

BIDDING DOCUMENTS

Procurement of Dredging Works and Services under Output- and Performance-based Contracts

**International Competitive Bidding
(Two-Envelop Bidding Process with e-Procurement)
(Without Prequalification)**

The World Bank
(Based on SBD Roads OPBRC ICB of October 2017)

Bidding Documents for Procurement of Works and Services under OPBC

[Two-Envelope Bidding Process with e-Procurement without Prequalification]

Summary

PART 1 – BIDDING PROCEDURES

Section I: Instructions to Bidders (ITB)

This Section provides relevant information to help Bidders prepare their bids. It is based on a two-envelope e-Procurement Bidding process when prequalification has not taken place. Information is also provided on the submission, opening, and evaluation of bids and on the award of Contracts. **Section I contains provisions that are to be used without modification.**

Section II. Bid Data Sheet (BDS)

This Section consists of provisions that are specific to each procurement and that supplement the information or requirements included in Section I, Instructions to Bidders.

Section III. Evaluation and Qualification Criteria

This Section contains the criteria to determine the lowest evaluated bid and the qualifications of the Bidder to perform the contract.

Section IV: Bidding Forms

This Section contains the forms which are to be completed by the Bidder and submitted as part of his Bid.

Section V. Eligible Countries

This Section contains information regarding eligible countries.

PART 2 – WORKS REQUIREMENTS

Section VI. Specifications for OPBC

This Section contains the Specification, the Drawings, and supplementary information that describe the Services and Works to be procured. The Specifications have to be prepared specifically for each contract to be procured, and shall also include the environmental, social (including sexual exploitation and abuse (SEA) and gender based violence (GBV)), health and safety (ESHS) requirements to be satisfied by the Contractor in designing and executing the Works.

PART 3 – CONDITIONS OF CONTRACT AND CONTRACT FORMS

Section VII. General Conditions (GC)

This Section contains the general clauses to be applied in all contracts. **The text of the clauses in this Section shall not be modified.**

Section VIII. Particular Conditions (PC)

This Section contains clauses specific to each contract. The contents of this Section modify or supplement the General Conditions and shall be prepared by the Employer.

Section IX: Annex to the Particular Conditions - Contract Forms

This Section contains the Letter of Acceptance, Contract Agreement and other relevant forms.

Attachment: Invitation for Bids

Specific Procurement Notice/Invitation for Bids Form for a two-envelope e-Procurement Bidding process without prequalification is provided at the end of the Bidding Documents for information. .

Bidding Document
International Competitive Bidding
(Two-Envelope Bidding Process with e-Procurement)
(Without Prequalification)

**Procurement of Contractor for Providing
Assured Least Available Depth of 2.5 /3.0 m
by Performance Based Dredging &
Bandalling in Mahendrapur – Barh (71
km) of National Waterway – 1 (River
Ganga)**

Issued on: 25th July, 2018

ICB No: IN-IWAI/68539-CW-RFB

Project: *Capacity Augmentation of National Waterway – 1*

Employer: *Inland Waterways Authority of India, ministry of Shipping,
Government of India*

PART 1 – BIDDING PROCEDURES

Section I. Instructions to Bidders

Section I. Instructions to Bidders

(This Section of the Bidding Document ‘Instructions to Bidders’ provides the information necessary for bidders to prepare responsive bids, in accordance with the requirements of the Employer. It also gives information on bid submission, opening and evaluation, and on the award of Contract.

A. General

1. Scope of Bid

1.1 In connection with the Invitation for Bids **indicated in the Bid Data Sheet (BDS)**, the Employer, as **indicated in the BDS**, issues these Bidding Documents for the procurement of Works and Services as listed below for the award of an **Output- and Performance-based Contract (OPBC)**. The Works and Services under the OPBC will cover the Waterways indicated **in the BDS** and will consist of:

(a) **Dredging / Bandalling and Aids to Navigation Works**, when requested **in the BDS** for the sections of Waterways indicated **in the BDS**, consisting of all interventions to be carried by the Contractor in order to bring the Waterways to the specified Service Levels described in the Specifications in Section VI.

1.2 Throughout these Bidding Documents:

- (a) the term “in writing” means communicated in written form and delivered against receipt;
- (b) except where the context requires otherwise, words indicating the singular also include the plural and words indicating the plural also include the singular;
- (c) “day” means calendar day; and
- (d) “ESHS” means environmental, social (including sexual exploitation and abuse (SEA) and gender based violence (GBV)), health and safety

2. Source of Funds

2.1 The Borrower or Recipient (hereinafter called “Borrower”) **indicated in the BDS** has applied for or received financing (hereinafter called “funds”) from the International Bank for Reconstruction and Development or the International Development Association (hereinafter called “the Bank”) toward the cost of the project **named in the BDS**. The

Borrower intends to apply a portion of the funds to eligible payments under the contract(s) for which these Bidding Documents are issued.

- 2.2 Payments by the Bank will be made only at the request of the Borrower and upon approval by the Bank in accordance with the terms and conditions of the financing agreement between the Borrower and the Bank (hereinafter called the Loan Agreement), and will be subject in all respects to the terms and conditions of that Loan Agreement. No party other than the Borrower shall derive any rights from the Loan Agreement or have any claim to the funds. The Loan Agreement prohibits a withdrawal from the loan account for the purpose of any payment to persons or entities, or for any import of equipment, plant, or materials, if such payment or import is prohibited by a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations.

3. Corrupt Practices

- 3.1 The Bank requires that Borrowers (including beneficiaries of Bank loans), as well as Bidders, Suppliers, Contractors, and Consultants under Bank-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts.¹ In pursuance of this policy, the Bank:

(a) defines, for the purposes of this provision, the terms set forth below as follows:

- (i) “corrupt practice”² is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
- (ii) “fraudulent practice”³ is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party

¹ In this context, any action taken by a bidder, supplier, contractor, or a sub-contractor to influence the procurement process or contract execution for undue advantage is improper.

