas would have a key role in:</p> <ol style="list-style-type: none"> <li>1. Analyzing the results of the team continuously and suggest appropriate correctives to the methodology in the bidding criteria, bid process management, selection of concessionaire and bringing the agreement to financial closure.</li> <li>2. Bring to bear his PPP expertise and assist in finalization of the PPP agreements and requests for VGF</li> </ol>

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Name of the Staff	Positions Assigned	Task Assigned
		<ol style="list-style-type: none"> <li>3. Ensure appropriate focusing on each phase – taking account of aspects that may require additional attention</li> <li>4. Take on board periodic feedback from the client and ensure it feeds into the project</li> </ol>
Atul Y. Chitale	PPP Legal Expert	<ol style="list-style-type: none"> <li>1. Work under the team leader to match the deadlines.</li> <li>2. Responsible for contract document preparation</li> <li>3. Legal due diligence/ and drafting of concession agreements including RFQ's, RFP's and other supporting documents.</li> <li>4. legal support for procurement of private parties</li> <li>5. Support in contract finalization</li> </ol>
Dr. S.D. Badrinath	Environmental and Social Management Expert	<ol style="list-style-type: none"> <li>1. Mobilization</li> <li>2. Assemble and appreciate of available data and reports</li> <li>3. Detailed reconnaissance</li> <li>4. Environmental and social screening</li> <li>5. Environmental assessment</li> <li>6. Preliminary design</li> <li>7. Resettlement and rehabilitation action plan</li> <li>8. Environmental management action plan</li> <li>9. Preliminary project report</li> </ol>
Shubhrendu Rakshit	Highway Engineer	<ol style="list-style-type: none"> <li>1. Mobilisation</li> <li>2. Quality assurance plan</li> <li>3. Assemble and appreciate of available data and reports</li> <li>4. Detailed reconnaissance</li> <li>5. Formulation of design standards</li> <li>6. Finalisation of methodology and work plan</li> <li>7. Traffic surveys</li> <li>8. Inventorisation of project roads</li> <li>9. Investigations for bridges and CD structures</li> <li>10. Traffic analysis, forecasting and assignment</li> <li>11. Evolution of improvement options</li> <li>12. Finalisation of bypass alignment</li> <li>13. Finalisation of draft feasibility report</li> <li>14. Engineering analysis and option designs</li> <li>15. Preparation of feasibility report</li> <li>16. Topographic surveys</li> <li>17. Engineering investigations</li> <li>18. Preliminary design</li> <li>19. Draft preliminary project report</li> <li>20. Preliminary project report</li> </ol>
Dr. M.P. Raju	Traffic & Transportation Planner	<ol style="list-style-type: none"> <li>1. Mobilization</li> <li>2. Assemble and appreciate of available data and reports</li> <li>3. Traffic surveys</li> <li>4. Traffic analysis, forecasting and assignment</li> <li>5. Preliminary project report</li> </ol>

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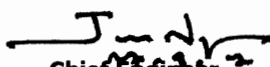


  
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Support Staff		
Name of the Staff	Positions Assigned	Task Assigned
Nripesh Kumar	PPP Expert	As the PPP Expert, Nripesh would have a key role in: <ol style="list-style-type: none"> <li>1. Analyze the findings and present it in reports, presentations with special emphasis on structuring of the projects on PPP basis.</li> <li>2. Use his PPP expertise especially in ROAD SECTOR and linkages to help develop recommendations in consultation with the Client</li> <li>3. Assist in reviewing and signing of agreement leading to the financial close</li> </ol>
Vijay Sarma	Financial Analyst	<ol style="list-style-type: none"> <li>1. Prepare excel based models to establish the financial viability of the projects.</li> <li>2. Assist in the structuring of the projects in terms of concession period and toll rates</li> <li>3. Assist in drafting PPP Agreements</li> <li>4. Assist in the financial analysis requirement during bid process management</li> <li>5. Assist in reviewing and signing of agreement leading to the financial close</li> </ol>
Kushal Singh	Financial Analyst	<ol style="list-style-type: none"> <li>1. Prepare excel based models to establish the financial viability of the projects.</li> <li>2. Assist in the structuring of the projects in terms of concession period and toll rates</li> <li>3. Assist in drafting PPP Agreements</li> <li>4. Assist in the financial analysis requirement during bid process management</li> <li>5. Assist in reviewing and signing of agreement leading to the financial close</li> </ol>
K. A. Sivaram	Legal Expert	<ol style="list-style-type: none"> <li>1. Work under the PPP Legal Expert to match the deadlines:</li> <li>2. Responsible for contract document preparation</li> <li>3. Due diligence of the contract.</li> <li>4. Drafting of concession agreements</li> <li>5. Support in contract finalization</li> </ol>
Krishna Kumar V.	Procurement Expert	<ol style="list-style-type: none"> <li>1. Structuring the PPP agreements specially the procurement documents for pre-qualification and selection of Concessionaires.</li> <li>2. Prepare excel based models to establish the financial viability of the projects.</li> <li>3. Packaging the project</li> <li>4. Assist in the financial analysis requirement during bid process management</li> </ol>

