



**GOVERNMENT OF ODIHSA
WORKS DEPARTMENT**

**AGREEMENT
FOR
PREPARATION OF FEASIBILITY REPORT FOR
“Two laning of Bisoi - Rairangpur Road (SH)
in the District of Mayurbhanj” in PPP Mode**

Between

**ARKITECHNO CONSULTANTS (INDIA) PVT. Ltd,
PLOT# N-3/91, IRC VILLAGE, NAYAPALLI,
BHUBANESWAR – 751015**

AND

**Chief Engineer, World Bank Projects, Odisha
O/o Engineer-in-Chief (Civil), Odisha
Nirman Soudha, Keshari Nagar, Unit – V, Bhubaneswar – 751 001**

AGREEMENT VALUE: Rs. 24,47,184

DECEMBER, 2012

Contents

- 1. General**
 - 1.1 Definitions and Interpretation
 - 1.2 Relation between the Parties
 - 1.3 Rights and Obligations
 - 1.4 Governing law and jurisdiction
 - 1.5 Language
 - 1.6 Table of contents and headings
 - 1.7 Notices
 - 1.8 Location
 - 1.9 Authority of Member-in-charge
 - 1.10 Authorised representatives
 - 1.11 Taxes and duties
- 2. Commencement, Completion and Termination of Agreement**
 - 2.1 Effectiveness of Agreement
 - 2.2 Commencement of Services
 - 2.3 Termination of Agreement for failure to commence Services
 - 2.4 Expiration of Agreement
 - 2.5 Entire Agreement
 - 2.6 Modification of Agreement
 - 2.7 Force Majeure
 - 2.8 Suspension of Agreement
 - 2.9 Termination of Agreement
- 3. Obligations of the Consultant**
 - 3.1 General
 - 3.2 Conflict of Interest
 - 3.3 Confidentiality
 - 3.4 Liability of the Consultant
 - 3.5 Insurance to be taken out by the Consultant
 - 3.6 Accounting, inspection and auditing
 - 3.7 Consultant's actions requiring the Authority's prior approval
 - 3.8 Reporting obligations
 - 3.9 Documents prepared by the Consultant to be the property of the Authority
 - 3.10 Equipment and materials furnished by the Authority
 - 3.11 Providing access to the Project Office and Personnel
 - 3.12 Accuracy of Documents

- 4. Consultant's Personnel and Sub-Consultant**
 - 4.1 General
 - 4.2 Deployment of Personnel
 - 4.3 Approval of Personnel
 - 4.4 Substitution of Key Personnel
 - 4.5 Working hours, overtime, leave etc.
 - 4.6 Resident Team Leader and Project Manager
 - 4.7 Sub-Consultants
- 5. Obligations of the Authority**
 - 5.1 Assistance in clearances etc.
 - 5.2 Access to land and property
 - 5.3 Change in Applicable Law
 - 5.4 Payment
- 6. Payment to the Consultant**
 - 6.1 Cost estimates and Agreement Value
 - 6.2 Currency of payment
 - 6.3 Mode of billing and payment
- 7. Liquidated damages and penalties**
 - 7.1 Performance Security
 - 7.2 Liquidated Damages
 - 7.3 Penalty for deficiency in Services
- 8. Fairness and Good Faith**
 - 8.1 Good Faith
 - 8.2 Operation of the Agreement
- 9. Settlement of Disputes**
 - 9.1 Amicable settlement
 - 9.2 Dispute resolution
 - 9.3 Conciliation
 - 9.4 Arbitration

ANNEXES

- Annex 1: Terms of Reference
- Annex 2: Deployment of Personnel
- Annex 3: Estimate of Personnel Costs
- Annex 4: Approved Sub-Consultant(s)
- Annex 5: Cost of Services
- Annex 6: Payment Schedule
- Annex 7: Bank Guarantee for Performance Security



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AGREEMENT

Preparation of Feasibility Report for Two laning of Bisoi - Rairangpur
Road (SH) in the District of Mayurbhanj” in PPP Mode

AGREEMENT No. 6 OF 2012 - 13

This AGREEMENT (hereinafter called the “Agreement”) is made on the 31st day of the month of **December 2012**, between, on the one hand, the Governor of Odisha in Works Department acting through the Chief Engineer, World Bank Projects, Odisha, Bhubaneswar (hereinafter called the “Authority” which expression shall include their respective successors and permitted assigns, unless the context otherwise requires) and, on the other hand, Arkitechno Consultants (India) Pvt. Ltd, PLOT# N-3/91, IRC Village, Nayapalli, Bhubaneswar – 751015 (hereinafter called the “Consultant” which expression shall include their respective successors and permitted assigns).

Consultant

31/12/2012



Page 1

Chief Engineer
World Bank Projects, Odisha

WHEREAS

- (A) The Authority vide its Request for Proposal for Preparation of Feasibility Report (hereinafter called the “**Consultancy**”) for *Two laning of Bisoi - Rairangpur Road (SH) in the District of Mayurbhanj in PPP Mode* (hereinafter called the “**Project**”);
- (B) the Consultant submitted its proposals for the aforesaid work, whereby the Consultant represented to the Authority that it had the required professional skills, and in the said proposals the Consultant also agreed to provide the Services to the Authority on the terms and conditions as set forth in the RFP and this Agreement; and
- (C) the Authority, on acceptance of the aforesaid proposals of the Consultant, awarded the Consultancy to the Consultant vide its Letter of Award No. **42836** dated **15th December 2012** (the “**LOA**”); and
- (D) in pursuance of the LOA, the parties have agreed to enter into this Agreement.

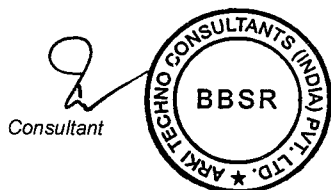
NOW, THEREFORE, the parties hereto hereby agree as follows:

1. GENERAL

1.1 Definitions and Interpretation

1.1.1 The words and expressions beginning with capital letters and defined in this Agreement shall, unless the context otherwise requires, have the meaning hereinafter respectively assigned to them:

- (a) “**Additional Costs**” shall have the meaning set forth in Clause 6.1.2;
- (b) “**Agreement**” means this Agreement, together with all the Annexes;
- (c) “**Agreement Value**” shall have the meaning set forth in Clause 6.1.2;
- (d) “**Applicable Laws**” means the laws and any other instruments having the force of law in India as they may be issued and in force from time to time;
- (e) “**Confidential Information**” shall have the meaning set forth in Clause 3.3;
- (f) “**Conflict of Interest**” shall have the meaning set forth in Clause 3.2 read with the provisions of RFP;
- (g) “**Dispute**” shall have the meaning set forth in Clause 9.2.1;
- (h) “**Effective Date**” means the date on which this Agreement comes into force and effect pursuant to Clause 2.1;
- (i) “**Expatriate Personnel**” means such persons who at the time of being so hired had their domicile outside India;
- (j) “**Government**” means the [Government of Odisha];
- (k) “**INR, Re. or Rs.**” means Indian Rupees;



- (l) “**Member**”, in case the Consultant consists of a joint venture or consortium of more than one entity, means any of these entities, and “**Members**” means all of these entities;
- (m) “**Party**” means the Authority or the Consultant, as the case may be, and **Parties** means both of them;
- (n) “**Personnel**” means persons hired by the Consultant or by any Sub-Consultant as employees and assigned to the performance of the Services or any part thereof;
- (o) “**Resident Personnel**” means such persons who at the time of being so hired had their domicile inside India;
- (p) “**RFP**” means the Request for Proposal document in response to which the Consultant’s proposal for providing Services was accepted;
- (q) “**Services**” means the work to be performed by the Consultant pursuant to this Agreement, as described in the Terms of Reference hereto;
- (r) “**Sub-Consultant**” means any entity to which the Consultant subcontracts any part of the Services in accordance with the provisions of Clause 4.7; and
- (s) “**Third Party**” means any person or entity other than the Government, the Authority, the Consultant or a Sub-Consultant.

All terms and words not defined herein shall, unless the context otherwise requires, have the meaning assigned to them in the RFP.

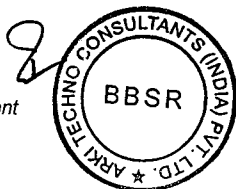
1.1.2 The following documents along with all addenda issued thereto shall be deemed to form and be read and construed as integral parts of this Agreement and in case of any contradiction between or among them the priority in which a document would prevail over another would be as laid down below beginning from the highest priority to the lowest priority:

- (a) Agreement;
- (b) Annexes of Agreement;
- (c) RFP; and
- (d) Letter of Award.

1.2 Relation between the Parties

Nothing contained herein shall be construed as establishing a relation of master and servant or of agent and principal as between the Authority and the Consultant. The Consultant shall, subject to this Agreement, have complete charge of Personnel performing the Services and shall be fully responsible for the Services performed by them or on their behalf hereunder.

Consultant



Page 3

Chief Engineer
World Bank Projects, Odisha

1.3 Rights and obligations

The mutual rights and obligations of the Authority and the Consultant shall be as set forth in the Agreement, in particular:

- (a) the Consultant shall carry out the Services in accordance with the provisions of the Agreement; and
- (b) the Authority shall make payments to the Consultant in accordance with the provisions of the Agreement.

1.4 Governing law and jurisdiction

This Agreement shall be construed and interpreted in accordance with and governed by the laws of India, and the courts at **Bhubaneswar** shall have exclusive jurisdiction over matters arising out of or relating to this Agreement.

1.5 Language

All notices required to be given by one Party to the other Party and all other communications, documentation and proceedings which are in any way relevant to this Agreement shall be in writing and in English language.

1.6 Table of contents and headings

The table of contents, headings or sub-headings in this Agreement are for convenience of reference only and shall not be used in, and shall not affect, the construction or interpretation of this Agreement.

1.7 Notices

Any notice or other communication to be given by any Party to the other Party under or in connection with the matters contemplated by this Agreement shall be in writing and shall:

- (a) in the case of the Consultant, be given by facsimile or e-mail and by letter delivered by hand to the address given and marked for attention of the Consultant's Representative set out below in Clause 1.10 or to such other person as the Consultant may from time to time designate by notice to the Authority; provided that notices or other communications to be given to an address outside India may, if they are subsequently confirmed by sending a copy thereof by registered acknowledgement due, air mail or by courier, be sent by facsimile or e-mail to the number as the Consultant may from time to time specify by notice to the Authority;



- (b) in the case of the Authority, be given by facsimile or e-mail and by letter delivered by hand and be addressed to the Authority with a copy delivered to the Authority Representative set out below in Clause 1.10 or to such other person as the Authority may from time to time designate by notice to the Consultant; provided that if the Consultant does not have an office in [Bhubaneswar] it may send such notice by facsimile or e-mail and by registered acknowledgement due, air mail or by courier; and
- (c) any notice or communication by a Party to the other Party, given in accordance herewith, shall be deemed to have been delivered when in the normal course of post it ought to have been delivered and in all other cases, it shall be deemed to have been delivered on the actual date and time of delivery; provided that in the case of facsimile or e-mail, it shall be deemed to have been delivered on the working days following the date of its delivery.

1.8 Location

The Services shall be performed at the site of the Project in accordance with the provisions of RFP and at such locations as are incidental thereto, including the offices of the Consultant.

1.9 Authority of Member-in-charge

In case the Consultant consists of a consortium of more than one entity, the Parties agree that the Lead Member shall act on behalf of the Members in exercising all the Consultant's rights and obligations towards the Authority under this Agreement, including without limitation the receiving of instructions and payments from the Authority.

1.10 Authorised Representatives

1.10.1 Any action required or permitted to be taken, and any document required or permitted to be executed, under this Agreement by the Authority or the Consultant, as the case may be, may be taken or executed by the officials specified in this Clause 1.10.

1.10.2 The Authority may, from time to time, designate one of its officials as the Authority Representative. Unless otherwise notified, the Authority Representative shall be:

Chief Engineer,

World Bank Projects, Odisha

O/o E.I.C. (Civil), Odisha,

Nirman Soudha, Keshari Nagar, Unit – V, Bhubaneswar - 751001

Tel: +91 674 239 6783 / Fax: +91 674 239 0080 Email: pmuosrp@gmail.com

Consultant



1.10.3 The Consultant may designate one of its employees as Consultant's Representative. Unless otherwise notified, the Consultant's Representative shall be:

Rajesh Roy Choudhury
Managing Director
Tel: +91-674-255-4205
Mobile: 09437011012
Fax+91-674-255-3689
Email: rajesh@arkitechno.com

1.11 Taxes and duties

Unless otherwise specified in the Agreement, the Consultant shall pay all such taxes, duties, fees and other impositions as may be levied under the Applicable Laws and the Authority shall perform such duties in regard to the deduction of such taxes as may be lawfully imposed on it.

2. COMMENCEMENT, COMPLETION AND TERMINATION OF AGREEMENT

2.1 Effectiveness of Agreement

This Agreement shall come into force and effect on the date of this Agreement (the "Effective Date").

2.2 Commencement of Services

The Consultant shall commence the Services within a period of 7 (seven) days from the Effective Date, unless otherwise agreed by the Parties.

2.3 Termination of Agreement for failure to commence Services

If the Consultant does not commence the Services within the period specified in Clause 2.2 above, the Authority may, by not less than 2 (two) weeks' notice to the Consultant, declare this Agreement to be null and void, and in the event of such a declaration, the Bid Security of the Consultant shall stand forfeited.

2.4 Expiration of Agreement

Unless terminated earlier pursuant to Clauses 2.3 or 2.9 hereof, this Agreement shall, unless extended by the Parties by mutual consent, expire upon the earlier of (i) expiry of a period of 90 (ninety) days after the delivery of the final deliverable to the Authority; and (ii) the expiry of [1 (one) year] from the Effective Date. Upon Termination, the Authority shall make payments of all amounts due to the Consultant hereunder.



2.5 Entire Agreement

2.5.1 This Agreement and the Annexes together constitute a complete and exclusive statement of the terms of the agreement between the Parties on the subject hereof, and no amendment or modification hereto shall be valid and effective unless such modification or amendment is agreed to in writing by the Parties and duly executed by persons especially empowered in this behalf by the respective Parties. All prior written or oral understandings, offers or other communications of every kind pertaining to this Agreement are abrogated and withdrawn; provided, however, that the obligations of the Consultant arising out of the provisions of the RFP shall continue to subsist and shall be deemed to form part of this Agreement.

2.5.2 Without prejudice to the generality of the provisions of Clause 2.5.1, on matters not covered by this Agreement, the provisions of RFP shall apply.

2.6 Modification of Agreement

Modification of the terms and conditions of this Agreement, including any modification of the scope of the Services, may only be made by written agreement between the Parties. Pursuant to Clauses 4.2.3 and 6.1.3 hereof, however, each Party shall give due consideration to any proposals for modification made by the other Party.

2.7 Force Majeure

2.7.1 Definition

- (a) For the purposes of this Agreement, “**Force Majeure**” means an event which is beyond the reasonable control of a Party, and which makes a Party’s performance of its obligations hereunder impossible or so impractical as reasonably to be considered impossible in the circumstances, and includes, but is not limited to, war, riots, civil disorder, earthquake, fire, explosion, storm, flood or other adverse weather conditions, strikes, lockouts or other industrial action (except where such strikes, lockouts or other industrial action are within the power of the Party invoking Force Majeure to prevent), confiscation or any other action by government agencies.
- (b) Force Majeure shall not include (i) any event which is caused by the negligence or intentional action of a Party or such Party’s Sub-Consultant or agents or employees, nor (ii) any event which a diligent Party could reasonably have been expected to both (A) take into account at the time of the conclusion of this



Agreement, and (B) avoid or overcome in the carrying out of its obligations hereunder.

- (c) Force Majeure shall not include insufficiency of funds or failure to make any payment required hereunder.

2.7.2 No breach of Agreement

The failure of a Party to fulfil any of its obligations hereunder shall not be considered to be a breach of, or default under, this Agreement insofar as such inability arises from an event of Force Majeure, provided that the Party affected by such an event has taken all reasonable precautions, due care and reasonable alternative measures, all with the objective of carrying out the terms and conditions of this Agreement.

2.7.3 Measures to be taken

- (a) A Party affected by an event of Force Majeure shall take all reasonable measures to remove such Party's inability to fulfil its obligations hereunder with a minimum of delay.
- (b) A Party affected by an event of Force Majeure shall notify the other Party of such event as soon as possible, and in any event not later than 14 (fourteen) days following the occurrence of such event, providing evidence of the nature and cause of such event, and shall similarly give notice of the restoration of normal conditions as soon as possible.
- (c) The Parties shall take all reasonable measures to minimise the consequences of any event of Force Majeure.

2.7.4 Extension of time

Any period within which a Party shall, pursuant to this Agreement, 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.

2.7.5 Payments

During the period of its inability to perform the Services as a result of an event of Force Majeure, the Consultant shall be entitled to be reimbursed for additional costs reasonably and necessarily incurred by it during such period for the purposes of the Services and in reactivating the Services after the end of such period.

2.7.6 Consultation

Not later than 30 (thirty) days after the Consultant has, as the result of an event of Force Majeure, become unable to perform a material portion of the Services, the Parties shall



consult with each other with a view to agreeing on appropriate measures to be taken in the circumstances.

2.8 Suspension of Agreement

The Authority may, by written notice of suspension to the Consultant, suspend all payments to the Consultant hereunder if the Consultant shall be in breach of this Agreement or shall fail to perform any of its obligations under this Agreement, including the carrying out of the Services; provided that such notice of suspension (i) shall specify the nature of the breach or failure, and (ii) shall provide an opportunity to the Consultant to remedy such breach or failure within a period not exceeding 30 (thirty) days after receipt by the Consultant of such notice of suspension.