² “Another party” refers to a public official acting in relation to the procurement process or contract execution]. In this context, “public official” includes World Bank staff and employees of other organizations taking or reviewing procurement decisions.

³ A “party” refers to a public official; the terms “benefit” and “obligation” relate to the procurement process or contract execution; and the “act or omission” is intended to influence the procurement process or contract execution.

to obtain a financial or other benefit or to avoid an obligation;

- (iii) “collusive practice”⁴ is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
- (iv) “coercive practice”⁵ is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
- (v) “obstructive practice” is
 - (aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or
 - (bb) acts intended to materially impede the exercise of the Bank’s inspection and audit rights provided for under sub-clause 3.1(e) below.
- (b) will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract in question;
- (c) will cancel the portion of the loan allocated to a contract if it determines at any time that representatives of the Borrower or of a beneficiary of the loan engaged in corrupt, fraudulent, collusive or coercive practices during the procurement or the execution of that contract, without the Borrower having taken timely and appropriate action satisfactory to the Bank to remedy the situation;
- (d) will sanction a firm or individual, including declaring them ineligible, either indefinitely or for a stated period

of time, to be awarded a Bank-financed contract if it at any time determines that they have, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for, or in executing, a Bank-financed contract; and

- (e) will have the right to require that a provision be included in Bidding Documents and in contracts financed by a Bank Loan, requiring bidders, suppliers, contractors and consultants to permit the Bank to inspect their accounts and records and other documents relating to the Bid submission and contract performance and to have them audited by auditors appointed by the Bank.

3.2 Furthermore, Bidders shall be aware of the provision stated in Sub-Clause 15.6 of the Particular Conditions.

4. Eligible Bidders

4.1 A Bidder may be a natural person, private entity, government-owned entity—subject to ITB 4.6—or any combination of such entities supported by a letter of intent to enter into an agreement or under an existing agreement in the form of a joint venture or association (JVA). In the case of a joint venture or association:

- (f) unless otherwise **specified in the BDS**, all partners shall be jointly and severally liable, and
- (g) the JVA shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the partners of the JVA during the bidding process and, in the event the JVA is awarded the Contract, during contract execution.

⁴ “Parties” refers to participants in the procurement process (including public officials) attempting to establish bid prices at artificial, non competitive levels.

⁵ A “party” refers to a participant in the procurement process or contract execution.

- 4.2 A Bidder, and all parties constituting the Bidder, may have the nationality of any country as defined under the *Guidelines: Procurement under IBRD Loans and IDA Credits* (hereinafter referred to as the Guidelines), subject to the restrictions specified in Section V, Eligible Countries. A Bidder shall be deemed to have the nationality of a country if the Bidder is a citizen or is constituted, incorporated, or registered and operates in conformity with the provisions of the laws of that country. This criterion shall also apply to the determination of the nationality of proposed subcontractors or suppliers for any part of the Contract including related Services.
- 4.3 A Bidder shall not have a conflict of interest. All Bidders found to have a conflict of interest shall be disqualified. A Bidder may be considered to have a conflict of interest with one or more parties in this bidding process, if :
- (h) they have controlling partners in common; or
 - (i) they receive or have received any direct or indirect subsidy from any of them; or
 - (j) they have the same legal representative for purposes of this bid; or
 - (k) they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder, or influence the decisions of the Purchaser regarding this bidding process; or
 - (l) a Bidder participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all Bids in which the party is involved. However, this does not limit the inclusion of the same subcontractor in more than one bid; or
 - (m) a Bidder participated as a consultant in the preparation of the design or technical specifications of the works that are the subject of the bid;
 - (n) a Bidder was affiliated with a firm or entity that has been hired (or is proposed to be hired) by the Employer or Borrower as Engineer for the contract.

- 4.4 A Bidder that has been determined to be ineligible by the Bank in relation to the Bank's Guidelines: Procurement under IBRD Loans and IDA Credits, the Bank's Guidelines: Selection and Employment of Consultants by World Bank Borrowers, or the Bank's Anti-Corruption Guidelines on Preventing and Combating Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants, shall not be eligible to be awarded a contract.
- 4.5 Government-owned entities in the Employer's country shall be eligible only if they can establish that they are legally and financially autonomous and operate under commercial law. Also, they shall not be dependent agencies of the Employer.
- 4.6 Bidders shall provide such evidence of their continued eligibility satisfactory to the Employer, as the Employer shall reasonably request.
- 4.7 Firms shall be excluded if:
- (o) as a matter of law or official regulation, the Borrower's country prohibits commercial relations with that country, provided that the Bank is satisfied that such exclusion does not preclude effective competition for the supply of goods or related services required; or
 - (p) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower's country prohibits any import of goods or contracting of Works or services from that country or any payments to persons or entities in that country.
- 4.8 This bidding is open only to prequalified Bidders, unless stated otherwise **in the BDS**.

**5. Eligible
Materials,
Equipment,
and Services**

- 5.1 The materials, equipment and services to be supplied under the Contract and financed by the Bank may have their origin in any country subject to the restrictions specified in Section V, Eligible Countries, and all expenditures under the Contract will be limited to such materials, equipment, and services. At the Employer's request, Bidders may be required to provide evidence of the origin of materials, equipment and services.
- 5.2 For purposes of ITB 5.1 above, "origin" means the place where the materials and equipment are mined, grown, produced or manufactured, and from which the services are provided. Materials and equipment are produced when, through manufacturing, processing, or substantial or major

assembling of components, a commercially recognized product results that is substantially in its basic characteristics or in purpose or utility from its components.

B. Contents of Bidding Document

6. Sections of Bidding Document

- 6.1 The Bidding Documents consist of Parts 1, 2, and 3, which include all the Sections indicated below, and should be read in conjunction with any Addenda issued in accordance with ITB 8.