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Support Staff		
Name of the Staff	Positions Assigned	Task Assigned
Subhrajit Ghadei	Procurement Expert	<ol style="list-style-type: none"> <li>1. Structuring the PPP agreements specially the procurement documents for pre-qualification and selection of Concessionaires.</li> <li>2. Prepare excel based models to establish the financial viability of the projects.</li> <li>3. Packaging the project</li> <li>4. Assist in the financial analysis requirement during bid process management</li> </ol>
TBN	Highway Engineer (1)	<ol style="list-style-type: none"> <li>1. Mobilisation</li> <li>2. Quality assurance plan</li> <li>3. Assemble and appreciate of available data and reports</li> <li>4. Detailed reconnaissance</li> <li>5. Formulation of design standards</li> <li>6. Finalisation of methodology and work plan</li> <li>7. Traffic surveys</li> <li>8. Inventorisation of project roads</li> <li>9. Investigations for bridges and cd structures</li> <li>10. Traffic analysis, forecasting and assignment</li> <li>11. Evolution of improvement options</li> <li>12. Finalisation of bypass alignment</li> <li>13. Finalisation of draft feasibility report</li> <li>14. Engineering analysis and option designs</li> <li>15. Preparation of feasibility report</li> <li>16. Topographic surveys</li> <li>17. Engineering investigations</li> <li>18. Preliminary design</li> <li>19. Draft preliminary project report</li> <li>20. Preliminary project report</li> </ol>
TBN	Highway Engineer (2)	<ol style="list-style-type: none"> <li>1. Mobilisation</li> <li>2. Quality assurance plan</li> <li>3. Assemble and appreciate of available data and reports</li> <li>4. Detailed reconnaissance</li> <li>5. Formulation of design standards</li> <li>6. Finalisation of methodology and work plan</li> <li>7. Traffic surveys</li> <li>8. Inventorisation of project roads</li> <li>9. Investigations for bridges and cd structures</li> <li>10. Traffic analysis, forecasting and assignment</li> <li>11. Evolution of improvement options</li> <li>12. Finalisation of bypass alignment</li> <li>13. Finalisation of draft feasibility report</li> </ol>

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Support Staff		
Name of the Staff	Positions Assigned	Task Assigned
		14. Engineering analysis and option designs 15. Preparation of feasibility report 16. Topographic surveys 17. Engineering investigations 18. Preliminary design 19. Draft preliminary project report 20. Preliminary project report
TBN	Traffic & Transportation Planner (1)	1. Mobilisation 2. Assemble and appreciate of available data and reports 3. Detailed reconnaissance 4. Finalisation of methodology and work plan 5. Traffic surveys 6. Traffic analysis, forecasting and assignment 7. Evolution of improvement options 8. Finalisation of bypass alignment 9. Finalisation of draft feasibility report 10. Preliminary design 11. Draft preliminary project report 12. Preliminary project report
TBN	Traffic & Transportation Planner (2)	1. Mobilisation 2. Assemble and appreciate of available data and reports 3. Detailed reconnaissance 4. Finalisation of methodology and work plan 5. Traffic surveys 6. Traffic analysis, forecasting and assignment 7. Evolution of improvement options 8. Finalisation of bypass alignment 9. Finalisation of draft feasibility report 10. Preliminary design 11. Draft preliminary project report 12. Preliminary project report
TBN	Environmental Management Planner (1)	1. Mobilisation 2. Quality assurance plan 3. Assemble and appreciate of available data and reports 4. Detailed reconnaissance 5. Finalisation of methodology and work plan 6. Environmental and social screening 7. Environmental assessment 8. Preparation of feasibility report 9. Environmental management action plan 10. Draft preliminary project report 11. Preliminary project report
TBN	Social Management Planner (1)	1. Mobilization 2. Assemble and appreciate of available data and reports 3. Detailed reconnaissance