2.9 Termination of Agreement

2.9.1 By the Authority

The Authority may, by not less than 30 (thirty) days' written notice of termination to the Consultant, such notice to be given after the occurrence of any of the events specified in this Clause 2.9.1, terminate this Agreement if:

- (a) the Consultant fails to remedy any breach hereof or any failure in the performance of its obligations hereunder, as specified in a notice of suspension pursuant to Clause 2.8 hereinabove, within 30 (thirty) days of receipt of such notice of suspension or within such further period as the Authority may have subsequently granted in writing;
- (b) the Consultant becomes insolvent or bankrupt or enters into any agreement with its creditors for relief of debt or take advantage of any law for the benefit of debtors or goes into liquidation or receivership whether compulsory or voluntary;
- (c) the Consultant fails to comply with any final decision reached as a result of arbitration proceedings pursuant to Clause 9 hereof;
- (d) the Consultant submits to the Authority a statement which has a material effect on the rights, obligations or interests of the Authority and which the Consultant knows to be false;
- (e) any document, information, data or statement submitted by the Consultant in its Proposals, based on which the Consultant was considered eligible or successful, is found to be false, incorrect or misleading;
- (f) 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 60 (sixty) days; or
- (g) the Authority, in its sole discretion and for any reason whatsoever, decides to terminate this Agreement.



2.9.2 By the Consultant

The Consultant may, by not less than 30 (thirty) days' written notice to the Authority, such notice to be given after the occurrence of any of the events specified in this Clause 2.9.2, terminate this Agreement if:

- (a) the Authority fails to pay any money due to the Consultant pursuant to this Agreement and not subject to dispute pursuant to Clause 9 hereof within 45 (forty five) days after receiving written notice from the Consultant that such payment is overdue;
- (b) the Authority is in material breach of its obligations pursuant to this Agreement and has not remedied the same within 45 (forty five) days (or such longer period as the Consultant may have subsequently granted in writing) following the receipt by the Authority of the Consultant's notice specifying such breach;
- (c) 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 60 (sixty) days; or
- (d) the Authority fails to comply with any final decision reached as a result of arbitration pursuant to Clause 9 hereof.

2.9.3 Cessation of rights and obligations

Upon termination of this Agreement pursuant to Clauses 2.3 or 2.9 hereof, or upon expiration of this Agreement pursuant to Clause 2.4 hereof, all rights and obligations of the Parties hereunder shall cease, except (i) such rights and obligations as may have accrued on the date of termination or expiration, or which expressly survive such Termination; (ii) the obligation of confidentiality set forth in Clause 3.3 hereof; (iii) the Consultant's obligation to permit inspection, copying and auditing of such of its accounts and records set forth in Clause 3.6, as relate to the Consultant's Services provided under this Agreement; and (iv) any right or remedy which a Party may have under this Agreement or the Applicable Law.

2.9.4 Cessation of Services

Upon termination of this Agreement by notice of either Party to the other pursuant to Clauses 2.9.1 or 2.9.2 hereof, the Consultant shall, immediately upon dispatch or receipt of such notice, take all necessary steps to bring the Services to a close in a prompt and orderly manner and shall make every reasonable effort to keep expenditures for this purpose to a minimum. With respect to documents prepared by the Consultant and equipment and materials furnished by the Authority, the Consultant shall proceed as provided respectively by Clauses 3.9 or 3.10 hereof.

2.9.5 Payment upon Termination

Upon termination of this Agreement pursuant to Clauses 2.9.1 or 2.9.2 hereof, the Authority shall make the following payments to the Consultant (after offsetting against these payments any amount that may be due from the Consultant to the Authority):

- (i) remuneration pursuant to Clause 6 hereof for Services satisfactorily performed prior to the date of termination;
- (ii) reimbursable expenditures pursuant to Clause 6 hereof for expenditures actually incurred prior to the date of termination; and
- (iii) except in the case of termination pursuant to sub-clauses (a) through (e) of Clause 2.9.1 hereof, reimbursement of any reasonable cost incidental to the prompt and orderly termination of the Agreement including the cost of the return travel of the Consultant's personnel.

2.9.6 Disputes about Events of Termination

If either Party disputes whether an event specified in Clause 2.9.1 or in Clause 2.9.2 hereof has occurred, such Party may, within 30 (thirty) days after receipt of notice of termination from the other Party, refer the matter to arbitration pursuant to Clause 9 hereof, and this Agreement shall not be terminated on account of such event except in accordance with the terms of any resulting arbitral award.

3. OBLIGATIONS OF THE CONSULTANT

3.1 General

3.1.1 Standards of Performance

The Consultant shall perform the Services and carry out its obligations hereunder with all due diligence, efficiency and economy, in accordance with generally accepted professional techniques and practices, and shall observe sound management practices, and employ appropriate advanced technology and safe and effective equipment, machinery, materials and methods. The Consultant shall always act, in respect of any matter relating to this Agreement or to the Services, as a faithful adviser to the Authority, and shall at all times support and safeguard the Authority's legitimate interests in any dealings with Sub-Consultants or Third Parties.

3.1.2 Terms of Reference

The scope of services to be performed by the Consultant is specified in the Terms of Reference (the "TOR") at Annex-1 of this Agreement. The Consultant shall provide the Deliverables specified therein in conformity with the time schedule stated therein.



3.1.3 Applicable Laws

The Consultant shall perform the Services in accordance with the Applicable Laws and shall take all practicable steps to ensure that any Sub-Consultant, as well as the Personnel and agents of the Consultant and any Sub-Consultant, comply with the Applicable Laws.

3.2 Conflict of Interest

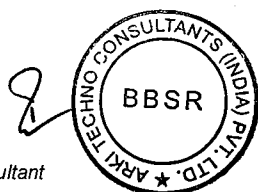
3.2.1 The Consultant shall not have a Conflict of Interest and any breach hereof shall constitute a breach of the Agreement.

3.2.2 Consultant and Affiliates not to be otherwise interested in the Project The Consultant agrees that, during the term of this Agreement and after its termination, the Consultant or any Associate thereof and any entity affiliated with the Consultant, as well as any Sub-Consultant and any entity affiliated with such Sub-Consultant, shall be disqualified from providing goods, works, services, loans or equity for any project resulting from or closely related to the Services and any breach of this obligation shall amount to a Conflict of Interest; provided that the restriction herein shall not apply after a period of five years from the completion of this assignment or to consulting assignments granted by banks/lenders at any time; provided further that this restriction shall not apply to consultancy/ advisory services provided to the Authority in continuation of this Consultancy or to any subsequent consultancy/ advisory services provided to the Authority in accordance with the rules of the Authority. For the avoidance of doubt, an entity affiliated with the Consultant shall include a partner in the Consultant's firm or a person who holds more than 5% (five per cent) of the subscribed and paid up share capital of the Consultant, as the case may be, and any Associate thereof.

3.2.3 Prohibition of conflicting activities

Neither the Consultant nor its Sub-Consultant nor the Personnel of either of them shall engage, either directly or indirectly, in any of the following activities:

- (a) during the term of this Agreement, any business or professional activities which would conflict with the activities assigned to them under this Agreement;
- (b) after the termination of this Agreement, such other activities as may be specified in the Agreement; or
- (c) at any time, such other activities as have been specified in the RFP as Conflict of Interest.



- 3.2.4 Consultant not to benefit from commissions, discounts, etc. The remuneration of the Consultant pursuant to Clause 6 hereof shall constitute the Consultant's sole remuneration in connection with this Agreement or the Services and the Consultant shall not accept for its own benefit any trade commission, discount or similar payment in connection with activities pursuant to this Agreement or to the Services or in the discharge of its obligations hereunder, and the Consultant shall use its best efforts to ensure that any Sub-Consultant, as well as the Personnel and agents of either of them, similarly shall not receive any such additional remuneration.
- 3.2.5 The Consultant and its Personnel shall observe the highest standards of ethics and shall not have engaged in and shall not hereafter engage in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice (collectively the "**Prohibited Practices**"). Notwithstanding anything to the contrary contained in this Agreement, the Authority shall be entitled to terminate this Agreement forthwith by a communication in writing to the Consultant, without being liable in any manner whatsoever to the Consultant, if it determines that the Consultant has, directly or indirectly or through an agent, engaged in any Prohibited Practices in the Selection Process or before or after entering into of this Agreement. In such an event, the Authority shall forfeit and appropriate the performance security, if any, as mutually agreed genuine pre-estimated compensation and damages payable to the Authority towards, *inter alia*, the time, cost and effort of the Authority, without prejudice to the Authority's any other rights or remedy hereunder or in law.
- 3.2.6 Without prejudice to the rights of the Authority under Clause 3.2.5 above and the other rights and remedies which the Authority may have under this Agreement, if the Consultant is found by the Authority to have directly or indirectly or through an agent, engaged or indulged in any Prohibited Practices, during the Selection Process or before or after the execution of this Agreement, the Consultant shall not be eligible to participate in any tender or RFP issued during a period of 2 (two) years from the date the Consultant is found by the Authority to have directly or indirectly or through an agent, engaged or indulged in any Prohibited Practices.
- 3.2.7 For the purposes of Clauses 3.2.5 and 3.2.6, the following terms shall have the meaning hereinafter respectively assigned to them:
- (a) "**corrupt practice**" means the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence the actions of any person connected with the Selection Process (for removal of doubt, offering of employment or employing or engaging in any manner whatsoever, directly or indirectly, any



official of the Authority who is or has been associated in any manner, directly or indirectly with Selection Process or LOA or dealing with matters concerning the Agreement before or after the execution thereof, at any time prior to the expiry of one year from the date such official resigns or retires from or otherwise ceases to be in the service of the Authority, shall be deemed to constitute influencing the actions of a person connected with the Selection Process); or (ii) engaging in any manner whatsoever, whether during the Selection Process or after the issue of LOA or after the execution of the Agreement, as the case may be, any person in respect of any matter relating to the Project or the LOA or the Agreement, who at any time has been or is a legal, financial or technical adviser the Authority in relation to any matter concerning the Project;

- (b) “**fraudulent practice**” means a misrepresentation or omission of facts or suppression of facts or disclosure of incomplete facts, in order to influence the Selection Process;
- (c) “**coercive practice**” means impairing or harming, or threatening to impair or harm, directly or indirectly, any person or property to influence any person’s participation or action in the Selection Process or the exercise of its rights or performance of its obligations by the Authority under this Agreement;
- (d) “**undesirable practice**” means (i) establishing contact with any person connected with or employed or engaged by the Authority with the objective of canvassing, lobbying or in any manner influencing or attempting to influence the Selection Process; or (ii) having a Conflict of Interest; and
- (e) “**restrictive practice**” means forming a cartel or arriving at any understanding or arrangement among Applicants with the objective of restricting or manipulating a full and fair competition in the Selection Process.

3.3 Confidentiality

The Consultant, its Sub-Consultants and the Personnel of either of them shall not, either during the term or within two years after the expiration or termination of this Agreement disclose any proprietary information, including information relating to reports, data, drawings, design software or other material, whether written or oral, in electronic or magnetic format, and the contents thereof; and any reports, digests or summaries created or derived from any of the foregoing that is provided by the Authority to the Consultant, its Sub-Consultants and the Personnel; any information provided by or relating to the Authority, its technology, technical processes, business affairs or finances or any


information relating to the Authority's employees, officers or other professionals or suppliers, customers, or contractors of the Authority; and any other information which the Consultant is under an obligation to keep confidential in relation to the Project, the Services or this Agreement ("**Confidential Information**"), without the prior written consent of the Authority.

Notwithstanding the aforesaid, the Consultant, its Sub-Consultants and the Personnel of either of them may disclose Confidential Information to the extent that such Confidential Information:

- (i) was in the public domain prior to its delivery to the Consultant, its Sub-Consultants and the Personnel of either of them or becomes a part of the public knowledge from a source other than the Consultant, its Sub-Consultants and the Personnel of either of them;
- (ii) was obtained from a third party with no known duty to maintain its confidentiality;
- (iii) is required to be disclosed by Applicable Laws or judicial or administrative or arbitral process or by any governmental instrumentalities, provided that for any such disclosure, the Consultant, its Sub-Consultants and the Personnel of either of them shall give the Authority, prompt written notice, and use reasonable efforts to ensure that such disclosure is accorded confidential treatment; and
- (iv) is provided to the professional advisers, agents, auditors or representatives of the Consultant or its Sub-Consultants or Personnel of either of them, as is reasonable under the circumstances; provided, however, that the Consultant or its Sub-Consultants or Personnel of either of them, as the case may be, shall require their professional advisers, agents, auditors or its representatives, to undertake in writing to keep such Confidential Information, confidential and shall use its best efforts to ensure compliance with such undertaking.

3.4 Liability of the Consultant

3.4.1 The Consultant's liability under this Agreement shall be determined by the Applicable Laws and the provisions hereof.


Consultant




Chief Engineer
World Bank Projects, Odisha

- 3.4.2 The Consultant shall, subject to the limitation specified in Clause 3.4.3, be liable to the Authority for any direct loss or damage accrued or likely to accrue due to deficiency in Services rendered by it.
- 3.4.3 The Parties hereto agree that in case of negligence or willful misconduct on the part of the Consultant or on the part of any person or firm acting on behalf of the Consultant in carrying out the Services, the Consultant, with respect to damage caused to the Authority's property, shall not be liable to the Authority:
- (i) for any indirect or consequential loss or damage; and
 - (ii) for any direct loss or damage that exceeds (a) the Agreement Value set forth in Clause 6.1.2 of this Agreement, or (b) the proceeds the Consultant may be entitled to receive from any insurance maintained by the Consultant to cover such a liability in accordance with Clause 3.5.2, whichever of (a) or (b) is higher.
- 3.4.4 This limitation of liability specified in Clause 3.4.3 shall not affect the Consultant's liability, if any, for damage to Third Parties caused by the Consultant or any person or firm acting on behalf of the Consultant in carrying out the Services subject, however, to a limit equal to 3 (three) times the Agreement Value.

3.5 Insurance to be taken out by the Consultant

- 3.5.1 (a) The Consultant shall, for the duration of this Agreement, take out and maintain, and shall cause any Sub-Consultant to take out and maintain, at its (or the Sub-Consultant's, as the case may be) own cost, but on terms and conditions approved by the Authority, insurance against the risks, and for the coverages, as specified in the Agreement and in accordance with good industry practice.
- (b) Within 15 (fifteen) days of receiving any insurance policy certificate in respect of insurances required to be obtained and maintained under this clause, the Consultant shall furnish to the Authority, copies of such policy certificates, copies of the insurance policies and evidence that the insurance premia have been paid in respect of such insurance. No insurance shall be cancelled, modified or allowed to expire or lapse during the term of this Agreement.
- (c) If the Consultant fails to effect and keep in force the aforesaid insurances for which it is responsible pursuant hereto, the Authority shall, apart from having other recourse available under this Agreement, have the option, without prejudice to the obligations of the Consultant, to take out the aforesaid insurance, to keep in force any such insurances, and pay such premia and recover the costs thereof from

Consultant



the Consultant, and the Consultant shall be liable to pay such amounts on demand by the Authority.

- (d) Except in case of Third Party liabilities, the insurance policies so procured shall mention the Authority as the beneficiary of the Consultant and the Consultant shall procure an undertaking from the insurance company to this effect; provided that in the event the Consultant has a general insurance policy that covers the risks specified in this Agreement and the amount of insurance cover is equivalent to 3 (three) times the cover required hereunder, such insurance policy may not mention the Authority as the sole beneficiary of the Consultant or require an undertaking to that effect.

3.5.2 The Parties agree that the risks and coverages shall include but not be limited to the following:

- (a) Third Party liability insurance as required under Applicable Laws, with a minimum coverage of [Rs. 75 (seventy five) lakhs];
- (b) employer's liability and workers' compensation insurance in respect of the Personnel of the Consultant and of any Sub-Consultant, in accordance with Applicable Laws; and
- (c) professional liability insurance for an amount no less than the Agreement Value.

The indemnity limit in terms of "Any One Accident" (AOA) and "Aggregate limit on the policy period" (AOP) should not be less than the amount stated in Clause 6.1.2 of the Agreement. In case of consortium, the policy should be in the name of Lead Member and not in the name of individual Members of the consortium.

3.6 Accounting, inspection and auditing

The Consultant shall:

- (a) keep accurate and systematic accounts and records in respect of the Services provided under this Agreement, in accordance with internationally accepted accounting principles and in such form and detail as will clearly identify all relevant time charges and cost, and the basis thereof (including the basis of the Consultant's costs and charges); and
- (b) permit the Authority or its designated representative periodically, and up to one year from the expiration or termination of this Agreement, to inspect the same and make copies thereof as well as to have them audited by auditors appointed by the Authority.

3.7 Consultant's actions requiring the Authority's prior approval

The Consultant shall obtain the Authority's prior approval in writing before taking any of the following actions:

- (a) appointing such members of the Professional Personnel as are not listed in Annex-2.
- (b) entering into a subcontract for the performance of any part of the Services, it being understood (i) that the selection of the Sub-Consultant and the terms and conditions of the subcontract shall have been approved in writing by the Authority prior to the execution of the subcontract, and (ii) that the Consultant shall remain fully liable for the performance of the Services by the Sub-Consultant and its Personnel pursuant to this Agreement; or
- (c) any other action that is specified in this Agreement.

3.8 Reporting obligations

The Consultant shall submit to the Authority the reports and documents specified in the Agreement, in the form, in the numbers and within the time periods set forth therein.