PART 1 Bidding Procedures

- Section I. Instructions to Bidders (ITB)
- Section II. Bid Data Sheet (BDS)
- Section III. Evaluation Criteria and Qualification Criteria
- Section IV. Bidding Forms
- Section V. Eligible Countries

PART 2 Specifications for Works and Services

- Section VI. Specifications for Works and Services

PART 3 Conditions of Contract and Contract Forms

- Section VII. General Conditions (GC)
- Section VIII. Particular Conditions (PC)
- Section IX. Annex to the Particular Conditions - Contract Forms

- 6.2 The Invitation for Bids issued by the Employer is not part of the Bidding Document.

- 6.3 The Employer is not responsible for the completeness of the Bidding Documents and their addenda, if they were not obtained directly from the source stated by the Employer in the Invitation for Bids.

- 6.4 The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Document. Failure to furnish all information or documentation required by the Bidding Documents may result in the rejection of the bid.

7. Clarification of Bidding Document,

- 7.1 The electronic bidding system **specified in the BDS** provides for online clarifications. A Bidder requiring any clarification

Site Visit, Pre-Bid Meeting

of the Bidding Documents may notify the Employer online or raise its inquiries during the pre-Bid meeting if provided for in accordance with ITB 7.4. Clarifications requested through any other mode shall not be considered by the Employer. The Employer will respond to any request for clarification, provided that such request is received prior to the deadline for submission of bids within a period **specified in the BDS**. Description of clarification sought and the response of the Employer shall be uploaded for information of all Bidders without identifying the source of request for clarification. Should the clarification result in changes to the essential elements of the Bidding Documents, the Employer shall amend the Bidding Documents following the procedure under ITB 8 and ITB 22.2. It is the bidder's responsibility to check on the e-procurement system, for any addendum/ amendment/ corrigendum to the bidding documents.

- 7.2 The Bidder is advised to visit and examine the Site of the Waterways and their surroundings and obtain for itself and on its own responsibility all information that may be necessary for preparing the Bid and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the Bidder's own expense.
- 7.3 The Bidder and any of its personnel or agents will be granted permission by the Employer to visit the Waterways and surrounding lands for the purpose of such visit, but only upon the express condition that the Bidder, its personnel, and agents will release and indemnify the Employer and its personnel and agents from and against all liability in respect thereof, and will be responsible for death or personal injury, loss of or damage to property, and any other loss, damage, costs, and expenses incurred as a result of the inspection.
- 7.4 The Bidder's designated representative is invited to attend a pre-Bid meeting and/or a Site of the Waterways' visit, if **provided for in the BDS**. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.
- 7.5 The Bidder is requested, to submit any questions only through the e-procurement portal, not later than one week before the pre-bid meeting. Clarifications requested through any other mode shall not be considered by the Employer.
- 7.6 Minutes of the pre-Bid meeting, including the text of the questions raised, without identifying the source, and the responses given, together with any responses prepared after

the meeting, shall be uploaded on the e-procurement system for information of all Bidders without identifying the source of request for clarification. Any modification to the bidding documents that may become necessary as a result of the pre-Bid meeting shall be made by the Employer exclusively through the issue of an Addendum following the procedure under ITB 8 and ITB 22.2, and not through the minutes of the pre-bid meeting. Nonattendance at the pre-Bid meeting will not be a cause for disqualification of a Bidder.

8. Amendment of Bidding Document

- 8.1 At any time prior to the deadline for submission of bids, the Employer may amend the Bidding Documents by issuing addenda. The addenda will appear on the e-procurement system under “Latest Corrigendum” and email notification is also automatically sent to those bidders who have started working on the tender, or as otherwise specified in BDS.
- 8.2 Any addendum thus issued shall be part of the Bidding Documents and shall be deemed to have been communicated to all the bidders.
- 8.3 To give prospective Bidders reasonable time in which to take an addendum into account in preparing their Bids, the Employer may, at its discretion, extend the deadline for the submission of bids, pursuant to ITB 22.2.

C. Preparation of Bids

9. Cost of Bidding

- 9.1 The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the Employer shall not be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

10. Language of Bid

- 10.1 The Bid, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Employer, shall be written in the language **specified in the BDS**. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language **specified in the BDS**, in which case, for purposes of interpretation of the Bid, such translation shall govern.

11. Documents comprising the Bid

- 11.1 The Bid shall comprise two Parts, namely the Technical Part and the Financial Part. These two Parts shall be submitted simultaneously.

11.2 The **Technical Part** shall contain the following:

- (a) **Letter of Bid - Technical Part:** prepared in accordance with ITB 12;
- (b) **Bid Security:** in accordance with ITB 19;
- (c) **Alternative Bid - Technical Part:** if permissible in accordance with ITB 13;
- (d) **Authorization:** written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB 20.3, and in accordance with ITB 20.4 in case of a JV;
- (e) **Qualification:** documentary evidence in accordance with ITB 17 establishing the Bidder's qualification to perform the Contract if its Bid is accepted;
- (f) **Conformity:** a technical proposal in accordance with ITB 16;
- (g) **Construction Methodology:** as detailed in Para 1.1 of Section III Evaluation Criteria;
- (h) Contractor Registration certificate (as per IFB); and
- (i) any other document required **in the BDS**.

11.3 The **Financial Part** shall contain the following:

- (a) **Letter of Bid – Financial Part:** prepared in accordance with ITB 12 and ITB 14;
- (b) **Completed schedules, including priced Bill of Quantities:** completed online in accordance with ITB 12 and ITB 14;
- (c) **Alternative Bid - Financial Part;** if permissible in accordance with ITB 13, the Financial Part of any Alternative Bid;
- (d) any other document **required in the BDS**.

11.4 The Technical Part shall not include any financial information related to the Bid price. Where material financial information related to the Bid price is contained in the Technical Part, the Bid shall be declared non-responsive.

11.5 In addition to the requirements under ITB 11.2, Bids submitted by a JV shall include a copy of the Joint Venture Agreement

entered into by all partners. Alternatively, a letter of intent to execute a Joint Venture Agreement in the event of a successful Bid shall be signed by all partners and submitted with the Bid, together with a copy of the proposed Agreement.

- 11.6 The Bidder shall furnish in the Letter of Bid – Financial Part information on commissions and gratuities, if any, paid or to be paid to agents or any other party relating to this Bid.