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Support Staff		
Name of the Staff	Positions Assigned	Task Assigned
		<ol style="list-style-type: none"> <li>4. Finalization of methodology and work plan</li> <li>5. Evolution of improvement options</li> <li>6. Finalization of draft feasibility report</li> <li>7. Social screening</li> <li>8. Social assessment</li> <li>9. Preparation of feasibility report</li> <li>10. Resettlement and rehabilitation action plan</li> <li>11. Environmental management action plan</li> <li>12. Draft preliminary project report</li> <li>13. Preliminary project report</li> </ol>
TBN	Bridge Engineer	<ol style="list-style-type: none"> <li>1. Mobilisation</li> <li>2. Quality assurance plan</li> <li>3. Assemble and appreciate of available data and reports</li> <li>4. Detailed reconnaissance</li> <li>5. Formulation of design standards</li> <li>6. Finalisation of methodology and work plan</li> <li>7. Inventorisation of project roads</li> <li>8. Investigations for bridges and cd structures</li> <li>9. Traffic analysis, forecasting and assignment</li> <li>10. Evolution of improvement options</li> <li>11. Finalisation of bypass alignment</li> <li>12. Finalisation of draft feasibility report</li> <li>13. Engineering analysis and option designs</li> <li>14. Preparation of feasibility report</li> <li>15. Topographic surveys</li> <li>16. Engineering investigations</li> <li>17. Preliminary design</li> <li>18. Draft preliminary project report</li> <li>19. Preliminary project report</li> </ol>
TBN	Pavement Engineer	<ol style="list-style-type: none"> <li>1. Mobilisation</li> <li>2. Quality assurance plan</li> <li>3. Assemble and appreciate of available data and reports</li> <li>4. Detailed reconnaissance</li> <li>5. Formulation of design standards</li> <li>6. Finalisation of methodology and work plan</li> <li>7. Traffic surveys</li> <li>8. Inventorisation of project roads</li> <li>9. Investigations for pavements and cd structures</li> <li>10. Traffic analysis, forecasting and assignment</li> <li>11. Evolution of improvement options</li> <li>12. Finalisation of bypass alignment</li> <li>13. Finalisation of draft feasibility report</li> <li>14. Engineering analysis and option designs</li> </ol>

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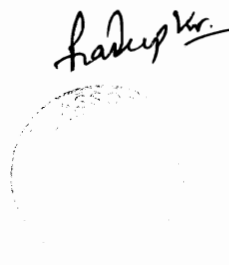


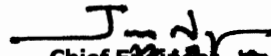
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Support Staff		
Name of the Staff	Positions Assigned	Task Assigned
		15. Preparation of feasibility report 16. Topographic surveys 17. Engineering investigations 18. Preliminary design 19. Draft preliminary project report 20. Preliminary project report
TBN	Surveyor	1. Mobilisation 2. Quality assurance plan 3. Survey 4. Collection of Data 5. Assemble and appreciate of available data and reports 6. Detailed reconnaissance 7. Finalisation of methodology and work plan 8. Traffic surveys 9. Traffic analysis, forecasting and assignment 10. Evolution of improvement options 11. Finalisation of bypass alignment 12. Finalisation of draft feasibility report 13. Engineering analysis and option designs 14. Preparation of feasibility report 15. Topographic surveys 16. Engineering investigations 17. Preliminary design 18. Draft preliminary project report 19. Preliminary project report

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## STAFFING SCHEDULE

No	Name of the Staff	Home/Field	Input (In the form of a Bar Chart)												Total Staff-Month Input			
			Phase-I						Phase-II						Home	Field	Total	
			1	2	3	4	5	6	7	8	9	10	11	12				
Local																		
1	Avdesh Singh	Home Field														5	5	10
2	Amrit Panduranghi	Home Field														1	1	2
3	Atul Y Chitale	Home Field														2	2	4
4	Vishwas Udgirkar	Home Field														3	3	6
5	Dr. S.D. Badrinath	Home Field														3	4	7
6	Subhrendu Rakshit	Home Field														2	4	6
7	Dr. M.P. Raju	Home Field														1	3	4
8	PPP Expert	Home Field														2	2	4
9	Financial Analysts and Legal Support (3 positions)	Home Field														5	6	11
10	Support Staff for Procurement (2 positions)	Home Field														3	5	8
11	Support Staff for Technical Feasibility (9 positions)	Home Field														6	60	66
12	Administrative Support Staff (1 positions)	Home Field															12	12