3.9 Documents prepared by the Consultant to be property of the Authority

- 3.9.1 All plans, drawings, specifications, designs, reports and other documents (collectively referred to as "**Consultancy Documents**") prepared by the Consultant (or by the Sub-Consultants or any Third Party) in performing the Services shall become and remain the property of the Authority, and all intellectual property rights in such Consultancy Documents shall vest with the Authority. Any Consultancy Document, of which the ownership or the intellectual property rights do not vest with the Authority under law, shall automatically stand assigned to the Authority as and when such Consultancy Document is created and the Consultant agrees to execute all papers and to perform such other acts as the Authority may deem necessary to secure its rights herein assigned by the Consultant.
- 3.9.2 The Consultant shall, not later than termination or expiration of this Agreement, deliver all Consultancy Documents to the Authority, together with a detailed inventory thereof. The Consultant may retain a copy of such Consultancy Documents. The Consultant, its Sub-Consultants or a Third Party shall not use these Consultancy Documents for purposes unrelated to this Agreement without the prior written approval of the Authority.

3.9.3 The Consultant shall hold the Authority harmless and indemnified for any losses, claims, damages, expenses (including all legal expenses), awards, penalties or injuries (collectively referred to as 'claims') which may arise from or due to any unauthorised use of such Consultancy Documents, or due to any breach or failure on part of the Consultant or its Sub-Consultants or a Third Party to perform any of its duties or obligations in relation to securing the aforementioned rights of the Authority.

3.10 Equipment and materials furnished by the Authority

Equipment and materials made available to the Consultant by the Authority shall be the property of the Authority and shall be marked accordingly. Upon termination or expiration of this Agreement, the Consultant shall furnish forthwith to the Authority, an inventory of such equipment and materials and shall dispose of such equipment and materials in accordance with the instructions of the Authority. While in possession of such equipment and materials, the Consultant shall, unless otherwise instructed by the Authority in writing, insure them in an amount equal to their full replacement value.

3.11 Providing access to Project Office and Personnel

The Consultant shall ensure that the Authority, and officials of the Authority having authority from the Authority, are provided unrestricted access to the Project Office and to all Personnel during office hours. The Authority's official, who has been authorized by the Authority in this behalf, shall have the right to inspect the Services in progress, interact with Personnel of the Consultant and verify the records relating to the Services for his satisfaction.

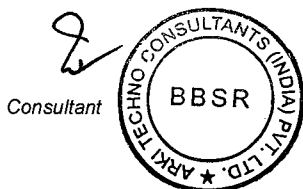
3.12. Accuracy of Documents

The Consultant shall be responsible for accuracy of the data collected by it directly or procured from other agencies/authorities, the designs, drawings, estimates and all other details prepared by it as part of these services. Subject to the provisions of Clause 3.4, it shall indemnify the Authority against any inaccuracy in its work which might surface during implementation of the Project, if such inaccuracy is the result of any negligence or inadequate due diligence on part of the Consultant or arises out of its failure to conform to good industry practice. The Consultant shall also be responsible for promptly correcting, at its own cost and risk, the drawings including any re-survey / investigations.

4. CONSULTANT'S PERSONNEL AND SUB-CONSULTANTS

4.1 General

The Consultant shall employ and provide such qualified and experienced Personnel as may be required to carry out the Services.



4.2 Deployment of Personnel

- 4.2.1 The designations, names and the estimated periods of engagement in carrying out the Services by each of the Consultant's Personnel are described in Annex-2 of this Agreement. The estimate of Personnel costs and manday rates are specified in Annex- 3 of this Agreement.
- 4.2.2 Adjustments with respect to the estimated periods of engagement of Personnel set forth in the aforementioned Annex-3 may be made by the Consultant by written notice to the Authority, provided that: (i) such adjustments shall not alter the originally estimated period of engagement of any individual by more than 20% (twenty per cent) or one week, whichever is greater, and (ii) the aggregate of such adjustments shall not cause payments under the Agreement to exceed the Agreement Value set forth in Clause 6.1.2 of this Agreement. Any other adjustments shall only be made with the written approval of the Authority.
- 4.2.3 If additional work is required beyond the scope of the Services specified in the Terms of Reference, the estimated periods of engagement of Personnel, set forth in the Annexes of the Agreement may be increased by agreement in writing between the Authority and the Consultant, provided that any such increase shall not, except as otherwise agreed, cause payments under this Agreement to exceed the Agreement Value set forth in Clause 6.1.2.

4.3 Approval of Personnel

- 4.3.1 The Professional Personnel listed in Annex-2 of the Agreement are hereby approved by the Authority. No other Professional Personnel shall be engaged without prior approval of the Authority.
- 4.3.2 If the Consultant hereafter proposes to engage any person as Professional Personnel, it shall submit to the Authority its proposal along with a CV of such person in the form provided at Appendix-I (Form-12) of the RFP. the Authority may approve or reject such proposal within 14 (fourteen) days of receipt thereof. In case the proposal is rejected, the Consultant may propose an alternative person for the Authority's consideration. In the event the Authority does not reject a proposal within 14 (fourteen) days of the date of receipt thereof under this Clause 4.3, it shall be deemed to have been approved by the Authority.

4.4 Substitution of Key Personnel

The Authority expects all the Key Personnel specified in the Proposal to be available during implementation of the Agreement. The Authority will not consider any substitution of Key Personnel except under compelling circumstances beyond the control of the Consultant and the concerned Key Personnel. Such substitution shall be limited to not more than two Key Personnel subject to equally or better qualified and experienced personnel being provided to the satisfaction of the Authority. Without prejudice to the foregoing, substitution of one Key Personnel shall be permitted subject to reduction of remuneration equal to 20% (twenty per cent) of the total remuneration specified for the Key Personnel who is proposed to be substituted. In case of a second substitution, such reduction shall be equal to 50% (fifty per cent) of the total remuneration specified for the Key Personnel who is proposed to be substituted.

4.5 Working hours, overtime, leave, etc.

The Personnel shall not be entitled to be paid for overtime nor to take paid sick leave or vacation leave except as specified in the Agreement, and the Consultant's remuneration shall be deemed to cover these items. All leave to be allowed to the Personnel is excluded from the mandays of service set forth in Annex-2. Any taking of leave by any Personnel for a period exceeding 7 (seven) days shall be subject to the prior approval of the Authority, and the Consultant shall ensure that any absence on leave will not delay the progress and quality of the Services.

4.6 Resident Team Leader and Project Manager

The person designated as the Team Leader of the Consultant's Personnel shall be responsible for the coordinated, timely and efficient functioning of the Personnel. In addition, the Consultant shall designate a suitable person as Project Manager (the "Project Manager") who shall be responsible for day to day performance of the Services.

4.7 Sub-Consultants

Sub-Consultants listed in Annex-4 of this Agreement are hereby approved by the Authority. The Consultant may, with prior written approval of the Authority, engage additional Sub-Consultants or substitute an existing Sub-Consultant. The hiring of Personnel by the Sub-Consultants shall be subject to the same conditions as applicable to Personnel of the Consultant under this Clause 4.

5. OBLIGATIONS OF THE AUTHORITY

5.1 Assistance in clearances etc.

Unless otherwise specified in the Agreement, the Authority shall make best efforts to ensure that the Government shall:

- (a) provide the Consultant, its Sub-Consultants and Personnel with work permits and such other documents as may be necessary to enable the Consultant, its Sub-Consultants or Personnel to perform the Services;
- (b) facilitate prompt clearance through customs of any property required for the Services; and
- (c) issue to officials, agents and representatives of the Government all such instructions as may be necessary or appropriate for the prompt and effective implementation of the Services.

5.2 Access to land and property

The Authority warrants that the Consultant shall have, free of charge, unimpeded access to the site of the project in respect of which access is required for the performance of Services; provided that if such access shall not be made available to the Consultant as and when so required, the Parties shall agree on (i) the time extension, as may be appropriate, for the performance of Services, and (ii) the additional payments, if any, to be made to the Consultant as a result thereof pursuant to Clause 6.1.3.

5.3 Change in Applicable Law

If, after the date of this Agreement, there is any change in the Applicable Laws with respect to taxes and duties which increases or decreases the cost or reimbursable expenses incurred by the Consultant in performing the Services, by an amount exceeding 2% (two per cent) of the Agreement Value specified in Clause 6.1.2, then the remuneration and reimbursable expenses otherwise payable to the Consultant under this Agreement shall be increased or decreased accordingly by agreement between the Parties hereto, and corresponding adjustments shall be made to the aforesaid Agreement Value.

5.4 Payment

In consideration of the Services performed by the Consultant under this Agreement, the Authority shall make to the Consultant such payments and in such manner as is provided in Clause 6 of this Agreement.



6. PAYMENT TO THE CONSULTANT

6.1 Cost estimates and Agreement Value

6.1.1 An abstract of the cost of the Services payable to the Consultant is set forth in Annex- 5 of the Agreement.

6.1.2 Except as may be otherwise agreed under Clause 2.6 and subject to Clause 6.1.3, the payments under this Agreement shall not exceed the agreement value specified herein (the “**Agreement Value**”). The Parties agree that the Agreement Value is **Rs. 24,47,184** (Rupees Twenty four lakhs forty seven thousands one hundred eighty four only), which does not include the Additional Costs specified in Annex-5 (the “**Additional Costs**”).

6.1.3 Notwithstanding anything to the contrary contained in Clause 6.1.2, if pursuant to the provisions of Clauses 2.6 and 2.7, the Parties agree that additional payments shall be made to the Consultant in order to cover any additional expenditures not envisaged in the cost estimates referred to in Clause 6.1.1 above, the Agreement Value set forth in Clause 6.1.2 above shall be increased by the amount or amounts, as the case may be, of any such additional payments.

6.2 Currency of payment

All payments shall be made in Indian Rupees. The Consultant shall be free to convert Rupees into any foreign currency as per Applicable Laws.

6.3 Mode of billing and payment

Billing and payments in respect of the Services shall be made as follows:-

(a) A Mobilisation Advance for an amount upto 10% (ten per cent) of the Agreement Value shall be paid to the Consultant on request and against a Bank Guarantee from a Scheduled Bank in India in an amount equal to such advance, such Bank Guarantee to remain effective until the advance payment has been fully set off as provided herein. The advance outstanding shall attract simple interest @ 10% (ten per cent) per annum and shall be adjusted in four equal instalments from the first four stage payments due and payable to the Consultant, and the accrued interest shall be recovered from the fifth instalment due and payable thereafter.

(b) The Consultant shall be paid for its services as per the Payment Schedule at Annex-6 of this Agreement, subject to the Consultant fulfilling the following conditions:



- (i) No payment shall be due for the next stage till the Consultant completes, to the satisfaction of the Authority, the work pertaining to the preceding stage.
- (ii) The Authority shall pay to the Consultant, only the undisputed amount.
- (c) The Authority shall cause the payment due to the Consultant to be made within 30 (thirty) days after the receipt by the Authority of duly completed bills with necessary particulars (the "Due Date"). Interest at the rate of 10% (ten per cent) per annum shall become payable as from the Due Date on any amount due by, but not paid on or before, such Due Date.
- (d) The final payment under this Clause shall be made only after the final report and a final statement, identified as such, shall have been submitted by the Consultant and approved as satisfactory by the Authority. The Services shall be deemed completed and finally accepted by the Authority and the final deliverable shall be deemed approved by the Authority as satisfactory upon expiry of 90 (ninety) days after receipt of the final deliverable by the Authority unless the Authority, within such 90 (ninety) day period, gives written notice to the Consultant specifying in detail, the deficiencies in the Services. The Consultant shall thereupon promptly make any necessary corrections and/or additions, and upon completion of such corrections or additions, the foregoing process shall be repeated. The Authority shall make the final payment upon acceptance or deemed acceptance of the final deliverable by the Authority.
- (e) Any amount which the Authority has paid or caused to be paid in excess of the amounts actually payable in accordance with the provisions of this Agreement shall be reimbursed by the Consultant to the Authority within 30 (thirty) days after receipt by the Consultant of notice thereof. Any such claim by the Authority for reimbursement must be made within 1 (one) year after receipt by the Authority of a final report in accordance with Clause 6.3 (d). Any delay by the Consultant in reimbursement by the due date shall attract simple interest @ 10% (ten per cent) per annum.
- (f) 10% (ten per cent) of the Agreement Value has been earmarked as Final Payment to be made to the Consultant upon execution of the Concession Agreement. In the event the Concession Agreement does not get executed within one year of the Effective Date the Final Payment shall not become due to the Consultant, save and except the costs incurred for meeting its reimbursable expenses during the

period after expiry of 18 (eighteen) weeks from the Effective Date, including travel costs and personnel costs, at the agreed rates.

- (g) All payments under this Agreement shall be made to the account of the Consultant as may be notified to the Authority by the Consultant.

7. LIQUIDATED DAMAGES AND PENALTIES

7.1 Performance Security

7.1.1 The Authority shall retain by way of performance security (the “**Performance Security**”), 5% (five per cent) of all the amounts due and payable to the Consultant, to be appropriated against breach of this Agreement or for recovery of liquidated damages as specified in Clause 7.2 herein. The balance remaining out of the Performance Security shall be returned to the Consultant at the end of 3 (three) months after the expiration of this Agreement pursuant to Clause 2.4 hereof.

7.1.2 The Consultant may, in lieu of retention of the amounts as referred to in Clause 7.1.1 above, furnish a Bank Guarantee substantially in the form specified at Annex-7 of this Agreement.

7.2 Liquidated Damages

7.2.1 Liquidated Damages for error/variation

In case any error or variation is detected in the reports submitted by the Consultant and such error or variation is the result of negligence or lack of due diligence on the part of the Consultant, the consequential damages thereof shall be quantified by the Authority in a reasonable manner and recovered from the Consultant by way of deemed liquidated damages, subject to a maximum of 50% (fifty per cent) of the Agreement Value.

7.2.2 Liquidated Damages for delay

In case of delay in completion of Services, liquidated damages not exceeding an amount equal to 0.2% (zero point two per cent) of the Agreement Value per day, subject to a maximum of 10% (ten per cent) of the Agreement Value will be imposed and shall be recovered by appropriation from the Performance Security or otherwise. However, in case of delay due to reasons beyond the control of the Consultant, suitable extension of time shall be granted.



7.2.3 **Encashment and appropriation of Performance Security**

The Authority shall have the right to invoke and appropriate the proceeds of the Performance Security, in whole or in part, without notice to the Consultant in the event of breach of this Agreement or for recovery of liquidated damages specified in this Clause 7.2.

7.3 **Penalty for deficiency in Services**

In addition to the liquidated damages not amounting to penalty, as specified in Clause 7.2, warning may be issued to the Consultant for minor deficiencies on its part. In the case of significant deficiencies in Services causing adverse effect on the Project or on the reputation of the Authority, other penal action including debaring for a specified period may also be initiated as per policy of the Authority.

8. **FAIRNESS AND GOOD FAITH**

8.1 **Good Faith**

The Parties undertake to act in good faith with respect to each other's rights under this Agreement and to adopt all reasonable measures to ensure the realisation of the objectives of this Agreement.

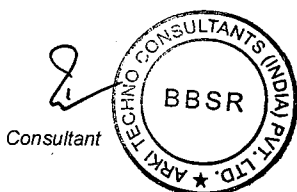
8.2 **Operation of the Agreement**

The Parties recognise that it is impractical in this Agreement to provide for every contingency which may arise during the life of the Agreement, and the Parties hereby agree that it is their intention that this Agreement shall operate fairly as between them, and without detriment to the interest of either of them, and that, if during the term of this Agreement either Party believes that this Agreement is operating unfairly, the Parties will use their best efforts to agree on such action as may be necessary to remove the cause or causes of such unfairness, but failure to agree on any action pursuant to this Clause shall not give rise to a dispute subject to arbitration in accordance with Clause 9 hereof.

9. **SETTLEMENT OF DISPUTES**

9.1 **Amicable settlement**

The Parties shall use their best efforts to settle amicably all disputes arising out of or in connection with this Agreement or the interpretation thereof.



9.2 Dispute resolution

9.2.1 Any dispute, difference or controversy of whatever nature howsoever arising under or out of or in relation to this Agreement (including its interpretation) between the Parties, and so notified in writing by either Party to the other Party (the “Dispute”) shall, in the first instance, be attempted to be resolved amicably in accordance with the conciliation procedure set forth in Clause 9.3.

9.2.2 The Parties agree to use their best efforts for resolving all Disputes arising under or in respect of this Agreement promptly, equitably and in good faith, and further agree to provide each other with reasonable access during normal business hours to all nonprivileged records, information and data pertaining to any Dispute.

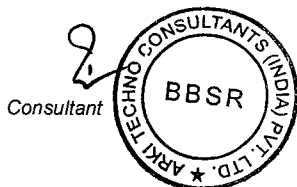
9.3 Conciliation

In the event of any Dispute between the Parties, either Party may call upon [Secretary, Works Department, Government of Odisha] and the Chairman of the Board of Directors of the Consultant or a substitute thereof for amicable settlement, and upon such reference, the said persons shall meet no later than 10 (ten) days from the date of reference to discuss and attempt to amicably resolve the Dispute. If such meeting does not take place within the 10 (ten) day period or the Dispute is not amicably settled within 15 (fifteen) days of the meeting or the Dispute is not resolved as evidenced by the signing of written terms of settlement within 30 (thirty) days of the notice in writing referred to in Clause 9.2.1 or such longer period as may be mutually agreed by the Parties, either Party may refer the Dispute to arbitration in accordance with the provisions of Clause 9.4.

9.4 Arbitration

9.4.1 Any Dispute which is not resolved amicably by conciliation, as provided in Clause 9.3, shall be finally decided by reference to arbitration by an Arbitral Tribunal appointed in accordance with Clause 9.4.2. Such arbitration shall be held in accordance with the Rules of Arbitration of the International Centre for Alternative Dispute Resolution, New Delhi (the “Rules”), or such other rules as may be mutually agreed by the Parties, and shall be subject to the provisions of the Arbitration and Conciliation Act, 1996. The venue of such arbitration shall be **Bhubaneswar** and the language of arbitration proceedings shall be English.