12. Process of Bid Preparation and Submission

- 12.1. The Letter of Bid – Technical Part, Letter of Bid – Financial Part and Schedules including Bill of Quantities shall be prepared using the relevant forms furnished in Section IV, Bidding Forms. The forms must be completed without any alterations to the text, and no substitutes shall be accepted except as provided under ITB 20.5. All blank spaces shall be filled in with the information requested.

- 12.2. Entire Bid including the Letter of Bid – Technical Part, Letter of Bid – Financial Part and filled-up Schedules including Bill of Quantities shall be submitted online on e-procurement system specified in ITB 7.1. Details and process of online submission of the bid and relevant documents are given in the website mentioned above. Scanned copies of documents listed in clauses 11 and 12.3 should also be uploaded on this website.

- 12.3. Submission of Original Documents: The bidders are required to separately submit (i) original payment documents towards the cost of bid document and registration on e-procurement website (if not previously registered) (as per IFB); (ii) original bid security in approved form; and (iii) original affidavit regarding correctness of information furnished with bid document, with the office specified in the BDS, before deadline for submission of Bids, either by registered/speed post/courier or by hand, failing which such bids will be declared non-responsive and will not be opened. Hard copy of rest of the bid or any other document are not to be submitted.

13. Alternative Bids

- 13.1 **Unless otherwise indicated in the BDS**, alternative bids shall not be considered.
- 13.2 When alternative times for reaching the required Service Levels or for the completion of Rehabilitation or Improvement Works are explicitly invited, a statement to that

effect **will be included in the BDS**, as will the method of evaluating different times for completion.

13.3 Except as provided under ITB 13.4 below, Bidders wishing to offer technical alternatives to the requirements of the bidding document must first price the Employer's design as described in the bidding document and shall further provide all information necessary for a complete evaluation of the alternative by the Employer, including drawings, design calculations, technical specifications, breakdown of prices, and proposed construction methodology and other relevant details. Only the technical alternatives, if any, of the lowest evaluated Bidder conforming to the basic technical requirements shall be considered by the Employer.

13.4 When specified in the BDS, Bidders are permitted to submit alternative technical solutions for specified parts of the Rehabilitation and/or Improvement Works, and such parts **will be identified in the BDS**, as will the method for their evaluating, and described in Section VI, Work's Requirements.

14. Bid Prices and Discounts

14.1 The prices and discounts quoted by the Bidder in the Letter of Bid and in the Bills of Quantities shall conform to the requirements specified below.

14.2 The Bidder shall fill in rates and prices for all items of the Works and Services described in the Bills of Quantities. Items against which no rate or price is entered by the Bidder will not be paid for by the Employer when executed and shall be deemed covered by the rates for other items and prices in the Bills of Quantities.

14.3 The price to be quoted in the Letter of Bid, in accordance with ITB 12.1, shall be the total price of the Bid, excluding any discounts offered.

14.4 The Bidder shall quote any unconditional discounts and the methodology for their application in the Letter of Bid, in accordance with ITB 12.1.

14.5 Unless otherwise provided in the BDS and the Contract, the rates and prices quoted by the Bidder are subject to adjustment during the performance of the Contract in accordance with the provisions of the Conditions of Contract. In such a case, the Bidder shall furnish the indices and weightings for the price adjustment formulae in the Schedule

of Adjustment Data and the Employer may require the Bidder to justify its proposed indices and weightings.

- 14.6 If so indicated in ITB 1.1, bids are being invited for individual lots (contracts) or for any combination of lots (packages). Bidders wishing to offer any price reduction for the award of more than one Contract shall specify in their bid the price reductions applicable to each package, or alternatively, to individual Contracts within the package. Price reductions or discounts shall be submitted in accordance with ITB 14.4, provided the bids for all lots (contracts) are submitted and opened at the same time.
- 14.7 All duties, taxes, and other levies payable by the Contractor under the Contract, or for any other cause, as of the date 28 days prior to the deadline for submission of bids, shall be included in the rates and prices and the total Bid Price submitted by the Bidder.

**15. Currencies
of Bid and
Payment**

- 15.1 The currency(cies) of the bid shall be **as specified in the BDS.**
- 15.2 Bidders may be required by the Employer to justify, to the Employer's satisfaction, their local and foreign currency requirements, and to substantiate that the amounts included in the unit rates and prices and shown in the Summary of Payment Currency Schedule, in which case a detailed breakdown of the foreign currency requirements shall be provided by Bidders.

**16. Documents
Comprising the
Technical
Proposal**

- 16.1 The Bidder shall furnish a Technical Proposal including a statement of work methods, equipment, personnel, schedule and any other information as stipulated in Section IV, in sufficient detail to demonstrate the adequacy of the Bidders' proposal to meet the requirements of Section VI, Specifications.

**17. Documents
Establishing the
Qualifications
of the Bidder**

- 17.1 To establish its qualifications to perform the Contract in accordance with Section III, Evaluation and Qualification Criteria, the Bidder shall provide the information requested in the corresponding information sheets included in Section IV, Bidding Forms.
- 17.2 Domestic Bidders, individually or in joint ventures, applying for eligibility for domestic preference shall supply all information required to satisfy the criteria for eligibility as described in ITB 33.

**18. Period of
Validity of Bids**

- 18.1 Bids shall remain valid for the period **specified in the BDS** after the bid submission deadline date prescribed by the Employer. A bid valid for a shorter period shall be rejected by the Employer as non responsive.
- 18.2 In exceptional circumstances, prior to the expiration of the bid validity period, the Employer may request Bidders to extend the period of validity of their bids. The request and the responses shall be made in writing. If a bid security is requested in accordance with ITB 19, it shall also be extended for twenty-eight (28) days beyond the deadline of the extended validity period. A Bidder may refuse the request without forfeiting its bid security. A Bidder granting the request shall not be required or permitted to modify its bid, except as provided in ITB 18.3.
- 18.3 In the case of fixed price contracts, if the award is delayed by a period exceeding fifty-six (56) days beyond the expiry of the initial bid validity, the Contract price shall be adjusted by a factor specified in the request for extension. Bid evaluation shall be based on the Contract Price without taking into consideration the above correction.