The professionals will be available throughout the engagement as required and as shown above. However their exact inputs from home or field will be refined and finalized during deliberations and finalized at inception stage and as required during execution of the assignment

Full time Input  
Part time Input

*Dr. M.P. Raju*

*Subhrendu Rakshit*



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**ACTIVITIES SCHEDULE**

S. No.	Activity	Months											
		1	2	3	4	5	6	7	8	9	10	11	12
Phase I													
1	Quality Assurance Plan (QAP)												
2	Inception Report												
3	Approval for Inception report and O&P												
4	Technical Feasibility, Social and Environmental Screening Report												
5	Step Plan												
6	Preliminary Project Report												
7	Approval for Preliminary Feasibility report												
8	PPP Technical-economic Feasibility report												
9	Approval of the techno-economic feasibility report												
10	Preparation of the Draft PPP Agreement												
11	Approval for the final PPP Agreements												
12	Presentation to GOI on the techno-economic feasibility report												
13	Submission of the Application for In. Permission VGF approval with Central Government												
	Preparation of documents for clearances, utilities relocation and LAR												
Phase II													
1	Preparation of Pre-Qualification RFP (if required)												
2	Issuing Pre-qualification RFP												
3	Framework for Bid Process and Bidding Calendar												
4	Approval of the Bid Process and Bidding Calendar												
5	Finalisation of Pre-qualification bidders												
6	Preparation of the Bidding Documents												
7	Approval of the Bidding Documents												
8	Issue of Bid Documents												
9	Pre bid meeting												
10	Evaluation of the Proposals received												
11	Submission of Evaluation report and Value for Money Report												
12	Approval of the Evaluation report and the value for money report												
13	Issue of LOA												
14	Contract Negotiations and signing of the PPP Agreement												
15	Submission of Close out report												
16	Approval of the Close out report												
17	Co-ordination with the Client that the lead financial institution presents its project appraisal report and updated VGF forms to DEA												
18	Facilitate tripartite agreement between GOI, Private sector and Lead Lender												
19	Training Designated officers of the Client and GOO												
	<b>Key Activities</b>	X											
	<b>Key Deliverables</b>												
	<b>Monthly Progress Report</b>												

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**Appendix D**


**Breakdown of Contract Price in Foreign Currency**

*NOT Used*

**Not Applicable**

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## Appendix E

### Breakdown of Contract Price in Local Currency

#### Professional Person Rates

Name	Position	Staff-month Rate (INR)	
<b>Local Key Professional</b>			
<b>Avdesh Singh</b>	Lead Transaction Advisor/PPP Financial Expert	[Home] INR 540,000	
		[Field] INR 540,000	
Amrit Pandurangi	Expert Transaction Advisor	[Home] INR 540,000	
		[Field] INR 540,000	
Atul Y. Chitale	PPP Legal Expert	[Home] INR 252,000	
		[Field] INR 252,000	
Vishwas Udgirkar	PPP Contract Management & Procurement Specialist	[Home] INR 360,000	
		[Field] INR 360,000	
Subhendu Rakshit	Highway Engineer	[Home] INR 250,000	
		[Field] INR 250,000	
Dr. M. P. Raju	Traffic & Transportation Planner	[Home] INR 400,000	
		[Field] INR 400,000	
Dr. S. D. Badrinath	Environmental and Social Management Expert	[Home] INR 250,000	
		[Field] INR 250,000	
<b>Local Sub Professional</b>			
Nripesh Kumar	PPP Expert	[Home] INR 252,000	
		[Field] INR 252,000	
Kushal Kumar	Financial Analyst	[Home] INR 144,000	
		[Field] INR 144,000	
Krishankumar V	Procurement Expert	[Home] INR 144,000	
		[Field] INR 144,000	
Subhrajit Ghadei	Procurement Expert	[Home] INR 144,000	
		[Field] INR 144,000	
Vijay Sharma	Financial Analyst	[Home] INR 252,000	
		[Field] INR 252,000	
K A Shivram	Legal Support Staff	[Home] INR 144,000	
		[Field] INR 144,000	
Technical Experts (9 positions)	Highway Engineer(1) Highway Engineer(2) Traffic & Transportation Planner(1) Traffic & Transportation Planner(2) Quality Management Engineer(1) Environmental Management Planner(1) Social Management Planner(1) Bridge Engineer (1) Pavement Engineer (1) Surveyor (1)	[Home] INR 75,000	
		[Field] INR 75,000	

This appendix will be used for determining remuneration for additional services.