9.4.2 There shall be a sole arbitrator whose appointment shall be made in accordance with the Rules.



9.4.3 The arbitrators shall make a reasoned award (the "Award"). Any Award made in any arbitration held pursuant to this Clause 9 shall be final and binding on the Parties as from the date it is made, and the Consultant and the Authority agree and undertake to carry out such Award without delay.

9.4.4 The Consultant and the Authority agree that an Award may be enforced against the Consultant and/or the Authority, as the case may be, and their respective assets wherever situated.

9.4.5 This Agreement and the rights and obligations of the Parties shall remain in full force and effect, pending the Award in any arbitration proceedings hereunder.

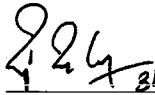
IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be signed in their respective names as of the day and year first above written.

SIGNED, SEALED AND DELIVERED

For and on behalf of

Consultant:

(Signature)

 31/12/2012

Rajesh Roy Choudhury

Managing Director

ARKITECHNO Consultants (I) Pvt. Ltd.

N-3/91, IRC Village, Nayapalli

Bhubaneswar -751015

Ph-06742553689

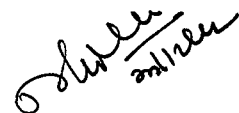
Fax-0674-2553689

SIGNED, SEALED AND DELIVERED

For and on behalf of

[Authority]

(Signature)



Er. Nalini Kanta Pradhan

Chief Engineer,

World Bank Projects, Odisha

O/o E.I.C. (Civil), Odisha


Nirman Soudha, Keshari Nagar,

Bhubaneswar - 751001


Fax No. +91 674 239 0080

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

In the presence of:

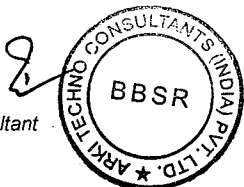
 31.12.2012

1. Mr. Pradipta Kumar Pala, ARKITECHNO

 31/12/2012

2. Dr. N C Pal, Executive Engineer, PMU

Consultant




Chief Engineer
World Bank Projects, Odisha

Annex-1

Terms of Reference
(Refer Clause 3.1.2)

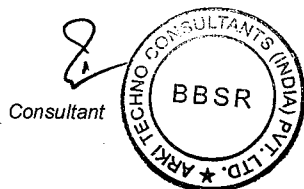
CONSULTANCY FOR
Carrying out Feasibility Report of Highway from
“Bisoi to Rairangpur in the District of Mayurbhanj”
in PPP Mode

TERMS OF REFERENCE (TOR)
FOR TECHNICAL CONSULTANT



Contents

1. **General**
2. **Objective**
3. **Scope of Services**
 - 3.1 Scope of Services
 - 3.2 Traffic surveys and demand assessment
 - 3.3 Engineering surveys and investigations
 - 3.4 Proposal for Sections passing through urban areas
 - 3.5 ROBs/RUBs
 - 3.6 Protective works in hill sections, retaining walls, breast walls, etc
 - 3.7 Road signs, safety devices
 - 3.8 Toll Plazas
 - 3.9 Truck laybys
 - 3.10 Bus bays and bus shelters
 - 3.11 Social impact assessment
 - 3.12 Environment impact assessment
 - 3.13 Preliminary designs
 - 3.14 Project cost
 - 3.15 Financial analysis and bid process
4. **Deliverables**
 - A. Inception Report
 - B. Report on Alignment and First Traffic Survey
 - C. Land Plan Schedules
 - D. Utility Relocation Plans
 - E. Reports on Environment and Social Impact Assessment
 - F. Report on Indicative GAD of Structures
 - G. Feasibility Report
 - H. Schedules of Concession Agreement
 - I. Financial analysis
 - J. Assistance during bid process



5. **Specific requirements for the Project Highway**
6. **Time and Payment Schedule**
7. **Meetings**
8. **Consultancy Team**
9. **Reporting**
10. **Data and software to be made available by the Authority**
11. **Completion of Services**

ATTACHMENTS

Attachment A : Topographic Survey

Attachment B : Indicative List of Drawings for Schedule-H of the Concession Agreement

PROFORMA

Proforma-1 : Road Inventory

Proforma-2 : Inventory and Condition Survey for Culverts

Proforma-3 : Inventory of Structures

Proforma-4 : Road Condition Survey

Proforma-5 : Bridge Condition Survey



**Consultancy for
Carrying out Feasibility Report of Highway from
“Bisoi to Rairangpur in the District of Mayurbhanj”
in PPP Mode**

Terms of Reference (TOR)

1. GENERAL

- 1.1 The Authority seeks the services of qualified firms for preparing a Feasibility Report for Two-laning, with paved shoulders, of the Project Highway on DBFOT basis. The Feasibility Report shall also include a pre-feasibility study for an option of Four-laning in the second phase of the concession. The Project Highway starts from Bisoi on SH 50 and ends at Rairangpur, and is approximately 32 km long. The Terms of Reference (the “TOR”) for this assignment are specified below.
- 1.2 The Consultant shall be guided in its assignment by the Model Concession Agreement and the Manual of Specifications and Standards for Two-laning of highways through Public Private Partnership published by Indian Roads Congress (IRC:SP:73-2007) (the “Manual”) and the Manual of Specifications and Standards for Four-laning of highways through Public Private Partnership published by DoRT&H (the “Four-Laning Manual”).
- 1.3 The Consultant shall be responsible for preparing the Schedules A, B, C, D and H of the Concession Agreement and for bringing out any special feature or requirement of the Project Highway referred to in the Concession Agreement or the Manual. The details and particulars to be specified in the Schedules shall be duly addressed and incorporated therein, in accordance with the provisions of the Manual (Refer to Appendix-I of the Manual).
- 1.4 The Consultant shall assist the Authority and its Financial Consultant and the Legal Adviser by furnishing clarifications as required for the financial appraisal and legal scrutiny of the Project Highway and Bid Documents.
- 1.5 The Consultant shall also participate in the pre-bid conference with the Bidders of the Project Highway and assist the Authority in clarifying the technical aspects arising from the Bid Documents including the Feasibility Report.

2. OBJECTIVE

The objective of this consultancy is to undertake feasibility studies and prepare a Feasibility Report of the Project Highway for the purpose of firming up the Authority’s requirements in respect of development and construction of the Project Highway and

Consultant



Page 32

Chief Engineer
World Bank Projects, Odisha

Project Facilities and enabling the prospective bidders to assess the Authority's requirements in a clear and predictable manner with a view to ensuring:

- (i) enhanced safety and level of service for the road users;
- (ii) superior operation and maintenance enabling enhanced operational efficiency of the Project Highway;
- (iii) minimal adverse impact on the local population and road users due to road construction;
- (iv) minimal adverse impact on environment;
- (v) minimal additional acquisition of land; and
- (vi) phased development of the Project Highway for improving its financial viability consistent with the need to minimise frequent inconvenience to traffic that may be caused if additional works are undertaken within a period of seven years from the commencement of construction of the Project Highway.

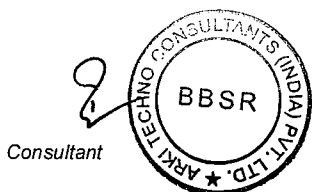
3. SCOPE OF SERVICES

3.1 Scope of Services

The scope of services shall comprise:

- (i) Traffic surveys and demand assessment
- (ii) Engineering surveys and investigations
- (iii) Location and layout of toll plazas
- (iv) Location and layout of truck laybys
- (v) Location and layout of bus bays and bus shelters
- (vi) Social impact assessment and its mitigation measures
- (vii) Environment impact assessment and its mitigation measures
- (viii) Preliminary designs of road, bridges, structures, etc.
- (ix) Preparation of Land Plan Schedules and Utility Relocation Plans
- (x) Preparation of indicative BOQ and rough Cost Estimates
- (xi) Preparation of Schedules A, B, C, D and H of the Concession Agreement.

These services are briefly explained hereunder:



3.2 Traffic surveys and demand assessment

3.2.1 The types of traffic surveys and the minimum number of survey stations shall be as under:

Sl. No.	Description of Activity	Number of Survey Stations
1.	Classified Traffic Volume Count	One station close to the proposed location of each Toll Plaza and one station for every 20 km of Project Highway.
2.	Origin – Destination Survey	One location on the project road and two other locations to assess the potential divertible traffic to the project road stretch
3.	Intersection Volume Count	All major intersections (All locations where the Project Highway intersects or meets a NH/ SH/ MDR).
4.	Pedestrian/Cattle crossing traffic count	At all locations of settlements / habitations along the Project Highway
5.	Axle Load Spectrum	One station each close to the proposed location of each Toll Plaza

The Consultant shall, upon award of the Consultancy, submit its proposal regarding the locations of traffic survey stations for each of the above activities along with an index plan giving the rationale of its proposal. Care shall be taken in proposing the locations in a manner that they capture the traffic in different sections. This proposal shall form part of the Inception Report. The Authority may, within one week of receiving the Inception Report, modify the locations of traffic survey stations in accordance with the provisions of this TOR and the Consultant shall comply with the same.

3.2.2 Classified traffic volume count

For conducting the traffic volume count, the Consultant shall comply with the following:

- (a) The classified traffic volume counts shall be carried out twice for 7 (seven) continuous days at the selected survey stations as per IRC guidelines on the subject (IRC: 9-1972). The timing for such counts shall be:
 - (i) within five weeks of the commencement of services, and
 - (ii) during the thirteenth week of commencement of services.

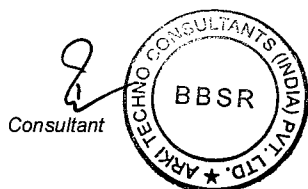
The following classes of vehicles shall be captured separately.

	Motorised vehicles		Non-motorised vehicles
1.	Cars (include jeeps, vans)	1.	Bicycles
2.	Light commercial vehicles including mini buses	2.	Cycle Rickshaws
3.	Buses	3.	Animal Drawn Carts
4.	Two axle trucks	4.	Handcarts
5.	Three axle trucks	5.	Any other non-motorised vehicles
6.	Four or more axle trucks		
7.	Tractors		
8.	Ambulance, fire tender, funeral vans		
9.	Three wheelers		
10.	Two wheelers		

- (b) The traffic count data would be analysed to depict hourly and daily variations. The Abstract of traffic data would also be provided for each survey station.

3.2.3 Traffic demand assessment

- (a) The Consultant shall make an assessment of the traffic demand for the Project Highway for a period of 10 (ten) years, 15 (fifteen) years and 20 (twenty) years respectively based on analysis of traffic counts, trend growth and growth in the influence area of the Project Highway. Normally, an annual growth rate of 5% (five per cent) shall be assumed. Any variation would have to be justified with reasons, including analysis of past trends.
- (b) Based on the assessment of the traffic demand on the various sections of the Project Highway, the Consultant shall discuss the options of Two-laning or Two-laning with paved shoulders in the first stage. Depending upon the present traffic volume and projected growth, due consideration shall be given to provision initially of Two-lane carriageway and paving of shoulders in the second stage. The Consultant shall also provide a broad assessment of the year in which four-laning may be required. The Consultant shall also provide sensitivity analysis due to change in assumption of traffic projections.



3.2.4 *Origin-Destination and Commodity Movements Surveys*

- (a) The Consultants shall carry out 1-day (24 hour, both directions) O-D and Commodity Movement Surveys at locations finalised in consultation with the Authority. The road side interviews shall be on random sample basis and cover all four-wheeled vehicles. The locations of the O-D survey and Commodity Movement surveys shall normally be same as for the classified traffic count stations.
- (b) The location of origin and destination zones shall be determined in relation to each individual station and the possibility of traffic diversion to the Project Road from/to other road routes including project road.
- (c) The trip matrices shall be worked out for each vehicle type information on weight for trucks should be summed up by commodity type and the results tabulated, giving total weight and average weight per truck for the various commodity types. The sample size for each vehicle type shall be indicated on the table and also in the graphical representations.
- (d) The data derived from surveys shall also be analysed to bring out the lead and load characteristics. The data analysis should also bring out the requirement for the construction of roads. The commodity movement data should be duly taken into consideration while making the traffic demand estimates.

3.2.5 *Intersection volume count and design*

- (a) Volume count

For conducting the intersection volume count, the turning movement traffic surveys shall be carried out as per IRC: SP:41-1994 at all locations where the Project Highway intersects/meets the NH, SH or MDR. The turning movement surveys will be undertaken from 08:00 to 12:00 hours in the morning and 16:00 to 20:00 hours in the evening.

- (b) Design

- (i) The data at each location shall be presented and analysed to identify suitable treatment viz. at-grade intersection, grade separator without ramps or interchange with ramps in the light of warrants and criteria specified in the Manual. The type and layout proposed by the Consultant for each location shall be furnished along with the analysis supporting the

same. Where an interchange with ramp is indicated by the analysis, its type should be determined keeping in view the site conditions.

- (ii) The amount of additional land required, if any, at each of the intersection on the Project Highway shall be clearly stated and brought out.
- (iii) For all cases where grade separators without ramps or interchanges with ramps are proposed, the possibility of their provision on the Project Highway in a phased manner shall be duly examined and a report on the cost-effectiveness of the Consultant's proposal submitted for consideration of the Authority to enable it to specify such requirements in the relevant Schedules of the Concession Agreement.

3.2.6 Pedestrian/Cattle crossing demand assessment

For assessing the requirements of Pedestrian/Cattle crossings, the traffic counts for two continuous days between 08.00 hours and 20.00 hours shall be carried out at the locations close to all habitations/settlements along the Project Highway. The data so collected shall be analysed to determine whether any pedestrian/cattle crossing by way of underpass/overpass is justified. If so, the locations and broad layout shall be proposed.

3.2.7 Axle load spectrum surveys

Axle load spectrum surveys shall be carried out at each proposed location of toll plaza on the Project Highway. The axle load survey shall capture buses, trucks and tractors with trailers in the traffic stream. The survey shall be for both directions. Sample size shall not be less than 10% (ten per cent) of the buses, trucks and tractors with trailers in the traffic stream and based on standard statistical techniques. The vehicle damage factor shall be calculated as per the equivalency factors given in IRC: 37.

3.3 Engineering surveys and investigations

3.3.1 The engineering surveys and investigations shall be divided into the following components:

- Topographic, alignment and land use survey
- Road inventory survey
- Road condition survey
- Bridge condition survey
- Soil, geo-technical, material, hydrology and drainage surveys

3.3.2 Topographic, alignment and land use survey

The activities and Deliverables forming part of the topographic, alignment and land use survey are described below (see also Attachment A to the TOR):

- (a) Divide the Project Highway into various stretches as per terrain classification.
- (b) Identify sections of Project Highway which fall within marine environment (Condition of severe marine environment: alternate wetting and drying due to sea spray; alternate wetting and drying combined with freezing; buried in soil having corrosive effect; members of structures in contact with water where the velocity of flow and the bed material are likely to cause erosion of concrete. Moderate marine environment would be other than severe).
- (c) Identify sections of Project Highway which fall within urban limits and need four laning in accordance with the Manual (see para 3.4).
- (d) Identify sections of Project Highway which require raising. Such sections will be identified with attention being paid to the previous history of submergence and the extent to which the subgrade is likely to be affected by the capillary action if the section is not raised.
- (e) As far as possible, the existing alignment would be retained subject to the following requirements:
 - (i) Identify stretches which do not meet the criterion of ruling design speed, i.e. where radii of horizontal curves are less than desirable minimum. Prepare realignment plans for improving geometrics in such stretches.
 - (ii) Identify stretches out of (i) above, which meet the criterion of minimum design speed, i.e. where the radii of horizontal curves are more than the absolute minimum (This will enable the Authority to take a view on whether to include such stretches for improving geometrics in the initial stage or these can be postponed by a few years and in the meantime steps can be taken to acquire the necessary land for the ROW).
 - (iii) Identify stretches where stopping sight distance is not available. Work out possible improvement plan to increase the sight distance to provide overtaking sight distance. Also work out option to increase the sight distance to provide at least the intermediate sight distance.

(iv) Identify stretches, other than those in (iii) above, where intermediate sight distance is not available. Work out possible improvement plan to increase the sight distance to provide overtaking sight distance. Also work out possible improvement plan to increase the sight distance to provide at least the intermediate sight distance.

(v) Identify stretches where the gradients are steeper than the ruling gradient for the relevant terrain condition. Work out and prepare an improvement plan for the vertical alignment in such stretches.

Divide improvement plans of such stretches into the following two parts:

- Stretches where gradient is more than the limiting gradient
- Stretches where gradient is more than the ruling gradient but less than the limiting gradient. (The Authority can take a view on whether improvements of stretches in this category shall be taken up or not.)

(vi) Identify stretches where extra width of roadway and carriageway at curves is required.

(f) Identify stretches involving construction of new bridges and other grade separated structures including those requiring reconstruction and their approaches. Work out proposal for location of such structures and alignment of approaches.

(g) Based on the improvement plans of horizontal and vertical alignment worked out as a result of tasks in (d), (e) and (f), prepare alignment plans, L-Sections and cross-sections of the entire Project Highway. Scale of drawings shall be as per IRC:SP:19. Proposed improvements shall be marked on the plans. Such improvements will include raising of road, widening of roadway, widening of existing carriageway, location of median and the side on which the new twolane carriageway is to be provided, provision of shoulders – both paved and granular, new structures, underpasses, grade separators, service roads, additional road signs, road furniture, safety devices, relocation of utilities, removal of trees, etc. The proposed ROW shall be demarcated on the ground for determining the extent of land acquisition, tree cutting, utility relocation and R&R by fixation of concrete pillars on both sides of the alignment at a minimum interval of 50m in straight reaches and 25m in curved stretches.