19. Bid Security

- 19.1 **Unless otherwise specified in the BDS**, the Bidder shall furnish as part of its bid, a bid security in original form and in the amount and currency **specified in the BDS**.
- 19.2 The bid security shall be a demand guarantee at the Bidder's option, in any of the following forms:
- (q) an unconditional bank guarantee;
 - (r) an irrevocable letter of credit;
 - (s) a cashier's or certified check; or
 - (t) another security indicated **in the BDS**,

from a reputable source from an eligible country. If the bid security furnished by the Bidder is in the form of a bond issued by an insurance or bonding institution located outside the Employer's Country, it shall have a correspondent financial institution located in the Employer's Country to make it enforceable. The bid security shall be submitted either using the Bid Security Form included in Section IV, Bidding Forms, in the case of a bank guarantee, or in another substantially similar format approved by the Employer prior to bid submission. In either case, the form must include the complete name of the Bidder. The bid security shall be valid

for twenty-eight (28) days beyond the original validity period of the bid, or beyond any period of extension if requested under ITB 18.2.

- 19.3 Any bid not accompanied by an enforceable and compliant bid security, if one is required in accordance with ITB 19.1, shall be rejected by the Employer as non responsive.
- 19.4 The bid security of unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder's furnishing of the performance security and if required in the BDS, the Environmental, Social, Health and Safety (ESHS) Performance Security pursuant to ITB 41.
- 19.5 The bid security of the successful Bidder shall be returned as promptly as possible once the successful Bidder has signed the Contract and furnished the required performance security, and if required in the BDS, the Environmental, Social, Health and Safety (ESHS) Performance Security.
- 19.6 The bid security may be forfeited:
- (u) if a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Letter of Bid Form, except as provided in ITB 18.2 or
 - (v) if the successful Bidder fails to:
 - (i) sign the Contract in accordance with ITB 40; or
 - (ii) furnish a performance security and if required in the BDS, the Environmental, Social, Health and Safety (ESHS) Performance Security, in accordance with ITB 41.
- 19.7 The bid security of a JVA shall be in the name of the JVA that submits the bid. If the JVA has not been legally constituted at the time of bidding, the Bid Security shall be in the names of all future partners as named in the letter of intent referred to in ITB 4.1.
- 19.8 If a bid security is **not required in the BDS**, and
- (a) if a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Letter of Bid Form, except as provided in ITB 18.2, or
 - (b) if the successful Bidder fails to:

- (i) sign the Contract in accordance with ITB 40; or
- (ii) furnish a performance security and if required in the BDS, the Environmental, Social, Health and Safety (ESHS) Performance Security, in accordance with ITB 41;

the Borrower may, **if provided for in the BDS**, declare the Bidder ineligible to be awarded a contract by the Borrower for a period of time **as stated in the BDS**.

20. Format and Signing of Bid

- 20.1 The Bidder shall prepare the Bid as per details given in ITB 11 and ITB 21.
- 20.2 The bid shall be signed by a person duly authorized to sign on behalf of the Bidder. The authorization shall consist of a written confirmation **as specified in the BDS** and shall be uploaded along with the bid.
- 20.3 In case the Bidder is a JV, the Bid shall be signed by an authorized representative of the JV on behalf of the JV, and so as to be legally binding on all the partners as evidenced by a power of attorney signed by their legally authorized representatives. Documents establishing authority to sign the bid on behalf of the JV shall be uploaded along with the bid.
- 20.4 Corrections if any in the bid can be carried out by editing the information before electronic submission on e-procurement portal.

D. Online Submission and Opening of Bids

21. Preparation of Bids

- 21.1 Bids, both Technical and Financial Parts, shall be submitted online on the e-procurement system specified in BDS 7.1. Detailed guidelines for viewing bids and submission of online bids are given on the website. The Invitation for Bids under this Project is published on this website. Any citizen or prospective bidder can logon to this website and view the Invitation for Bids and can view the details of works for which bids are invited. A prospective bidder can submit its bid online; however, the bidder is required to have enrolment/registration in the website, and should have valid Digital Signature Certificate (DSC) in the form of smart card/e-token obtained from any certifying agency authorised by the Government of India (for class of DSC **specified in BDS**). The bidder should register in the website using the relevant option available. Then the Digital Signature registration has to be done with the e-token, after logging into the website. The bidder can then login the website through

the secured login by entering the password of the e-token & the user id/ password chosen during registration. After getting the bid schedules, the Bidder should go through them carefully and submit the specified documents, along with the bid, otherwise the bid will be rejected.

21.2 The completed bid comprising of documents indicated in ITB 12, should be uploaded on the e-procurement portal along with scanned copies of requisite certificates as are mentioned in different sections in the bidding documents and scanned copy of the bid security.

21.3 All the documents are required to be signed digitally by the bidder. After electronic online bid submission, the system generates a unique bid identification number which is time stamped as per server time. This shall be treated as acknowledgement of bid submission.

21.4 Physical, e-mail, Telex, Cable or Facsimile bids will be rejected as non-responsive.

22. Deadline for Submission of Bids

22.1 Bids must be uploaded online no later than the date and time **specified in the BDS.**

22.2 The Employer may, at its discretion, extend the deadline for the submission of bids by amending the bidding documents in accordance with ITB 8, in which case all rights and obligations of the Employer and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.

23. Late Bids

23.1 The electronic bidding system would not allow any late submission of bids after due date & time as per server time.

24. Withdrawal, Substitution, and Modification of Bids

24.1 A Bidder may modify its bid by using appropriate option for bid modification on the e-procurement portal, before the deadline for submission of bids. For this the bidder need not make any additional payment towards the cost of bid document. For bid modification and consequential re-submission, the bidder is not required to withdraw the bid submitted earlier. The last modified bid submitted by the bidder within the bid submission time shall be considered as the bid. For this purpose, modification/withdrawal by other means will not be accepted. In online system of bid submission, the modification and consequential re-submission of bids is allowed any number of times. A bidder may withdraw its bid by using appropriate option for bid withdrawal, before the deadline for submission of bids,

however, if the bid is withdrawn, re-submission of the bid is not allowed (or allowed if **specified in BDS**).