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**Rates for Expenses/Other Services**

No	Description	Unit	Unit Cost (INR)	Number of Units
1.	Per diem allowances			
2.	<b>Local Key Professional</b>	Day	1500	585
3.	<b>Local Sub Professional</b>	Day	750	1752
4.	Local Flights round trips (Delhi – Bhubaneshwar)	Trip	15000	36
5.	Communication costs between <i>Delhi and Bhubaneshwar</i>	Month	25000	12
6.	Drafting, reproduction of reports	Copies	12,000	30
7.	Equipment, instruments, materials, supplies, etc.	Month	5,000	12
8.	Use of computers, software	Month	10,000	12
9.	<b>Subcontracts – Surveys</b>			
(a)	<b>Traffic Surveys</b>			
(i)	Classified Volume Count Survey(24 hours*3 Days)	No.of Locations	12,000	10
(ii)	Origin and Destination Survey - GOODS(1day)	No.of Locations	10,000	6
(iii)	Origin and Destination Survey - PASSENGERS(1Day)	No.of Locations	10,000	6
(iv)	Speed and Delay Survey(2 round trips)	Km	500	229
(v)	Turning Movement Survey at Major junctions(12 Hours)	No.of Locations	10,000	20
(vi)	Parking Surveys( on Street)	LS	160,000	
(vii)	Pedestrian Volume Counts(across)	No.of Locations	10,000	25
(viii)	Willingness to pay survey ( car/jeeps)	No.of Locations	10,000	6
(ix)	Willingness to pay survey ( Truck and Bus Operators)	No.of Locations	10,000	6
(b)	<b>Social Surveys</b>			
(i)	Strip Plan	km	1,500	229
(ii)	Land Acquisition Plan	km	5,000	229
(iii)	Census and Socio economic survey	km	2,000	229
(c)	<b>Environmental Surveys</b>			
(i)	Air Quality Monitoring	No of Stations	8,000	12
(ii)	Water Quality Monitoring	No of Stations	7,500	8
(iii)	Noise level Monitoring	No of Stations	6,000	20
(iv)	Tree Counting and Forest Area Management	LS	600,000	
(v)	Enhancement Survey	LS	200,000	
(vi)	Biodiversity Survey	LS	300,000	

Consultant



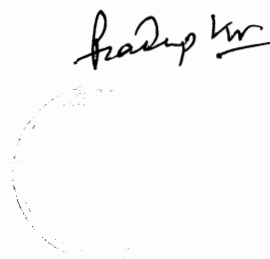
*Pradyumn*

*J. N. D.*  
**Chief Engineer**  
 World Bank Projects, Orissa  
**Chief Engineer,**  
 World Bank Project  
 @/a the E.I.C. (Civil)  
 Ori ss Bhubaneswar.

No	Description	Unit	Unit Cost (INR)	Number of Units
(vii)	Public Consultation	LS	300,000	
(d)	<b>Highway and Bridge Survey</b>			
(i)	Road and Bridge Inventory	km	800	229
(ii)	BBD Test and Pavement Evaluation	km	2,500	229
(iii)	Roughness Survey	km	800	229
(iv)	Axle Load Survey	No of Locations	50,000	6
(v)	Material Survey and Investigation	LS	1,000,000	
10.	Local transportation costs	Month	25,000	12
11.	Office rent, clerical assistance	Month	20,000	12
12.	<b>Training of the Client's personnel</b>			
(a)	Training Cost for conducting Domestic training course	LS	500,000	
(b)	Exposure tour to South Africa for 3 officers for 5 days including travel by economy class	LS	500,000	

**This appendix will be used for determining remuneration for additional services.**

Consultant



**Chief Engineer**  
 World Bank Projects, Orissa  
 Chief Engineer,  
 World Bank Project  
 O/o the E.I.C. (Civil)  
 Orissa, Bhubaneswar.