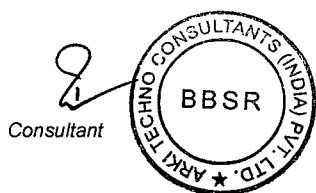


- (h) Also prepare a separate Land Plan of the Project Highway showing the existing ROW (alongwith all the existing assets within the ROW e.g. structures, drains, service roads, trees, utilities and safety devices) and proposed additional land required in various stretches for improvement of geometrics, construction of new structures, provision of intersections, interchanges, service roads, toll plazas, project facilities, etc. The Land Plan should also show encroachments, if any. A list of such encroachments alongwith their brief description shall also be prepared and included in the Feasibility Report.
- (i) For additional land proposed to be acquired as per final alignment plan of the Project Highway, the Land Plans shall be marked on duly certified village maps showing khasra numbers and shall be furnished along with a report which will include detailed schedules in respect of the proposed acquisition of land holdings as per revenue records in a format that would enable the Authority to initiate land acquisition proceedings.
- (j) A set of cross-sections of the existing road including urban sections at one km intervals for each homogeneous section in plain/rolling terrain and at 100 m intervals in mountainous/steep terrain shall be provided by the Consultant. In plain/ rolling terrain, additional cross-sections shall be provided for curves at the start, at the middle and at the end. These cross-sections along with proposed improvement plan and preliminary design shall form the basis of preparation of indicative BOQ for the Project Highway.

3.3.3 Road inventory survey

Deliverables under this component shall include:

- (a) An inventory of road, culverts, bridges and other structures like railway over/underbridges, flyovers (grade separated structures), underpasses and overpasses. The proforma for road, culverts and bridges or other structures have been provided at Proforma 1, 2 and 3 respectively.
- (b) Identification of stretches of the Project Highway which -
- (i) are affected by frequent flooding;
 - (ii) re subjected to water logging;
 - (iii) pass through black cotton soil area;
 - (iv) pass through marshy area; or
 - (v) pass through weak soil stratum



- (c) Typical cross-sections of the existing road showing the crust composition of pavement, shoulders and drains (one cross-section for every five km of the road).
- (d) Identification of sections in cutting.
- (e) Identification of culverts requiring:
 - (i) Reconstruction (all culverts which are structurally distressed shall be reconstructed as new structures).
 - (ii) Widening (all existing culverts which are not to be reconstructed shall be widened equal to the roadway width).
 - (iii) Repairs and/or rehabilitation alongwith preliminary proposals.
 - (iv) New construction

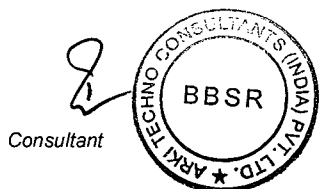
3.3.4 Road condition survey

The Consultant shall undertake a survey of the visual condition of the pavement and shoulders of the Project Highway and provide its report as per Proforma-4. The Consultant should also report if distresses are observed in the pavement and shoulders. It will also identify sections requiring reconstruction.

3.3.5 Bridge condition survey

The activities and Deliverables forming part of bridge condition survey are specified below:

- (a) The Consultant shall carry out a detailed inspection of every bridge and other structures such as railway over/under bridges, overpasses, underpasses and grade separators including flyovers. (For guidance, see IRC:SP:35 and IRC: SP:52).
- (b) For each structure, the Consultant shall indicate the distresses observed, if any, in respect of various components of the structures e.g. bearings, expansion joints, wearing coat, railings/crash-barriers, foundations, substructures (abutments, piers, pier caps), superstructure (Proforma-5). On the basis of the distresses observed, the Consultant shall divide the structures into the following categories:
 - (i) structures requiring reconstruction immediately as part of first stage development (all such structures shall be provided as new structures);



- (ii) structures where distresses are not so severe and reconstruction can be postponed to a subsequent stage say for a period of 7 to 8 years; if any major repairs are required in the meantime, these shall be so indicated for each such location;
- (iii) structures requiring repairs and/or rehabilitation (for such structures indicate preliminary proposals for repairs and/or rehabilitation);
- (iv) structures requiring widening (for such structures indicate widening methodology); and
- (v) structures that shall be retained.

3.3.6 Soil, geotechnical, material, hydrology and drainage surveys

The activities and Deliverables forming part of the soil, geotechnical, material, hydrology and drainage surveys are described below:

- (a) The characteristics of the existing soil, two samples from every five km of the Project Highway or closer where change in soil type is encountered.
- (b) The determination of subgrade CBR (soaked) every three km of the Project Highway or closer where change in soil type is encountered.
- (c) Benkleman Beam Deflection measurements on the Project Highway – one set of ten readings in 250 m for every three km of the Project Highway.
- (d) Investigations of the subsoil strata (one trial bore and/or test pit at embankment and one in river bed at locations where new bridges or other structures are proposed. The depth of trial bore/ test pit shall be as per IRC standards).
- (e) Preliminary hydraulic data for bridges, design discharge, HFL, LWL, etc. with a view to checking adequacy of existing waterway.
- (f) A broad assessment of the drainage condition and requirement of the Project Highway.

3.4 Proposal for Sections passing through urban areas

The task at 3.3.2(c) would identify the stretches of the Project Highway which pass through the urban areas. For each of these stretches, the Consultant shall prepare an improvement plan of the stretch to provide a four-lane divided carriageway with footpaths, covered drains, etc. Possibility of providing service roads shall also be explored and indicated. If there is any constraint due to available ROW or additional land to be acquired, the same shall be brought to the attention of the Authority on immediate basis.


Consultant




Chief Engineer
World Bank Projects, Odisha

In such situations, a bypass may be needed to avoid the urban area. The surveys and investigations for the alignment and other features of the bypass are a part of this Consultancy.

3.5 ROB/RUBs

The Consultant shall identify all locations of the existing railway level crossings on the Project Highway. Data regarding number of closures per day shall be provided. Normally, all level crossings are to be replaced with ROB/RUBs. However, the Consultant may propose retention of such railway crossings which are on sidings etc. where it would not be cost-effective to replace them with ROB/RUBs. The Consultant shall prepare and submit indicative GADs of the proposed ROB/RUBs including viaduct portion in the approaches based on preliminary consultation with the railway authorities concerned.

(The GAD of ROB/RUBs existing or under construction in the vicinity of the Project Highway could also be kept in view).

3.6 Protective works in hill sections, retaining walls, breast walls, etc.

For the stretches passing through hills, the Consultant shall identify the broad requirements of retaining walls, breastwalls, etc. for the purposes of preparing rough cost estimates.

3.7 Road signs, safety devices

- (a) The Consultant shall propose provision of Road Signs, Pavement Markings, Safety Barriers, Railings, Delineators, Chevron Markings, Traffic Attenuators, Road Boundary Stones, Km Stones, 200 m Stones. It shall also include Crash Barriers for existing bridges.
- (b) The Consultant shall propose overhead signs on the Project Highway and provide an outline of the same giving size and location.

3.8 Toll Plazas

The Consultant shall investigate and propose suitable location(s) for the Toll Plaza(s), within a range of 1000 m, keeping in view the requirements laid down in the Toll Rules, Model Concession Agreement and the Manual. It shall provide a typical layout plan for each Toll Plaza and indicate the additional land required keeping in view the requirements laid down in the Manual.

3.9 Truck laybys

The Consultant shall undertake field surveys and identify suitable locations for provision of truck laybys on the Project Highway. Truck laybys shall, in general, be located near check-barriers, interstate borders, places of conventional stops of the truck operators etc. The length of each such truck laybye shall also be indicated.

3.10 Bus bays and bus shelters

The Consultant shall undertake field surveys and identify suitable locations for provision of bus bays and bus shelters on the Project Highway. As far as possible, bus bays shall not be located on horizontal curves, summit of vertical curves and bridges. Good visibility must be ensured. Further, the bus bays should not be too close to major intersections. The length of each such bus bay shall also be indicated.

The Consultant shall also indicate the locations of bus stands/bus stops provided by the concerned State Transport Authorities on the Project Highway.

3.11 Social impact assessment

The Consultant shall undertake social impact assessment due to the improvements proposed on the Project Highway, especially the persons affected due to the Project and requiring resettlement and rehabilitation. The extant policies and guidelines of the government would be kept in view while undertaking the assessment. He shall prepare a plan for involuntary resettlement and land acquisition, which shall include the following:

- (a) Prepare in accordance with guidelines of the Government, a draft Resettlement and Land Acquisition Plan;
- (b) Prepare area specific social assessments to support development of a locally relevant approach to resettlement which provides benefits to people in the Project's area of influence, which include socioeconomic conditions, social service infrastructure, and social institutions and organization, in accordance with the Government policies and guidelines;
- (c) These social assessments should include gender and local ethnic aspects;
- (d) Provide recommendations and action plan for the Concessionaire to undertake, at the detailed design stage, a full census and inventory of lost assets (households, shops and agricultural and other lands, or access to current income-generating activities, including impacts caused by permanent or temporary acquisition) of

affected people and a baseline socioeconomic survey of the affected population. Determine the scope and magnitude of likely resettlement and land acquisition effects, and list likely losses of households, agricultural lands, business and income opportunities, as well as affected communal assets and public buildings;

- (e) In consultation with local stakeholders, government and the Authority, develop an entitlement matrix, on the basis of the consultations, socio-economic surveys, and inventories of losses that will determine the amount of compensation in accordance with the guidelines and policies of the Government;
- (f) Prepare the plans with full stakeholder participation, including the Government and the Authority. Consult with affected persons and community-based organizations to ensure that all affected persons have been fully informed of their entitlements through the consultative processes initiated by the Government and the Authority. Ensure that communities and displaced persons understand the project, its impacts, and the responsibilities of the parties; and
- (g) Analyse and confirm the following aspects that will apply to land acquisition and resettlement in the project area: (i) laws and regulations, including local practices; (ii) budgetary processes for involuntary resettlement and land acquisition; (iii) schedules for these activities that are coordinated with the construction schedule; and (iv) administrative arrangements and requirements.

3.12 Environment impact assessment

- (a) The Consultant shall undertake environment impact assessment of the Project Highway as per provisions of the Applicable Laws on environment protection and identify a package of measures to reduce/eliminate the adverse impact identified during the assessment. An environmental impact assessment report and environmental management plan shall be prepared based on such assessment. The management plan shall include project specific mitigation and monitoring measures for identified impacts as well as management and monitoring plans to address them.
- (b) The Consultant shall also assist the Authority in conducting public hearings and addressing the comments and suggestions received during the EIA process with a view to getting environmental clearance from the competent authority.

3.13 Preliminary designs

The Consultant shall arrive at the preliminary designs of various components of the Project Highway keeping in view the requirements of the Manual and the scope of services described in this TOR. It shall be responsible for the accuracy of the physical details such as alignment, right of way, abutting land use, assets within the right of way including safety devices, utilities, trees, service roads, cross drainage structures, etc. The layout and preliminary designs shall be supplemented with explanatory drawings, statements, charts, notes as necessary.

3.14 Project cost

The Consultant shall work out indicative BOQ of various components and prepare rough cost estimates of the Project Highway with a break up of cost for each component separately. To the construction cost so arrived at, the Consultant may add 25% (twenty five per cent) thereof as a lumpsum provision for physical and price contingencies, interest during construction and other financing costs, pre-construction expenses etc.

3.15 Financial analysis and bid process

3.15.1 Detailed financial analysis is not required to be undertaken by the Consultant. However, the Consultant shall provide the estimated construction costs, operation and maintenance costs, traffic forecast, toll revenues etc. as part of its preliminary financial analysis and appraisal of the Project. The Consultant shall, also provide a preliminary assessment of the financial viability of the Project with a view to estimating the likely IRR over a concession period of 10 (ten) years, 15 (fifteen) years, 20 (twenty) years and 25 (twenty five) years respectively. It shall also provide assistance during the Bid Process for selection of the Concessionaire.

3.15.2 While undertaking the financial analysis and projecting the IRR, the following assumptions shall be adopted:

- (a) Capital cost shall be adopted as per estimates of construction cost to which 25% (twenty five per cent) shall be added for physical and price contingencies, interest during construction, other financing costs etc;
- (b) debt equity ratio may be assumed as 70:30;
- (c) O&M costs may be assumed as per norms of the Authority;
- (d) the concession period may be fixed by reference to the year in which the projected traffic would exceed the design capacity of the Project Highway; and
- (e) growth rate of traffic may be assumed at 5% (five per cent) per annum.

3.15.3 The Consultant shall:

- (a) calculate the NPV and EIRR for the Project. It will undertake sensitivity analysis by identifying the most critical factors and determine their impact on the EIRR, including varying project costs and benefits, implementation period, and combinations of these factors; and
- (b) conduct a risk analysis (using the Monte Carlo method) by considering the possible values for key variables based on records, and their occurrence probability.

3.15.4 If the IRR of the Project, based on the aforesaid calculations is less than 12% (twelve per cent), an effort should be made to reduce the capital costs in consultation with the Authority. This may be done either by omitting/ modifying some of the proposed structures or by phasing them after a period of seven years or more, such that the IRR reaches a minimum of 12% (twelve per cent).

4. DELIVERABLES

The Consultant shall deliver the following deliverables (the "Deliverables") during the course of this Consultancy. The Deliverables shall be so drafted that they could be given to the prospective bidders for guidance in preparation of their bids. Twenty hard copies and two soft copies in CDs of all the final reports, drawings, etc. shall be submitted to the Authority. For draft reports only five hard copies and one soft copy in CD shall be submitted to the Authority. The size of drawings shall be A-3 (maximum).

A. Inception Report

On commencement of the Consultancy, the Consultant shall submit an Inception Report. The Inception Report shall include the Consultant's submissions towards understanding of the RFP and the Work Plan. The Inception Report shall also include the Consultant's proposal regarding the proposed locations of toll plazas and traffic survey stations (refer paras 3.2.1 and 3.8).

Within a period of six weeks of submission of the Inception Report, the Consultant shall submit a Supplementary Inception Report where it must clearly spell out the broad strategy for structuring the project in a manner that would restrict the likely viability gap funding to a level not exceeding 20% (twenty per cent) of the capital cost of the project assuming an IRR of 12% (twelve per cent). In making this assessment, the Consultant shall follow the assumptions specified in paragraph 3.15 above. In particular, the Consultant must make realistic assumptions about the traffic projections and the resulting

revenue streams with a view to making an assessment of the capital cost that can be sustained by such revenues. For this purpose, the Consultant shall undertake a 7 (seven) day classified traffic volume count and a topographic survey to identify geometric improvements, new bridges etc. The project components should be so formulated as to make the project viable.

In determining its aforesaid strategy, the Consultant shall also seek the advice of the Authority. In the event that a viable project does not seem feasible, the Consultant shall not proceed with the Consultancy and the same shall stand terminated. The Consultant shall be entitled to a payment limited to 15% (fifteen per cent) of the Agreement Value upon such termination.

B. Report on Alignment and First Traffic Survey

- (a) The Consultant shall undertake topographic survey of the Project Highway, identify geometric deficiencies and construction of new bridges and other grade separated structures (refer para 3.3.2) and submit a Report on the alignment together with proposed geometric improvements. The Consultant shall finalise the alignment after taking into account the comments of the Authority on the Report on Alignment. The work of preparing cross-sections and Land Plans, etc. shall be undertaken based on the finalised alignment.
- (b) The Consultant shall submit a Report on the first 7-day classified traffic volume count giving an analysis of hourly and daily variations. (Refer para 3.2.2).

C. Land Plan Schedules

- (a) Land Plan schedules for acquisition of additional land where required for widening of road, geometric improvements, new bridges and other grade separated structures, inter-sections, inter-changes, service roads etc. and land required for facilities such as toll plazas, truck laybys, bus bays, etc. (Refer para 3.3.2(i))
- (b) Another plan of the Project Highway showing the existing ROW (along with all the existing assets within the ROW) and encroachments, if any, together with a list of such encroachments along with their brief description (Refer para 3.3.2(h)).
- (c) Land Plan Schedules shall be provided separately for Four-laning and Six-laning respectively. The alignment for Six-laning shall, to the extent possible, follow an eccentric approach to widening of the Project Highway.

D. Utility Relocation Plans

Utility- wise preliminary plans together with approximate costs for shifting/relocation shall be provided for Four-laning. Indicative Plans shall also be provided for Six-laning.

E. Reports on Environment and Social impact assessment

The Consultant shall submit reports on social impact assessment (Refer para 3.11) and environment impact assessment (Refer para 3.12).

F. Report on indicative GAD of Structures

The Consultant shall submit report on indicative GAD of bridges, ROB/RUBs and grade separators (Refer paras 3.2.4, 3.2.5, 3.3.5 and 3.5).

G. Feasibility Report

The Feasibility Report of the Project shall include the following:

(1) *Sets of drawings*

- (a) An Index Plan of the Project Highway
- (b) Plans, L-sections, and typical cross-sections showing the existing features within the ROW (e.g. carriageway, structures, drains, crash barriers, service roads, utilities, adjoining land use, intersecting roads/access roads, road side developments etc.) with the proposed improvements marked thereon (e.g. raising of embankment, widening of embankment, location of median, placement of new carriageway, geometric improvements, widening or reconstruction of structures, new subways/ underpasses/grade separators, service roads, arrangements for merging/diverging, traffic circulation, relocation of utilities, etc.) (Refer para 3.3.2).

(2) *Investigation Reports*

- (a) Report on traffic survey and demand assessment (Refer para 3.2).
- (b) Inventory survey report (Refer para 3.3.3).
- (c) Road and bridge condition survey report (Refer paras 3.3.4 and 3.3.5).
- (d) Soil, geotechnical and drainage report (Refer para 3.3.6).