- 24.2 Bids requested to be withdrawn in accordance with ITB Sub-Clause 24.1 shall not be opened.
- 24.3 No bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Letter of Bid Form – Technical Part and repeated in the Letter of Bid Form - Financial Part, or any extension thereof.

E. Public Opening of Technical Parts of Bids

25. Public Opening of Technical Parts of Bids

- 25.1 The Employer shall publicly open Technical Parts of all bids received by the deadline at the date, time and place **specified in the BDS** in the presence of Bidders' designated representatives and anyone who chooses to attend, and this could also be viewed by the bidders online. The Financial Parts of the bids shall remain unopened in the e-procurement system, until the subsequent public opening, following the evaluation of the Technical Parts of the Bids. In all cases, original documents submitted as specified in ITB 12.3 shall be first scrutinized, and Bids that do not comply with the provisions of ITB 12.3 will be declared non-responsive and will not be opened. The bidder's names and such other details as the Employer may consider appropriate, will be notified online at the time of bid opening of the Technical Part of the bids.

In the event of the specified date of the bid opening being declared a holiday for the Employer, the bids shall be opened at the same time and venue on the next working day

- 25.2 The electronic summary of the bid opening will be generated and uploaded online. The Employer will also prepare minutes of the Bid opening, including the information disclosed such as (a) the name of the Bidder; (b) presence or absence of a Bid Security; and (c) if applicable, any Alternative Bid - Technical Part, and upload the same for viewing online.
- 25.3 Only Technical Parts of Bids, and Alternative Bids – Technical Parts if permitted in ITB 13, that are opened at Bid opening shall be considered further for evaluation.

F. Evaluation of Bids – General Provisions

26. Confidentiality

- 26.1 Information relating to the evaluation of Bids and recommendation of contract award, shall not be disclosed to Bidders or any other persons not officially concerned with such process until information on Contract award is communicated to all Bidders.
- 26.2 Any attempt by a Bidder to influence the Employer in the evaluation of the Bids or Contract award decisions may result in the rejection of its Bid.
- 26.3 Notwithstanding ITB 26.2, from the time of Bid opening to the time of Contract award, if any Bidder wishes to contact the Employer on any matter related to the Bidding process, it should do so in writing.

27. Clarification of Bids

- 27.1 To assist in the examination, evaluation, and comparison of the bids, and qualification of the Bidders, the Employer may, at its discretion, ask any Bidder for a clarification of its bid. Any clarification submitted by a Bidder that is not in response to a request by the Employer shall not be considered. The Employer's request for clarification and the response shall be in writing. No change in the prices or substance of the bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the bids, in accordance with ITB 31.
- 27.2 If a Bidder does not provide clarifications of its bid by the date and time set in the Contracting Agency's request for clarification, its bid may be rejected.

28. Deviations, Reservations, and Omissions

- 28.1 During the evaluation of bids, the following definitions apply:
- (a) "Deviation" is a departure from the requirements specified in the Bidding Document;
 - (b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Document; and
 - (c) "Omission" is the failure to submit part or all of the information or documentation required in the Bidding Document.

29. Nonmaterial Nonconformities

- 29.1 Provided that a Bid is substantially responsive, the Employer may waive any nonconformities in the Bid that do not constitute a material deviation, reservation or omission.

29.2 Provided that a Bid is substantially responsive, the Employer may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities in the Bid related to documentation requirements. Requesting information or documentation on such nonconformities shall not be related to any aspect of the price of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.

29.3 Provided that a Bid is substantially responsive, the *Employer* shall rectify nonmaterial nonconformities related to the Bid Price. To this effect, the Bid Price shall be adjusted, for comparison purposes only, to reflect the price of a missing or non-conforming item or component in the manner **specified in the BDS**.

G. Evaluation of Technical Parts of Bids

30. Evaluation of Technical Parts

30.1 In evaluating the Technical Parts of each Bid, the Employer shall use the criteria and methodologies listed in this ITB, and Section III, Evaluation and Qualification Criteria. No other evaluation criteria or methodologies shall be permitted.

31. Determination of Responsiveness

31.1 The Employer's determination of a Bid's responsiveness is to be based on the contents of the Bid itself, as defined in ITB 11.

31.2 A substantially responsive Bid is one that meets the requirements of the bidding documents without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that;

(a) if accepted, would:

(i) affect in any substantial way the scope, quality, or performance of the Works specified in the Contract; or

(ii) limit in any substantial way, inconsistent with the bidding documents, the Employer's rights or the Bidder's obligations under the proposed Contract; or

(b) if rectified, would unfairly affect the competitive position of other Bidders presenting substantially responsive Bids.

31.3 The Employer shall examine the technical aspects of the Bid submitted in accordance with ITB 16, Technical Proposal,

in particular, to confirm that all requirements of Section VI, Specifications have been met without any material deviation, or reservation.

- 31.4 If a Bid is not substantially responsive to the requirements of the bidding documents, it shall be rejected by the *Employer* and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.

32. Qualification of the Bidder

- 32.1 The Employer shall determine to its satisfaction whether the eligible Bidders that have submitted substantially responsive Bid - Technical Parts meet the qualifying criteria specified in Section III, Evaluation and Qualification Criteria.
- 32.2 The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB 17. The determination shall not take into consideration the qualifications of other firms such as the Bidder's subsidiaries, parent entities, affiliates, subcontractors (other than Specialized Subcontractors if permitted in the bidding documents), or any other firm different from the Bidder.
- 32.3 If a Bidder does not meet the qualifying criteria specified in Section III, Evaluation and Qualification Criteria, its Bid shall be rejected by the Employer and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.
- 32.4 Only Bids that are both substantially responsive to the bidding documents, and meet all Qualification Criteria shall have the Financial Parts of their Bids opened at the second public opening.