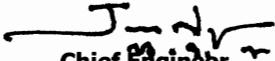
**Appendix F****Services and Facilities Provided by the Client****DATA, SERVICES, AND FACILITIES TO BE PROVIDED BY THE CLIENT**

The following and any other such data, available with the Client shall be provided;

- (a) Available base mapping, existing road inventories including data on pavement history and condition, traffic statistics and road accident statistics, geographical maps of all districts including category of road thereon;
- (b) Relevant permits, security and other clearances for the consultant teams for working in the sensitive areas.
- (c) Suitable meeting/conference space at PWD office for carrying out the consultations.

Consultant



  
Chief Engineer  
World Bank Projects, Orissa  
Chief Engineer,  
World Bank Project  
O/o the E.I.C. (Civil)  
Orissa, Bhubaneswar.

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**GOVERNMENT OF ORISSA  
WORKS DEPARTMENT**

\* \* \*

No. 15911 /W., Bhubaneswar, dated the 18/11 September, 2007  
EAP-6/06 (Pt)  
From

Sri S.N. Dey, OAS(S),  
Joint Secretary to Government.

To

The Chief Engineer World Bank Projects, Orissa.  
Nirman Soudha, Keshari Nagar, Bhubaneswar.

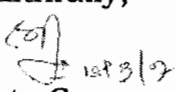
**Sub: Consultancy Services for "PPP Techno-Economic Feasibility Study And Transaction Advisor for Selected State Roads in the State of Orissa".**

Sir,

I am directed to refer to your Letter No.28392 dated.10.7.07 on the above subject and to say that Government in Works Department has been pleased to approve the contract document for engagement of **PPP Transaction Advisor** for selected State Roads in the State of Orissa, as furnished with your Letter No.27300 dated.3.7.07 and Letter No.28392 dated.10.7.07.


EE. A copy of the contract document duly signed by the Consultant and the Chief Engineer World Bank Project on behalf of the State Government may please be furnished to this Department early for reference.

Yours faithfully,

  
Joint Secretary to Government.

Memo No. \_\_\_\_\_ /W., Date. \_\_\_\_\_

Copy forwarded to Dr. Binayam Reja, Task Team Leader, Orissa State Road s Project, Senior Transport Economist, South Asia Energy and Infrastructure Unit, World Bank, Washington, DC 20433, USA for information.

  
Joint Secretary to Government.

TD  
Sri A.K. Sahu  
Put up immediately  
J.S.D.  
10.9.07

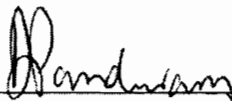
PricewaterhouseCoopers Pvt. Ltd.  
Building 8, 7th & 8th Floor  
Tower - B, DLF Cyber City  
Gurgaon - 122 002, Haryana  
Telephone +91(124) 4620000  
+91(124) 3060000  
Facsimile +91(124) 4620620  
www.pwc.com

**TO WHOM IT MAY CONCERN**

Whereas The Chief Engineer, World Bank Projects, Orissa (CE, WBP), on behalf of the Government of Orissa (GOO) has accepted the proposal submitted by PricewaterhouseCoopers Private Limited (PwC) in joint venture with Lea Associates South Asia Pvt. Ltd., (LASA) with PwC as the Lead Member for the appointment of Consultant for " *PPP Techno-Economic Feasibility Study and Transaction Advisor for Selected State Roads in the State of Orissa*", Project No: P096023 ("the Assignment").

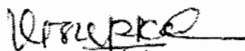
Know all men by these presents, we **PricewaterhouseCoopers Private Limited**, having our registered office located at Plot No. Y-14, Block EP, Sector V, Salt Lake, Kolkata - 700 091 do hereby constitute, appoint, authorize and empower **Mr. Vishwas Udgirkar**, who is presently employed with us and holding the position of Associate Director as our attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with the Assignment, including signing and submission of all documents and providing information/responses to OSRDC or GOO representing us in all matters including signing the consultancy agreement with GOO for the said Assignment.

We hereby agree to ratify all acts, deeds and things lawfully done by our said Attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us.