(3) *Preliminary designs*

Preliminary designs of the Project Highway including service roads, consistent with the existing facility and the additional requirements including:

- (a) Traffic and toll forecasting for 10 (ten), 15 (fifteen), 20 (twenty) and 25 (twenty five) years.
- (b) Preliminary pavement design for new carriageway and strengthening of existing carriageway along with typical cross-sections.
- (c) Options for retention of existing bridges and other structures or their replacement by new structures together with preliminary design. For new bridges, the length from abutment to abutment shall not be less than the length of the existing bridge and foundations need not be above the existing foundations unless soil conditions justify otherwise.
- (d) Preliminary drainage assessment.
- (e) Preliminary layout of inter-sections, grade separators and inter-changes with ramps.

(4) *Preliminary costing*

- (a) Indicative BOQ.
- (b) Preliminary Cost Estimate for construction of Project Highway.
- (c) Total Project Cost (Refer paras 3.14 and 3.15).

(5) *Implementation schedule*

- (a) Construction period.
- (b) Likely delays, if any, on account of land acquisition.

H. Schedules of Concession Agreement

The Consultant shall separately provide Schedules A, B, C, D and H of the Concession Agreement for the Project Highway with all supporting documentation relating to these Schedules. (See Appendix-I of the Manual). Explanation of the specific requirements for the Project Highway is given in para 5 below.

I. Financial analysis

A preliminary financial assessment of the Project indicating the likely IRR for a 10 (ten) year, 15 (fifteen) year, 20 (twenty) year and 25 (twenty five) year concession period respectively (Refer para 3.15).

The Consultant shall, based on the assumptions specified in paragraph 3.15, indicate the likely viability gap funding for the project. In case the viability gap funding projected in the Feasibility Report exceeds the projection in the Inception Report by more than 10% (ten per cent) of the capital costs, a deduction of 10% (ten per cent) of the Agreement Value shall be made from the payment due to the Consultant. Such deduction shall be deemed to be mutually agreed genuine pre-estimated compensation and damages suffered by the Authority on account of inaccurate projections leading to higher costs.

J. Assistance during bid process

The Consultant shall provide the required assistance to the financial consultant and the legal adviser in preparation of bid documents. The Consultant shall also participate in Prebid Conferences and assist in preparation of answers to the Bidders' queries on technical aspects of the Project Highway and Bid Documents.

5. SPECIFIC REQUIREMENTS FOR THE PROJECT HIGHWAY

For preparing Schedules A, B, C, D and H of the Concession Agreement and other specific requirements (refer Appendix-I of the Manual), the Consultant shall:

- (a) Based on the Consultant's assessment of the time period until which Two-laning with paved shoulders of the Project Highway may not be required, the Consultant shall identify and indicate the list of stretches/sections where Two-laning and Two-laning with paved shoulders need to be provided by the Concessionaire (Refer paras 1.14 of Manual).
- (b) Provide a list of stretches where roadway is proposed to be different from that provided in the Manual (Refer para 2.6.1 of Manual).
- (c) Provide a list of stretches of the Project Highway passing through urban limits and indicate the cross-section to be provided for each of these stretches including the requirement of footpaths if any. Also indicate if a bypass is necessary to avoid any specific urban stretch. If the TOR for the consultant obligates him to provide a feasibility report for the bypass, the same shall also be prepared and form part of the Deliverables (Refer para 2.1(ii) and 2.5.2 of Manual).

- (d) Provide a linear Plan showing the land width across various stretches of the Project Highway. This should include details of any additional land being acquired or proposed to be acquired for improvement of geometrics, provision of intersections, grade separators, interchanges, service roads, toll plazas and project facilities. (Refer paras 2.1(v), 2.2.3, 2.3, 2.13, 3.1, 3.2, 3.3, 3.4, 10.2, 10.3, 13.1, 13.4.1, 13.5.1 of Manual). The possibility of undertaking geometric improvements shall be examined and a report on cost-effectiveness of such proposals included.
- (e) Provide a list indicating locations of encroachments on the Project Highway alongwith a brief description thereof.
- (f) Provide a list of stretches where service roads are proposed together with their merging or otherwise at bridge locations. The Consultant shall also indicate the design traffic for determining the pavement composition of the service road if the forecast design traffic is more than one msa (Refer para 2.13 of Manual).
- (g) Provide a list of intersections, grade separators, interchanges, cattle and pedestrian under/over passes together with their locations, broad lay out, length of viaduct openings, and traffic circulation plan (Refer para 2.14.1, 2.14.2, 2.14.3, 3.1, 3.2, 3.3, 3.4 of Manual). The possibility of providing grade separators and interchanges with ramps in the second phase shall be examined and a report on costeffectiveness of such a proposal included.
- (h) Provide a list of stretches identified for raising of embankment (Refer para 4.2.2 of Manual).
- (i) Provide a list of stretches on the Project Highway where:
- (i) cement concrete pavement is to be provided (Refer para 5.1.2 of Manual);
 - (ii) reconstruction is proposed. Specify if pavement is proposed to be of cement concrete in such stretches. (Refer para 5.9.7 of Manual); and
 - (iii) width of paved shoulder proposed is different from 1.5 m (Refer para 5.9.9 of Manual). Specify width of paved shoulders in such stretches.
- (j) Prepare an addendum to Schedule-K of the Concession Agreement indicating the minimum performance and maintenance requirements for cement concrete pavements if these are proposed (Refer para 5.1.2 of Manual).
- (k) Specify overall width of structures more than 60 m in length (Refer para 7.1(ii) of Manual).
- (l) Provide a list of new structures where footpaths need to be provided (Refer para 7.1(iii) of Manual).
- (m) Provide specific recommendations for low-level bridges. Normally all bridges are required to be high-level bridges. However, there may be situations where an existing bridge is in a sound condition but may not be satisfying the requirement of a high-level bridge. Such structures shall be examined with a view to

stipulating whether they need to be upgraded as high level bridges, together with reasons therefor. In such cases, construction of high-level bridges can also be phased out after seven years. (Refer para 7.1(ii) of Manual).

- (n) Provide a list of utility services which are required to be carried over structures (Refer para 7.1(viii) of Manual).
- (o) Provide a list of culverts to be reconstructed and/or widened (Refer para 7.3.1 of Manual).
- (p) Provide a list of bridge structures including existing ROBs/RUBs to be reconstructed and/or widened (Refer para 7.3.2 of Manual). The possibility of postponing reconstruction of any bridge for a period of say 7 to 8 years shall be explored and indicated.
- (q) Specifically bring out the requirements of any special structures for any particular bridge on the Project Highway (Refer para 7.4(iv) of Manual).
- (r) Provide a list of stretches where reinforced earth wall is proposed together with maximum height of earth wall. Where the height of wall proposed is more than 6m, reasons for the same may also be given. (Refer para 7.16.1 of Manual).
- (s) Provide a list of existing bridges where railings on them are proposed to be replaced by crash barriers (Refer para 7.18(iv) of Manual). The Consultant shall check the safety of the structure due to such replacement and provide a report to that effect.
- (t) Provide a list of existing bridges/culverts where parapets/railings are proposed to be repaired or replaced (Refer para 7.18(v) of Manual).
- (u) Provide a list of railway level crossings which need not be replaced with ROB/RUB (Refer para 7.19 of Manual).
- (v) Provide a list of structures under marine environment (Refer para 7.22 of Manual).
- (w) Provide a list of existing bridges/culverts where repairs/strengthening is proposed together with nature and extent of repairs (Refer para 7.23(i) of Manual).
- (x) Indicate specifications for reflecting sheeting for road signs whether High Intensity Grade with encapsulated lens or Microprismatic retro-reflective element material (Refer para 9.3.1. of Manual).
- (y) Indicate proposed location of toll plazas on the Project Highway (Refer paras 10.2 and 10.3 of Manual).
- (z) Provide a list of locations on the Project Highway where overhead traffic signs are proposed together with proposed size (Refer para 11.5.5 of Manual).
- (aa) Provide an estimate of the number of trees to be planted as compensatory afforestation (Refer para 12:1 of Manual).

- (ab) Provide a list of situations/locations where lighting shall be provided and maintained by the Concessionaire on the Project Highway (Refer para 13.3.3 of Manual).
- (ac) Provide a list of locations where truck laybys are proposed on the Project Highway (Refer para 13.4 of Manual).
- (ad) Provide a list of locations where busbays and bus shelters are proposed on the Project Highway (Refer para 13.5 of Manual).
- (ae) Where the Project Highway passes through hills or ghats, provide a list of stretches where climbing lane is proposed for ease of movement of commercial vehicles (Refer para 14.5 of Manual).
- (af) Provide a list of sections/locations where tunnels may be required²⁵ (Refer para 14.8 of Manual).
- (ag) Provide a list of existing retaining walls requiring repairs, strengthening or reconstruction (Refer para 14.10.2 of Manual).
- (ah) Provide a list of drawings that the Authority may require the Concessionaire to provide to the Independent Engineer as per Schedule H of the Concession Agreement (Indicative list at Attachment B of the TOR for reference).
- (ai) Provide utility wise indicative plans for shifting of existing utilities and construction of new utilities along or across the Project Highway in the first stage (see paragraph 4D).

6. TIME AND PAYMENT SCHEDULE

- 6.1 The total duration for preparation of the Feasibility Report and Schedules to the Concession Agreement shall be 18 (eighteen) weeks, excluding the time taken by the Authority in providing the requisite documents or in conveying its comments on the Draft Feasibility Report. The Consultant shall deploy its Key Personnel as per the Deployment of Personnel proposed. Intermittent services will be required beyond the 18th (eighteenth) week and until the end of 52 (fifty two) weeks or two months after the signing of the Concession Agreement, whichever is earlier. The man-days required for the intermittent services shall be provided by the Consultant as per the Agreement.

2
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Chief Engineer
World Bank Projects, Odisha

6.2 Time schedule for important Deliverables (the “Key Dates”) of the Consultancy and the payment schedule linked to the specified Deliverables is given below:

Key Date No.	Description of Deliverables	Week No	Payment
KD1	Inception Report	2	Nil
KD2	Report on Alignment (including proposed geometric improvements) and first traffic survey and supplementary inception report spelling out the broad strategy for structuring the project	8	15%
KD3	Report on Land Plan Schedules and Utility Relocation	12	10%
KD4	Report on Indicative GAD of structures (bridges, grade separators, ROB/RUBs)	13	10%
KD5	Report on Environment and Social Impact Assessment	14	10%
KD6	Draft Feasibility Report and Schedules to the Concession Agreement	16	25%
KD7	Final Feasibility Report	18 ^{\$}	20%
KD8	Completion of Services including assistance during Bid Process	52	10%
	Total		100%

\$ Excludes the time taken by the Authority in providing its comments on Draft Reports. The Consultant shall get one week for submission of the Final Feasibility Report after comments of the Authority are provided.

6.3 The TOR for the Consultant envisages assistance in the process of public hearings, etc. in respect of the Environment Impact Assessment (EIA) of the Project Highway specified in para 3.12. In the event that the process cannot be completed within the period specified herein for completion of Final Feasibility Report, the EIA Report may be completed and submitted to the Authority within an extended period of 6 (six) weeks after submission of the Feasibility Report. A sum equal to 5% (five per cent) of the total payment due shall be withheld and paid to the Consultant upon submission of the EIA Report and environment management plan.

6.4 Mobilization Advance upto 10% (ten per cent) of the total Agreement Value shall be paid on request against Bank Guarantee of a Scheduled Bank. This shall attract 10% (ten per cent) simple interest per annum and shall be adjusted against the first four bills in four equal installments and the accrued interest shall be recovered from the fifth bill.

6.5 10% (ten per cent) of the Agreement Value has been earmarked as Final Payment to be made to the Consultant upon execution of the Concession Agreement. In the event the Concession Agreement does not get executed within one year of the Effective Date, the

Final Payment shall not become due to the Consultant, save and except the costs incurred for meeting its reimbursable expenses during the period after expiry of 18 (eighteen) weeks from the Effective Date, including travel costs and personnel costs, at the agreed rates.

7. MEETINGS

The Authority may review with the Consultant, any or all of the documents and advice forming part of the Consultancy, in meetings and conferences which will be held in [Bhubaneswar] at the Authority’s office. Further, the Consultant may be required to attend meetings and conferences with pre-qualified Bidders or the Selected Bidder. The expenses towards attending such meetings during the period of Consultancy, including travel costs and *per diem*, shall be reimbursed in accordance with the Financial Proposal contained in Form-2 of Appendix-II of the RFP. The days required to be spent in [Bhubaneswar] shall be computed at the rate of 8 man hours a day in case of an outstation Consultant. For a Consultant having its office within the [State of Odisha], the time spent during meetings shall be calculated as per actuals. No travel time shall be payable except in case of an expatriate Consultant who will be entitled to claim actual travel time, subject to a maximum of 10 (ten) man hours for a return journey.

8. CONSULTANCY TEAM

8.1 The Consultant shall form a multi-disciplinary team (the “**Consultancy Team**”) for undertaking this assignment. The following Key Personnel whose experience and responsibilities are briefly described herein would be considered for evaluation of the Technical Proposal. Other expertise such as that required for financial analysis, pavement design, material investigation characterisation, quantity survey, social impact assessment etc. for the Project Highway shall be included in the Team either through the Key Personnel specified below or through other Professional Personnel, as necessary.

(a) Senior Highway Engineer-cum-Team Leader

Educational Qualifications	Graduate in Civil Engineering
Essential Experience	10 years in planning, project preparation and design of highway projects.
Job responsibilities	He will lead, coordinate and supervise the multi-disciplinary team. It will be his responsibility to guide the team in arriving at solutions within the constraints specified in the TOR.
Minimum time required on site	[30 days]



Consultant


Chief Engineer
World Bank Projects, Odisha

(b) Bridge Engineer

Educational Qualifications	Graduate in Civil Engineering
Essential Experience	7 years in analysis of condition of existing bridges and design of major highway bridges, flyovers, road over bridges
Job responsibilities	He will be responsible for suggesting options for retention of existing bridges or their replacement and propose preliminary design solutions under the constraints described in the TOR.
Minimum time required on site	[20 days]

(c) Traffic-cum-Safety Expert

Educational Qualifications	Post Graduate in Traffic and/or Transportation Engineering or Planning
Essential Experience	7 years in traffic surveys and studies, traffic safety facilities, etc. on highway projects.
Job responsibilities	He will be responsible for suggesting the broad layout of intersections, interchanges, grade separators and assessment of traffic forecast on the Project Highway, road safety devices etc.
Minimum time required on site	[20 days]

(d) Surveyor

Educational Qualifications	Graduate in Civil Engineering or Diploma in Civil Engineering or Diploma in Surveying
Essential Experience	7 years experience in surveying on highway projects
Job responsibilities	He will be responsible for quick traverse survey of the alignment, cross section, l-section, strip plan, land-use, etc. of the Project Highway.
Minimum time required on site	[40 days]

(e) Financial Analyst

Educational Qualifications	Post Graduate in Commerce/ Chartered Accountant or equivalent.
Essential Experience	7 years in financial analysis and modeling of infrastructure projects.
Job responsibilities	He will be responsible for financial analysis and modeling of the Project.
Minimum time required on site	[2 days]

(f) Social Expert

Educational Qualifications	Masters/Bachelor in Social Science or equivalent
Essential Experience	7 years in environmental studies
Job responsibilities	He will conduct the social impact assessment of the Project and prepare its mitigation measures
Minimum time required on site	[7 days]

(g) Environmental Expert

Educational Qualifications	Masters/Bachelor in Environmental Science or equivalent
Essential Experience	7 years in environmental studies
Job responsibilities	He will conduct the environmental impact assessment of the Project and prepare its mitigation measures
Minimum time required on site	[7 days]

8.2 The Consultant shall establish a Project Office at a suitable location near the Project Highway for efficient and coordinated performance of its Services. All the Key Personnel shall be deployed at this office during the first 16 (sixteen) weeks as specified in the Manning Schedule forming part of the Agreement. The authorised officials of the Authority may visit the Consultant's Project Office any time during office hours for inspection and interaction with the Consultant's Personnel. It is not expected of the Consultant to carry out the operations from the Head/Home Office. However, he may do so for the remaining consultancy services beyond the first 16 (sixteen) weeks.

8.3 The Consultant shall mobilise and demobilise its Professional Personnel and Support Personnel with the concurrence of the Authority and shall maintain the time sheet/ attendance sheet of the working of all Personnel in the Project Office. These time sheets/ attendance sheets shall be made available to the Authority as and when asked for and a copy of such record shall be submitted to the Authority at the end of each calendar month.

9. REPORTING

9.1 The Consultant will work closely with the Authority. The Authority has established a Working Group (the "WG") to enable conduct of this assignment. A designated Project Director of the Authority will be responsible for the overall coordination and project development. He will play a coordinating role in dissemination of the Consultant's outputs, facilitating discussions, and ensuring required reactions and responses to the Consultant.



Consultant


Chief Engineer
World Bank Projects, Odisha

- 9.2 The Consultant may prepare Issue Papers highlighting issues that could become critical for the timely completion of the Project and that require attention from the Authority.
- 9.3 The Consultant will make a presentation on the inception report for discussion with the WG at a meeting. This will be a working document. The Consultant is required to prepare and submit a monthly report that includes and describes, *inter alia*, general progress to date; data and reports obtained and reviewed, conclusions to date, if any; concerns about availability of, or access to, data, analyses, reports; questions regarding the TOR or any other matters regarding work scope and related issues; and so on. The Consultants' work on the TOR tasks should continue while the report is under consideration and is being discussed.
- 9.4 Regular communication with the WG and the Project Director is required in addition to all key communications. This may take the form of telephone/ teleconferencing, emails, faxes, and occasional meetings.
- 9.5 The Deliverables will be submitted as per schedule provided in this RFP.