33. Subcontractors

- 33.1 Unless otherwise stated **in the BDS**, the Employer does not intend to execute any specific elements of the Works by subcontractors selected in advance by the Employer.
- 33.2 Bidders may propose subcontracting up to the percentage of total value of contracts or the volume of works as specified **in the BDS**. Subcontractors proposed by the Bidder shall be fully qualified for their parts of the Works.
- 33.3 The subcontractor's qualifications shall not be used by the Bidder to qualify for the Works unless their specialized parts of the Works were previously designated by the Employer **in the BDS** as can be met by subcontractors referred to hereafter as 'Specialized Subcontractors', in which case, the

qualifications of the Specialized Subcontractors proposed by the Bidder may be added to the qualifications of the Bidder.

H. Public Opening of Financial Parts of Bids

34. Public Opening of Financial Parts

- 34.1 Following the completion of the evaluation of the Technical Parts of the Bids, and the Bank has issued its no objection (if applicable), the Employer shall notify in writing those Bidders whose Bids were considered non-responsive to the bidding documents or failed to meet the Qualification Criteria, advising them of the following information:
- (a) The grounds on which their Technical Part of Bid failed to meet the requirements of the bidding documents;
 - (b) their Financial Part of the Bid shall not be opened; and
 - (c) notify them of the date, time and location for online public opening of the Financial Parts of the Bids.
- 34.2 The Employer shall, simultaneously, notify in writing those Bidders whose Technical Parts have been evaluated as substantially responsive to the bidding documents and met the Qualification Criteria, advising them of the following information:
- (a) their Bid has been evaluated as substantially responsive to the bidding documents and met the Qualification Criteria;
 - (b) their Financial Part of Bid will be opened at the public opening of Financial Parts;
 - (c) notify them of the date, time and location of the online public opening of the Financial Parts of the Bids, as **specified in the BDS**.
- 34.3 The opening date should allow Bidders sufficient time to make arrangements for attending the opening. Financial Parts of the bids shall not be opened earlier than seven (7) days from the communication of technical evaluation results to the bidders. The Financial Part of the Bid shall be opened online publicly in the presence of Bidders' designated representatives and anyone who chooses to attend, and this could also be viewed by the bidders online. The bidder's names, the Bid prices per lot (contract) if applicable, the total amount of each bid, including any discounts and Alternative Bid – Financial Part, and such other details as the Employer

may consider appropriate will be notified online by the Employer at the time of bid opening.

In the event of the specified date of bid opening being declared a holiday for the Employer, the bids will be opened at the appointed time and location on the next working day.

- 34.4 The electronic summary of the bid opening will be generated and uploaded online. The Employer will also prepare minutes of the Bid opening, including the information disclosed and upload the same for viewing online. Only Financial Part of Bids, Financial Parts of Alternative Bids and discounts that are opened and read out at Bid opening shall be considered further for evaluation.

I. Evaluation of Financial Parts of Bids

35. Evaluation of Financial Parts

- 35.1 The Employer shall use the criteria and methodologies listed in this Clause. No other evaluation criteria or methodologies shall be permitted.
- 35.2 To evaluate the Financial Part of the Bid, the Employer shall consider the following:
- (a) the Bid price, excluding Provisional Sums and the provision, if any, for contingencies in the Summary Bill of Quantities, but including Daywork items, where priced competitively;
 - (b) price adjustment for correction of arithmetic errors in accordance with ITB 36.1- Not Used;
 - (c) price adjustment due to discounts offered in accordance with ITB 14.4;
 - (d) converting the amount resulting from applying (a) to (c) above, if relevant, to a single currency in accordance with ITB 37; and
 - (e) price adjustment due to quantifiable nonmaterial nonconformities in accordance with ITB 29.3;
 - (f) Net Present Value (NPV) of the five year's prices for Maintenance Services quoted in the Priced Bill of Quantities for Maintenance Services, by discounting these prices to the Date of Commencement of Services, assuming only for the purpose of the evaluation that the prices are payable at the end of the respective years. For

the purpose of determining the NPV, discount factor **specified in the BDS** shall be applicable; and

- (g) the additional evaluation factors indicated in Section III, Evaluation and Qualification Criteria.
- 35.3 The estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the period of execution of the Contract, shall not be taken into account in Bid evaluation.
- 35.4 If these Bidding documents allow Bidders to quote separate prices for different lots (contracts), and the award to a single Bidder of multiple lots (contracts), the methodology to determine the lowest evaluated cost of the lot (contract) combinations, including any discounts offered in the Letter of Bid Form – Financial Part, is specified in Section III, Evaluation and Qualification Criteria.
- 35.5 If the bid, which results in the lowest Evaluated Bid Price, is seriously unbalanced or front loaded in the opinion of the Employer, the Employer may require the Bidder to produce detailed price analyses for any or all items of the Bill of Quantities, to demonstrate the internal consistency of those prices with the construction methods and schedule proposed. After evaluation of the price analyses, taking into consideration the schedule of estimated Contract payments, the Employer may require that the amount of the performance security be increased at the expense of the Bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful Bidder under the Contract.
- 35.6 The price of the Development Dredging and Improvement Works included in each Bid shall not be higher than the threshold indicated **in the BDS**. If the Bidder estimates that its costs for the Development Dredging and Improvement Works are higher than the threshold indicated in the BDS, it shall include the portion above the threshold in its price for the Maintenance Services. If the bid which results in the lowest Evaluated Bid Price is above the threshold indicated in the BDS for the Development Dredging and Improvement Works, the Employer may reject the Bid.
- 36. Correction of Arithmetical Errors**
- 36.1 The e-procurement system automatically calculates the total amount from unit rates and quantities, and the system also automatically populates the amount in words from the amount in figures, and therefore there is no scope of discrepancy and need for arithmetic correction.