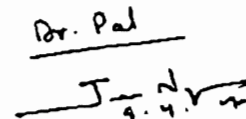


**Amrit K Pandurangi**  
*Executive Director*  
*For and behalf of PricewaterhouseCoopers Private Ltd.*  
*9<sup>th</sup> March, 2007*

Accepted by me,



**Vishwas Udgirkar**  
*Associate Director*  
*PricewaterhouseCoopers Private Ltd.*  
*9<sup>th</sup> March, 2007*

*Dr. Pal*  


# LEA Associates South Asia Pvt. Ltd.

A LEA Group Company  
Consulting Engineers & Planners

B-1/E-27, Mohan Cooperative Industrial Estate  
Mathura Road, New Delhi - 110044 INDIA  
Tel : (91-11) 2697 3950-52, 4167 8150 (8 Lines)  
Fax : (91-11) 4167 8659, 2697 1062  
E-mail : lasa@lasaindia.com  
www.lasaindia.com / www.lea.ca

LASA/PPP-ORISSA/CN/2007/ 928  
New Delhi, 17<sup>th</sup> September 2007

**Er. Jayamangal Nayak**  
Chief Engineer, World Bank Projects, Orissa  
Head, Project Implementation Unit,  
Orissa State Roads Project, Government of Orissa,  
Bhubaneswar – 751 001  
Orissa

Sub: *Consulting Services for "PPP Techno-Economic Feasibility Study and Transaction Advisor for Selected State Roads in the State of Orissa"*

Dear Sir,

We, LEA Associate South Asia Pvt. Ltd., New Delhi are authorizing **Mr. Pradeep Kumar**, General Manager (Traffic and Transportation) of our firm to sign the Contract Agreement Document for the above mentioned subject project.

The signature of Mr. Pradeep Kumar, General Manager (Traffic and Transportation), LEA Associates South Asia Pvt. Ltd. is attested below:

Thanking you,

Yours faithfully,  
for LEA Associates South Asia Pvt. Ltd.




Dr. M.P. Raju  
Managing Director



Signature of Pradeep Kumar

ATTESTED



Dr. M.P. Raju  
Managing Director

Project Offices in India :

- Agartala ● Allahabad ● Anantapur ● Bangalore ● Barabanki ● Bhopal ● Bhubaneswar ● Chandikhole ● Chennai
- Dehri-on-sona ● Faizabad ● Gandhinagar ● Gurgaon ● Guwahati ● Kolkata ● Jammu ● Jayamakondam
- Lucknow ● Mumbai ● Nagaon ● Noida ● Polur ● Surat ● Srikalahasti ● Varanasi ● Vriddhachalam

Project Offices in Overseas :

- Addis Ababa (Ethiopia) ● Colombo (Srilanka) ● Dhaka (Bangladesh)



LEAdership in engineering  
& planning solutions

July 6, 2007

Mr. J. M. Nayak  
Chief Engineer (WB Projects)  
Government of Orissa  
Orissa Nirman Soudha  
Keshari Nagar, Unit - V  
Bhubaneswar – 751 001

Dear Mr. Nayak:

***INDIA: Proposed Orissa State Roads Project (P096023) Procurement – Hiring of  
Consultancy Services for PPP Techno-Economic Feasibility Study and Transaction  
Advisor for Selected State Roads – Draft Contract***

Thank you for your letter of July 3, 2007 regarding the above. We have reviewed the final draft of the proposed contract and have no objection to your signing the contract M/s. Pricewaterhouse Coopers Pvt. Ltd., Gurgaon, in joint venture with M/s LEA Associates South Asia Pvt. Ltd., New Delhi for an amount as follows, subject to incorporation of the attached comments:

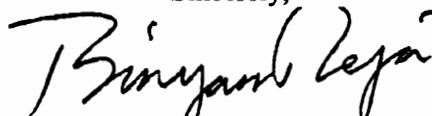
Phase I:        INR 22,322,900 (exclusive of service tax)  
Phase II:       INR 12,350,500 (exclusive of service tax)

In case the client decided to go ahead for less than 3 stretches in Phase II, the fees for phase II will be modified as under:

Consultancy fee for Phase I (in case of one stretch):        INR 8,613,804  
Consultancy fee for Phase II (in case of two stretches):       INR 10,331,826

We look forward to receiving for our review a copy of the signed contract along with the pre-award review checklist duly completed.

Sincerely,



Binyam Reja  
Sr. Transport Economist  
Sustainable Development Unit  
South Asia Region

Attachment: a/a