10. DATA AND SOFTWARE TO BE MADE AVAILABLE BY THE AUTHORITY

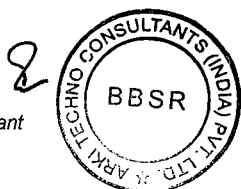
The Authority shall provide to the Consultant the following:

- (a) A copy of the Manual of Specifications and Standards for Two-laning of highways.
- (b) A copy of the Manual of Specifications and Standards for Four-laning of highways.
- (c) A copy of the Model Concession Agreement.
- (d) A copy of the Toll Rules.

Available data as may be required by the Consultant will be provided by the Authority on request. The Nodal Officer designated by the Authority shall facilitate handing over of such information to the Consultant.

11. COMPLETION OF SERVICES

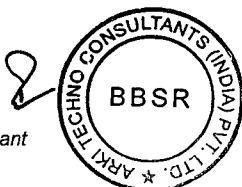
- 11.1 All the study outputs including primary data shall be compiled, classified and submitted by the Consultant to the Authority in soft form apart from the reports indicated in the Deliverables (para 4). The study outputs shall remain the property of the Authority and shall not be used for any purpose other than that intended under these Terms of Reference without the permission of the Authority. The Consultancy shall stand completed on acceptance by the Authority of all the Deliverables of the Consultant and execution of the



Concession Agreement or 52 (fifty two) weeks from the Effective Date, whichever is earlier. The Authority shall issue a certificate to that effect. The Consultancy shall in any case be deemed to be completed upon expiry of [1 (one)] year from the Effective Date, unless extended by mutual consent of the Authority and the Consultant.

- 11.2 10% (ten per cent) of the Agreement Value has been earmarked as lump sum payment to be made to the Consultant upon execution of the Concession Agreement (the “**Lump Sum Payment**”). In consideration of the Lump Sum Payment, the Consultant shall provide such services as may be required by the Authority for concluding the Bid Process and execution of the Concession Agreement. In the event the Concession Agreement does not get executed within one year of the Effective Date, the Consultancy shall stand completed as specified in Clause 11.1 above, but no Lump Sum Payment shall be due to the Consultant, save and except the costs incurred for meeting its expenses during the period after expiry of 18 (eighteen) weeks from the Effective Date, including travel costs and personnel costs, at the agreed rates specified in Annex-3 of the Agreement, which shall be reimbursed to the Consultant as per actuals. For the avoidance of doubt, it is agreed that reimbursement of such costs on travel and personnel shall be due to the Consultant as aforesaid, even if the Concession Agreement is not executed.

Consultant



Page 60


Chief Engineer
World Bank Projects, Odisha

Topographic Survey

1. The field surveys would be sufficiently detailed to meet the following objectives:
 - (i) Finalising the alignment including location of new bridges and other grade separated structures.
 - (ii) Preliminary layout of intersections and grade separators.
 - (iii) Preparation of Land Plans for acquisition of additional land where necessary.
 - (iv) Plans for shifting and relocation of utilities.

2. The field surveys shall be carried out using high precision instruments, i.e. total stations, d-GPS and would cover the following activities:
 - (i) Running a continuous open traverse along the existing road and realignments, wherever required to improve geometrics.
 - (ii) Collection of details for all features such as structures (bridges, culverts, etc.) utilities, existing roads, electric and telephone installations (both O/H as well as underground), huts, buildings, fencing, trees, oil and gas lines, etc. falling within the extent of survey.

3. The width of survey corridor shall be as under:
 - (i) The topographic surveys shall cover sufficient width beyond the centre line of the carriageway considering height of the embankment. The width of the survey corridor shall take into account the existing land width, realignments, service roads, if any, layout of intersections, extent of embankment and cut slopes and the general ground profile.
 - (ii) In case need for bypassing the congested locations is felt and the feasibility study for the bypass is included in the TOR, preliminary survey would be carried out along the possible alignments in order to identify and select the most suitable alignment for the bypass. The final alignment shall be got approved by the Authority. Further surveys shall be carried out along the final alignment.
 - (iii) Where existing roads cross the alignment, the survey shall extend to a minimum of 100 m on either side of the road centre line and shall be for sufficient width to allow improvements, including at grade intersection

4. The important features of the survey conducted and the reference points taken in consideration like d-GPS bench mark, temporary and permanent bench marks, etc. shall be listed in appropriate formats. The proposed ROW shall be demarcated on the ground for determining the extent of land acquisition, tree cutting, utility relocation and R&R by fixation of concrete pillars on both sides of the alignment at a minimum interval of 50m in straight reaches and 25m in curved stretches.

Indicative List of Drawings for Schedule H of the Concession Agreement

1. Drawings of horizontal alignment, vertical profile and cross-sections.
2. Drawings of cross drainage works.
3. Drawings of major intersections, interchanges, grade separators, underpasses and ROBs/RUBs.
4. Drawings of toll plaza layout, toll collection systems and roadway approaching and exiting toll plaza.
5. Drawings of bus-bays and bus shelters with furniture and drainage system.
6. Drawings of truck lay byes with furniture and drainage system.
7. Drawings of road furniture items including traffic signs, pavement markings, safety barriers, etc.
8. Drawings of traffic diversion plans and traffic control measures in construction zones.
9. Drawings of road drainage measures.
10. Drawings of typical details for slope protection measures.
11. Drawings of landscaping and horticulture.
12. Drawings of pedestrian and cattle crossings.
13. Drawings of street lighting.
14. General arrangement of Base camp and Administrative Block.

Proforma-1

ROAD INVENTORY

Date of Survey : _____ Section: km _____ to km _____

Chainage	Type of Terrain	Land Use @	Right of Way(m)	Roadway Width (m)		Carriageway		Shoulder		Average height of Embankment or depth of cutting	Road side drain		Service Roads, if any	Remarks
				Type #	Width (m)	Type # (m)	Width (m)	Width (m)	Exists (F/NF)*		Does not exist**			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
km _____ to														
km _____														

@ Land use, indicate built-up, agriculture, barren, industrial, forest etc.
 # For type of carriageway/shoulder, indicate CC/BT/Metalled/Gravel/Earth
 * F= Functional; NF = Non-functional
 ** If side drain does not exist, put a X mark.
 Remarks: Indicate history of submergence or any other information of significance.
 Indicate sections in built up area, sections requiring raising.

Proforma-2

INVENTORY AND CONDITION SURVEY FOR CULVERTS

Date of Survey: _____ Section: km _____ to km _____

S.No.	Location (chainage)	Type of structure (RCC Box/ Slab/Pipe/ Masonry Arch)	Length (m)	Span arrangement		Width of culvert		Height above			Condition Assessment*			
				Number of Spans	Width of span (m)	Total (m)	Carriage-way (m)	u/s side (m)	d/s side (m)	Box, slab, pipe, arch	Head wall	Bed level	Wing wall	Return wall
1	2	3	4	5	6	7	8	9	10	11	12	13	14	

Parapet / Handrail	Condition Assessment		Whether waterway adequate (Yes/No) reconstruction etc	Remarks
	Recommendation on widening			
15	16	17	18	

- * Distressed requiring reconstruction
- * Not distressed, only widening required
- * No widening or reconstruction required

Remarks : Indicate presence of protection works, scour etc. A detailed note should be furnished separately for each culvert proposed for reconstruction, and/or addition of span (waterway).



Proforma- 3

**INVENTORY OF STRUCTURES
(Bridges and other Structures)**

Date of Survey : _____ Section: km _____ to km _____

Location (Chainage)	Year of Construction	Type of Structure			Type of Bearing	Type of Expansion Joint	Type of Wearing Coat	Whether High level Yes/No	Span or viaduct arrangement		Average vertical clearance** (m)	Width of carriageway between kerbs (m)	
		Super structure	Sub structure	Foundation					Number of Spans	Length of span (m)			
1	2	3	4	5	6	7	8	9	10	11	12	13	14

Width of Footpath (m)	Whether water way adequate (Yes/No)	High flood level (HFL)	Low Water Level (LWL)	Design Discharge (cumecs)	Maximum Design velocity (m/sec)	Protection work		Remarks
						Bed	Approaches	
15	16	17	18	19	20	21	22	23

* face to face of dirt wall
** Below bottom of girder/soffit
Remarks : Indicate any other feature considered important

**Proforma-4
ROAD CONDITION SURVEY**

Date of Survey : _____ Section: km _____ to km _____

Chainage	Visual condition of pavement (Good/Fair/Poor)	Visual condition of shoulders (Good/Fair/Poor)	Visual condition of roadside drains (Good/Fair/Poor)	Visual condition of side slopes and embankment (Good/Fair/Poor)	Length affected with shoulder drop more than 50 mm		Remarks
					LHS (m)	RHS (m)	
1	2	3	4	5	6	7	8
km 0.000 to km 1.000							
km 1.000 to km 2.000							
.....							
.....							

Notes: (1) Information will be given in block of one km each, i.e. from km 0.000 to 1.000 km, 1.000 to 2.000, etc.
(2) Shoulder drop will be counted when it is more than 50 mm in depth.

Proforma-5
BRIDGE CONDITION SURVEY
(Bridges and other Structures)

Date of Survey : _____ Section: km _____ to km _____

Location (chainage)	Type of structure	Flooding history	Bearings	Expansion joints	Wearing coat	Parapets/ Railings/ crash barriers	Foundations	Abutments	Condition of					Remarks*	
									Piers	Super Structure	Approach slabs	Guide bunds	Other protective works		Other items specify
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

* Indicate whether the structure requires widening, reconstruction, repairs and/or rehabilitation, addition of span (waterway)
* A detailed report should be furnished for each structure proposed for reconstruction and /or addition of span (increase in length).


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Chief Engineer
World Bank Projects, Odisha

Deployment of Personnel
(Refer Clause 4.2)



Sl. No.	Designation	Name	Man Days (MD)		Duration (Weeks)																		Total Man Weeks
			At Project Site	Away from Project Site	1																		
					2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
Key Personnel																							
1	Senior Highway Engineer-cum-Team Leader	Pratap Chandra Samal	30	26	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	8
2	Bridge Engineer	Ajit Kumar Sahu	20	36	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	8
3	Traffic-cum-Safety Expert	Ashok Kumar Pattnaik	20	15	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	5
4	Surveyor	Chandan Kumar Dey	40	16	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	8
5	Financial Analyst	Sanjeeva Shivesh	2	12	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	2
6	Social Expert	Alok Kumar Dey	7	14	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	3
7	Environmental Expert	Himansu Sekhar patra	7	14	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	3
TOTAL MAN WEEKS																						37	

Legend:

- Continuous Input
- - - Intermittent Input (as and when required)

Note: 2 man days of each Key Personnel as required for intermittent services beyond 18th week shall be provided by the Consultant

APPENDIX-I
Form-14
Survey and Field Investigations

Sl. No.	Item of Work/Activity	To be carried out / Prepared by		Duration (Weeks)																		
		Name	Designation	1		2		3		4		4.5										
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
1	Traffic Survey	A. K. Pattnaik	Traffic-cum-Safety Expert																			
2	Topographic Survey	Chandan Kumar Dey	Surveyor																			
3	Inventory Survey (Road and Junctions)	P.C.Samal / To be named	Senior Highway Engineer -cum- Team Leader/Highway Engineer																			
4	Inventory Survey (Culverts & Bridges)	Ajit Sahu / To be named	Bridge Engineer/ Jr. Bridge Engineer																			
5	Road Pavement Investigations	P.C.Samal / To be named	Senior Highway Engineer -cum- Team Leader/Pavement-cum-Material Engineer																			
6	Material Investigations	P.C.Samal / To be named	Senior Highway Engineer -cum- Team Leader/Pavement-cum-Material Engineer																			
7	Hydraulic/Hydrological Investigations	Ajit Sahu	Bridge Engineer																			
8	Geotechnical Investigations	Ajit Sahu / To be named	Bridge Engineer / Pavement-cum-Material Engineer																			
9	Environmental and Social Investigations	Himanshu Patra/ Aloke Dey	Environmental Expert / Social Expert																			

Legend:

———— Continuous Input

----- Intermittent Input (as and when required)

Work Plan

Task No.	Description of Activity	Assignment Duration (Months)																	
		Month/Week																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
INCEPTION REPORT																			
101	Mobilization	■	■	■	■														
102	Review of Data and Documents	■	■	■	■														
103	Reconnaissance Survey and Identification of Toll Plaza Locations & Traffic Survey Stations, etc	■	■	■	■														
104	Alignment Options for Bypasses / Realignments	■	■	■	■														
105	Preparation of Quality Assurance Plan	■	■	■	■														
106	Draft Design Standards	■	■	■	■														
107	Consultation with Local People and Stake holders	■	■	■	■														
108	Monthly Progress Reports	■	■	■	■														
109	Inception Report	■	■	■	■														
ALIGNMENT & SUPPLEMENTARY INCEPTION REPORT																			
201	Topographic Survey																		
202	Alignment options																		
203	Identify geometric deficiencies and proposal for improvements.																		
204	Finalization of alignment including location of new bridges and other grade separated structures																		
205	Traffic survey (Classified Traffic Volume Count) for 7days																		
206	Analyzing the traffic data for lane identification																		
207	Identification of Traffic Homogeneous link.																		
208	Social screening of the Project Area																		
209	A preliminary financial assessment of the Project																		
210	Overview of organisation and Activities, Program, and Project Financing and Cost Recovery Mechanisms																		
211	Assessment of Financial Viability in terms of IRR (10,15,20 years)																		
212	Preliminary cost estimate																		
213	Report on Alignment and Supplementary Inception report																		
DRAFT FEASIBILITY REPORT & FINAL FEASIBILITY REPORT																			
Engineering Surveys & Investigation																			
301	Topographic, alignment and land use survey																		
i.	Fixation of TBM, GPS pillars																		
ii.	Auto Level Traversing																		
iii.	Total Station traversing																		
ii.	Detailing																		
i.	Collection of Toposheets																		
ii.	Collection of village maps																		
i.	Design of Alignment																		
ii.	Preparation of plan and profile																		
i.	Preparation of Cross sections																		
ii.	Fixation of boundary pillars at ROW at 50 m intervals																		

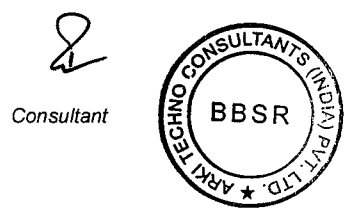
Consultant



Chief Engineer
World Bank Projects, Odisha

Task No.	Description of Activity	Assignment Duration (Months)																	
		Month/Week																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
302	Traffic Surveys and Demand Assessment																		
A.	Classified Traffic Volume Count																		
1	At Toll Plaza location																		
2	At least one in every 20 Km section																		
B	Origin-Destination survey																		
1	One location at project road																		
2	Two locations to ascertain the divertible traffic																		
C	Intersection & Turning movement survey at all major junctions for one day (8:00 AM to 12:00 PM and 16:00PM to 20:00 PM)																		
D.	Pedestrian and Cattle crossing for 2 consecutive days (8:00 AM to 8:00 PM)																		
E	Axle Load survey																		
F	One location at proposed Toll Plaza locations (both ways and not less than 10% of the total traffic)																		
303	Traffic Demand Assessment																		
a	Assuming 5% annual growth rate																		
b	Analysis of past traffic data																		
c	Preparation of traffic demands for 10,15,20 years																		
d	Analyzing the traffic data for lane identification																		
e	Identification of Traffic Homogeneous link.																		
304	Identification of proposals for widening and strengthening of existing road and alignment options for Realignments/Bypasses																		
305	Road inventory survey																		
306	Strip Plans with alternatives																		
307	Preparation of Land Plan Schedules																		
308	Preparation of Utility relocation Plan																		
309	Road Condition (Distress) Survey																		
310	Bridge and Culvert inventory and condition survey																		
311	Calculation of Hydrological data (HFL, LWL, Design discharge, waterways																		
312	Geotechnical Investigations																		
313	Soil, geotechnical, material, hydrology and drainage survey																		
314	Pavement Condition survey																		
a	Pavement composition																		
b	Sub grade soil test - 2 samples for every 5 KMs or where change in soil type																		
c	Lab CBR Tests to be conducted																		
d	BBD test - 1 set of 10 readings in 250m for every 3km of the project highway.																		
e	Suggested DCP test for confirmation of Lab CBR																		
f	Preparation of improvement plan to provide 4 lane divided carriageway.																		
315	Existing level crossings are to be replaced with ROB/RUBS																		
316	GAD of ROB/RUBS to be prepared in consultation with railway authorities																		
317	Identification of requirements of retaining walls, breast walls, etc.																		
318	Preparation of GAD for ROBRUB structures																		
319	Preparation of rough cost estimate																		
320	Proposals for road signs, pavement markings, safety barriers, railings, delineators, boundary stones, Km stones, crash barriers & overhead sign boards.																		
321	Preparation of Typical design of Toll plazas/ Amenities with Indication of additional land requirement																		

Task No.	Description of Activity	Assignment Duration (Months)																		
		Month/Week																		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	4.5
322	Social Impact Assessment a Socio-Economic Profile of the Project Area b Land Acquisition Survey c Census Survey along the project stretch d Socio-economic survey e Other administrative records f Health status of communities g Education status h Skills, occupation and income status i Gender and local ethnic aspects j Existing infrastructure facilities k Key Informal Interviews l Focus group discussion (Gram Sabha /Self Help groups) m Rapid Appraisal survey n Tribal/Cultural associated place o Temple/Mosque/Church etc p Sensitive mitigation plan q Social Impact Assessment (SIA) Report Environmental Impact Assessment a Screening and setting of ToR b Preparation of draft EIA Report to the competitive authority on behalf of OWD c Public hearing d Environmental Impact Assessment (EIA) report including Environmental Management Plan Prepare cost estimate mitigation measures in project cost.																			
323	Environmental Impact Assessment a Screening and setting of ToR b Preparation of draft EIA Report to the competitive authority on behalf of OWD c Public hearing d Environmental Impact Assessment (EIA) report including Environmental Management Plan Prepare cost estimate mitigation measures in project cost. Finalization of Design standards Preparation of Typical design of Toll plazas/ Amenities Preliminary Design of road, pavement, high embankment and culverts Preliminary Designs of all ancillary road works like junctions, service roads, toll plazas, drainage measures Preliminary Designs of Intersection Layouts and Grade Separators Weighing Stations, Parking Areas and rest Areas Traffic safety features. Road furnitures ad road markings Miscellaneous Works Proposals for service roads, junction improvement and wayside amenities Cost Estimates Financial Analysis a Assessment of Financial viability (in terms of IRR (10,15,20 years) b Calculation of NPV and EIRR c Conducting risk analysis																			
324																				
325																				
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Task No.	Description of Activity	Assignment Duration (Months)																	
		Month/Week																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
336	Value Analysis/ Value Engineering																		
337	Draft Feasibility Report																		
338	Submission of Technical schedules A,B,C,D & H of concession agreement																		
339	Final feasibility report																		
340	Project Clearances, etc																		
341	Assistance during Bidding Process #																		
342	Completion of services including Assistance during bid Process #																		

Reports :

- KD1- Inception Report
- KD2- Report on Alignment and supplementary inception report
- KD3- Report on Land Plan Schedules and Utility Relocation
- KD4- Report on Indicative GAD of structures (bridges, grade separators, ROB/RUBs)
- KD5- Report on Environment and Social Impact Assessment
- KD6- Draft Feasibility Report and Schedules to the Concession Agreement
- KD7- Final Feasibility Report
- KD8- Completion of Services including assistance during Bid Process

- The Consultants will provided interim input assistance during bid process until the close of project on upto 62 weeks approx.


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Chief Engineer
World Bank Projects, Odisha

Annex-3

Estimate of Personnel Costs
(Refer Clause 4.2)

ID No.	Position	Name	Manday Rate (Rs.)	Total mandays	Amount (Rs.)
A I. Remuneration for Resident Professional Personnel (including all personal allowances)					
1	Team Leader	Pratap Chandra Samal	3500	56	196000.00
2	Bridge Engineer	Ajit Kumar Sahu	3200	56	179200.00
3	Traffic-cum-Safety Expert	Ashok Kumar Pattnaik	2800	35	98000.00
4	Surveyor	Chandan Kumar Dey	2600	56	145600.00
5	Financial Analyst	Sanjeeva Shivesh	3000	14	42000.00
6	Social Expert	Alok Kumar Dey	2600	21	54600.00
7	Environmental Expert	Himanshu Sekhra Patra	2600	21	54600.00
Total					770000.00
A II. Remuneration for Resident Support Personnel (including all personal allowances)					
1	Highway Engineer	TBN	1500	30	45000.00
2	Quantity Surveyor	TBN	1500	21	31500.00
3	Pavement cum Material Engineer	TBN	1500	30	45000.00
4	Jr. Bridge Engineer	TBN	1500	30	45000.00
5	Jr. Traffic Engineer	TBN	1500	30	45000.00
6	CAD Operator	TBN	1200	30	36000.00
Total					247500.00
B I. Remuneration for Expatriate Personnel (including all personal allowances)					
NR					
Total					1017500.00

Consultant



Page 74

Chief Engineer
World Bank Projects, Odisha

Annex-4

Approved Sub-Consultant(s)
(Refer Clause 4.7.1)

1. Details of the Firm				
Firm's Name, Address and Telephone				
Name and Telephone No. of the Contact Person				
Fields of Expertise				
No. of Years in business in the above Fields				
2. Services that are proposed to be sub contracted.				
3. Person who will lead the Sub- Consultant Name: Designation: Telephone No: Email:				
Details of Firm's previous experience				
Name of Work	Name, address and telephone no. of Client	Total Value of Services Performed	Duration of Services	Date of Completion of Services
1.				
2.				
3.				

(Signature and name of the authorised signatory)


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Chief Engineer
World Bank Projects, Odisha

Annex-5

Cost of Services
(Refer Clause 6.1)

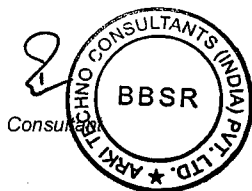
Item No.	Description	Amount (Rs)
A.	RESIDENT PERSONNEL AND LOCAL COSTS	
	i. Remuneration for Resident Professional Personnel (inclusive of all personal allowances)	770000
	ii. Remuneration for Resident Support Personnel (inclusive of all personal allowances)	247500
	iii. Office Rent	60000.00
	iv. Office Consumables like stationery, communication etc.	50000.00
	v. Office Furniture and Equipment (Rental)	30000.00
	vi. Reports and Document Printing	60000.00
	vii. Surveys	600000.00
	viii. Miscellaneous Expenses	100000.00
	Sub-total Resident Personnel and Local Costs (A):	1917500.00
B.	EXPATRIATE PERSONNEL	
	Remuneration for Expatriate Personnel (inclusive of all personal allowances)	0.00
	Subtotal Expatriate Personnel (B):	0.00
	Total of Personnel and Local Costs (A+B):	1917500.00
C.	POST REPORT CONSULTATIONS	
	2 man days each of:	
	Senior Road Engineer -cum-Team Leader	16000.00
	Bridge Engineer	16000.00
	Traffic - cum-Safety Expert	16000.00
	Surveyor	14000.00
	Financial Analyst	20000.00
	Social Expert	16000.00
	Environmental Expert	20000.00
	Subtotal Post Report Consultations (C)	118000.00
D.	SUBTOTAL OF A+B+C	2035500.00



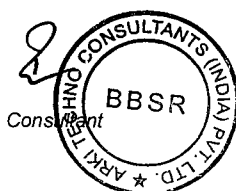
E.	OVERHEAD EXPENSES @ 7 % of (D)	142485.00
F.	SERVICE TAX @12.36%	269198.00
G.	TOTAL (including taxes) (D+E+F) (in Rs.)	2447184.00
	In Indian Rupees in figures in words (Twenty Four lakh Forty Seven Thousand One Hundred Eighty Four only)	
H.	ADDITIONAL COSTS (not included in evaluation)	0.00
	i. Domestic travel from firm's office to the Project Office (restricted to three return economy class air fares for each Personnel) ii. International travel from firm's office to the Project Office (restricted to two return full fare economy class air fares for each Expatriate Personnel) Return journeys from Project Office to Authority's office to attend meetings held by the Authority (provide indicative amount for three return fares)	
	Total of Additional Costs (H)	0.00
I.	TOTAL COST OF THE CONSULTANCY (G+H)	2447184.00
	In Indian Rupees in Figures In Words Twenty Four lakh Forty Seven Thousand One Hundred Eighty Four only	

Note:

1. All costs shall be reimbursed on production of a Statement of Expenses, duly certified by the Authorised Representative. However, no details of expenditures would be sought for overhead expenses, which will be reimbursed in proportion to the total expenses under Item D.
2. The reimbursement of expenses shall be limited to the amounts indicated above.
3. Savings of upto 20% (twenty per cent) under any head of expenditure specified in the summary of Financial Proposal may be reappropriated by the Consultant and added to any other head of expenditure, subject to a ceiling of 10% (ten per cent) in respect of the recipient head of expenditure. Upon Notification of such reappropriation to the Authority, the Financial Proposal shall be deemed to be amended, and payment shall be made accordingly.
4. No escalation on any account will be payable on the above amounts.
5. All other charges not shown here and all insurance premia are considered included in the man day rate/ overhead/ miscellaneous expenses.



6. The Authority may require the Key Personnel to visit the Project/ the Authority's offices for further consultations after their Report has been accepted. The cost (remuneration including personal allowances) of 2 (two) man days of each Key Personnel is included in the Financial Proposal. The Authority may require upto 12 (twelve) extra days of consultation with any or all Key Personnel on payment of additional charges. For any increase as compared to the aforesaid 2 (two) days, payment shall be computed solely on the basis of relevant man day rates specified in the financial proposal. In all cases, return full fare economy class airfare shall be reimbursed in addition, as per actuals.
7. The Authority may require Professional Personnel to visit the Project/the Authority's offices for further consultations or undertake desk work after the report has been accepted. The additional costs on this account shall be paid to the Consultant as per agreed man day rates and economy return airfare as per actuals shall also be reimbursed. However, the total number of additional mandays requisitioned hereunder shall not exceed 120 (one hundred and twenty).
8. All payments shall be made in Indian Rupees and shall be subject to applicable Indian laws withholding taxes if any.
9. For the purposes hereof "**Statement of Expenses**" means a statement of the expenses incurred on each of the heads indicated in the Financial Proposal; provided that in relation to expenses on Personnel, the Statement of Expenses shall be accompanied by the particulars of Personnel and the mandays spent on the Consultancy.
10. Lump Sum Payment shall be made only upon execution of the Concession Agreement with the Concessionaire selected through the Bid Process. No Lump Sum Payment shall be due or payable if the Concession Agreement is not executed within one year from the Effective Date; provided, however, that personnel and travel costs already incurred or due shall be payable.



Annex-6

Payment Schedule
(Refer Clause 6.3)

Key Date No.	Description of Deliverables	Week No	Payment
KD1	Inception Report	2	Nil
KD2	Report on Alignment and first traffic survey and supplementary inception report spelling out the broad strategy for structuring the project	8	15%
KD3	Report on Land Plan Schedules and Utility Relocation	12	10%
KD4	Report on Indicative GAD of structures (bridges, grade separators, ROB/RUBs)	13	10%
KD5	Report on Environment and Social Impact Assessment	14	10%
KD6	Draft Feasibility Report and Schedules to the Concession Agreement	16	25%
KD7	Final Feasibility Report	18	20%
KD8	Completion of Services including assistance during Bid Process	52	10%
	Total		100%

Notes:

1. *The above payments shall be made to the Consultant provided that the payments to be made at any time shall not exceed the amount certified by the Consultant in its Statement of Expenses.*
2. *All Reports shall first be submitted as draft reports for comments of the Authority. The Authority shall provide its comments no later than 3 (three) weeks from the date of receiving a draft report and in case no comments are provided within such 3 (three) weeks, the consultant shall finalise its report. Provided, however, that the Authority may take upto 4 (four) weeks in providing its comments on the Draft Feasibility Report.*
3. *Feasibility Report shall be completed in 18 (eighteen) weeks excluding the time taken by the Authority in providing its comments on the Draft Feasibility Report. The Consultant may take 1 (one) week for submitting its Final Feasibility Report after receipt of comments from the Authority.*
4. *Final payment of 10% (ten per cent) shall be released upon completion of Services in their entirety, including submission of the Environmental Impact Assessment Report.*
5. *Mobilisation Advance upto 10% (ten per cent) of the total Agreement Value shall be paid on request against Bank Guarantee of a Scheduled Bank. This shall attract 10% (ten per cent) simple interest per annum and shall be adjusted against the first 4 (four) bills in four equal installments and the accrued interest will be recovered from the 5th (fifth) bill.*



Bank Guarantee for Performance Security

(Refer Clause 7.1.2)

To

The Governor of Odisha in Works Department
acting through
The Chief Engineer, World Bank Projects, Odisha
O/o Engineer-in-Chief (Civil), Odisha
Nirman Soudha, KEshari Nagar, Unit – V,
Bhubaneswar - 751001

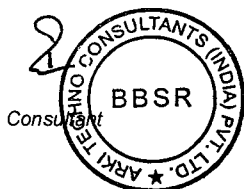
In consideration of The Chief Engineer, World Bank Projects, Odisha acting on behalf of the Governor of Odisha in Works Department (hereinafter referred as the "Authority", which expression shall, unless repugnant to the context or meaning thereof, include its successors, administrators and assigns) having awarded to M/s having its office at (hereinafter referred as the "Consultant" which expression shall, unless repugnant to the context or meaning thereof, include its successors, administrators, executors and assigns), vide the Authority's Agreement no. Dated valued at Rs. (Rupees), (hereinafter referred to as the "Agreement") Consultancy Services for [Two laning of ***** highway], and the Consultant having agreed to furnish a Bank Guarantee amounting to Rs. (Rupees) to the Authority for performance of the said Agreement.

1. We, (hereinafter referred to as the "Bank") at the request of the Consultant do hereby undertake to pay to the Authority an amount not exceeding Rs. (Rupees) against any loss or damage caused to or suffered or would be caused to or suffered by the Authority by reason of any breach by the said Consultant of any of the terms or conditions contained in the said Agreement.

2. We, (indicate the name of the Bank) do hereby undertake to pay the amounts due and payable under this Guarantee without any demur, merely on a demand from the Authority stating that the amount/claimed is due by way of loss or damage caused to or would be caused to or suffered by the Authority by reason of breach by the said Consultant of any of the terms or conditions contained in the said Agreement or by reason of the Consultant's failure to perform the said Agreement. Any such demand made on the bank shall be conclusive as regards the amount due and payable by the Bank under this Guarantee. However, our liability under this Guarantee shall be restricted to an amount not exceeding Rs. (Rupees).

3. We, (indicate the name of Bank) undertake to pay to the Authority any money so demanded notwithstanding any dispute or disputes raised by the Consultant in any suit or proceeding pending before any court or tribunal relating thereto, our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment thereunder and the Consultant shall have no claim against us for making such payment.

4. We, (indicate the name of Bank) further agree that the Guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the Authority under or by virtue of the said Agreement have been fully paid and its claims



satisfied or discharged or till the Authority certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Consultant and accordingly discharges this Guarantee. Unless a demand or claim under this Guarantee is made on us in writing on or before a period of one year from the date of this Guarantee, we shall be discharged from all liability under this Guarantee thereafter.

5. We, (indicate the name of Bank) further agree with the Authority that the Authority shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Agreement or to extend time of performance by the said Consultant from time to time or to postpone for any time or from time to time any of the powers exercisable by the Authority against the said Consultant and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Consultant or for any forbearance, act or omission on the part of the Authority or any indulgence by the Authority to the said Consultant or any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have the effect of so relieving us.

6. This Guarantee will not be discharged due to the change in the constitution of the Bank or the Consultant(s).

7. We, (indicate the name of Bank) lastly undertake not to revoke this Guarantee during its currency except with the previous consent of the Authority in writing.

8. For the avoidance of doubt, the Bank's liability under this Guarantee shall be restricted to Rs. *** crore (Rupees ***** crore) only. The Bank shall be liable to pay the said amount or any part thereof only if the Authority serves a written claim on the Bank in accordance with paragraph 2 hereof, on or before [*** (indicate date falling 180 days after the date of this Guarantee)].

For

Name of Bank:

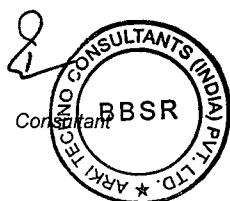
Seal of the Bank:

Dated, the day of, 20

(Signature, name and designation of the authorised signatory)

NOTES:

- (i) The Bank Guarantee should contain the name, designation and code number of the officer(s) signing the Guarantee.
- (ii) The address, telephone no. and other details of the Head Office of the Bank as well as of issuing Branch should be mentioned on the covering letter of issuing Branch.



OFFICE OF THE ENGINEER-IN-CHIEF (CIVIL), ODISHA
NIRMAN SOUDHA, KESHARI NAGAR, UNIT - V, BHUBANESWAR - 751 001

Letter No. PMU - WB - 97 / 2012 - 42836 Dt. 15-12-12

From

Er. Nalini Kanta Pradhan
Chief Engineer, World Bank Projects, Odisha
Tel: +91-674-2396783 / Fax: +91 - 674 -239 0080
Email: pmuosrp@gmail.com

To

ARKITECHNO CONSULTANTS (INDIA) PVT.Ltd,
PLOT# N-3/91, IRC VILLAGE, NAYAPALLI,
BHUBANESWAR - 751015
EMAIL- business@arkitechno.com

Sub: Selection of Technical Consultants for Preparation of Feasibility Study Report of "Bisoi - Rairangpur Road (SH) in the District of Mayurbhanj" in PPP Mode
- **Letter of Award (LOA)**

Ref: This office letter No. 39994 Dt. 23 Nov 2012

Sir,

In inviting a reference to the negotiation held with your authorized representatives on 4th December, 2012 this is to intimate that your proposal for the aforesaid consultancy services for an amount of **Rs.24,47,184/-** (Rupees Twenty four lakhs Forty seven thousand One hundred eighty four only) excluding the Additional Costs specified in your financial proposal amounting to NIL, is hereby accepted. Accordingly in pursuant to Clause 2.27 of the RFP, Letter of Award (LOA) is hereby issued in your favour.

You are requested to sign and return the duplicate copy of this LOA in acknowledgement within 7 (seven) days of the receipt of the LOA and send your authorized representative within 10 days to execute the Contract failing which the Authority may take action as per the stipulations of the RFP.

Yours faithfully,

[Signature]
Chief Engineer

World Bank Projects, Odisha

Memo No.

42837

Dt.

15-12-12

Copy submitted to the **Engineer-in-Chief-cum-Secretary**, Works Department, Government of Odisha for favour of kind information.

[Signature]
Chief Engineer

World Bank Projects, Odisha

Memo No.

42838⁽²⁾ Dt.

[Signature]
Chief Engineer

World Bank Projects, Odisha

Copy to the **Superintending Engineer**, Eastern (R&B) Circle, Balasore / **Executive Engineer**, Rairangpur (R & B) Division, Rairangpur for information and necessary action.