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| 37. Conversion to Single Currency | 37.1 For evaluation and comparison purposes, the currency(ies) of the Bid shall be converted into a single currency as specified in the BDS. |
| 38. Margin of Preference | 38.1 A margin of preference for domestic Bidders shall not apply. |
| 39. Comparison of Financial Parts | <p>39.1 The Employer shall compare all substantially responsive bids to determine the lowest evaluated bid, in accordance with ITB 35.2.</p> <p>39.2 After application of the criteria established in ITB 35.1 to ITB 35.6, the Evaluated Bid Price for comparison of Bids will be:</p> <ul style="list-style-type: none"> (a) the NPV value of the lump-sum price offered by the Bidder for the Maintenance Services; plus (b) the total price of the priced Bill of Quantities for the Development Dredging Works, if the bidding documents require prices for this type of works; plus (c) the total price of the priced Bill of Quantities for the Improvement Works, if the bidding documents require prices for this type of works; plus (d) the total price of the priced Bill of Quantities for the Emergency Works; plus (e) The total price of the priced Bill of Quantities for the Mobilization/ Demobilization, Set-up and Establishment (including ESHS). |
| 40. Employer's Right to Accept Any Bid, and to Reject Any or All Bids | 40.1 The Employer reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to Bidders. In case of annulment, all documents submitted and specifically, bid securities, shall be promptly returned to the Bidders. |

J. Award of Contract

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| 41. Award Criteria | 41.1 The Employer shall award the Contract to the Bidder whose offer has been determined to be the lowest evaluated bid and is substantially responsive to the Bidding Document, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily. |
| 42. Notification of Award | 42.1 Prior to the expiration of the Bid Validity Period, the Employer shall notify the successful Bidder, in writing, that its Bid has been accepted. The notification of award (hereinafter and in the Conditions of Contract and Contract |

Forms called the “Letter of Acceptance”) shall specify the sum that the Employer will pay the Contractor in consideration of the execution and completion of the Works (hereinafter and in the Conditions of Contract and Contract Forms called “the Contract Price”) and the requirement for the Contractor to remedy any defects therein as prescribed by the Contract. At the same time, the Employer shall also notify all other Bidders of the results of the bidding and shall publish in *UNDB online* the results identifying the bid and lot numbers and the following information: (i) name of each Bidder who submitted a Bid; (ii) bid prices as read out at Bid Opening; (iii) name and evaluated prices of each Bid that was evaluated (for bidders whose Financial Parts of Bids were opened); (iv) name of bidders whose bids were rejected and the reasons for their rejection; and (v) name of the winning Bidder, and the final total contract price, as well as the duration and summary scope of the contract awarded.

42.2 Until a formal contract is prepared and executed, the notification of award shall constitute a binding Contract.

42.3 The Employer shall promptly respond in writing to any unsuccessful Bidder who, after notification of award in accordance with ITB 42.1, requests in writing the grounds on which its tender was not selected.

43. Signing of Contract 43.1 Promptly after notification, the Employer shall send the successful Bidder the Contract Agreement.

43.2 Within twenty-eight (28) days of receipt of the Contract Agreement, the successful Bidder shall sign, date, and return it to the Employer along with (a) the performance security in accordance with ITB Clause 44; and (b) if the successful bidder is a JV, the JV agreement duly signed by all the partners, if it had submitted only a letter of intent to execute the JV agreement.

44. Performance Security 44.1 Within twenty-eight (28) days of the receipt of notification of award from the Employer, the successful Bidder shall furnish the Performance Security and if required **in the BDS**, the Environmental, Social, Health and Safety (ESHS) Performance Security, in accordance with the Conditions of Contract, subject to ITB 35.5, using for that purpose the Performance Security and ESHS Performance Security Forms included in Section IX, Annex to the Particular Conditions - Contract Forms, or another form acceptable to the Employer. A foreign institution providing a Performance Security or ESHS Performance Security shall have a correspondent financial institution located in the Employer’s

Country. The performance security and if required in the BDS the ESHS performance security, of a Joint Venture shall be in the name of the Joint Venture specifying the names of all partners.

- 44.2 Failure of the successful Bidder to submit the above-mentioned Performance Security and, if required in the BDS, the Environmental, Social, Health and Safety (ESHS) Performance Security, or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security. In that event the Employer may award the Contract to the next lowest evaluated Bidder whose offer is substantially responsive and is determined by the Employer to be qualified to perform the Contract satisfactorily.

Section II. Bid Data Sheet

The following specific data for the Works and Services to be procured shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB) as well as E-Procurement Annexure to ITB. Whenever there is a conflict, the provisions herein shall prevail over those in ITB as well as E-Procurement Annexure to ITB.

ITB Clause Reference	Bid Data
A. Introduction	
ITB 1.1	The number of the Invitation for Bids is : <i>IN-IWAI/68539-IFB</i>
ITB 1.1	The Employer is: <i>Inland Waterways Authority of India, Ministry of Shipping, Government of India</i>
ITB 1.1	The name of the ICB is: <i>Procurement of Contractor for Providing Assured Least Available Depth of 2.5 /3.0 m by Performance Based Dredging & Bandalling in Mahendrapur – Barh (71 km) of National Waterway – 1 (River Ganga) (Detailed Scope of Work is provided in Annex A)</i> The identification number of the ICB is: <i>IN-IWAI/68539-CW-RFB</i>
ITB 1.1	The Waterway is: National Waterway – 1 (River Ganga)
ITB 1.1	Dredging / Bandalling and Aids to Navigation Works are required. The section(s) of the Waterways(s) subject to Dredging / Bandalling and Aids to Navigation Works is: Mahendrapur – Barh Stretch
ITB 2.1	The Borrower is: Government of India
ITB 2.1	The name of the Project is: <i>Capacity Augmentation of national Waterway – 1 (Jal Marg Vikas)</i>
ITB 3.2	In ITB 3.2 replace the words ‘Sub-Clause 15.6 ’ with ‘Sub-Clause 59.2’
ITB 4.1 (a)	Replace ITB 4.1 (a) with the following: “all partners of the joint venture shall be jointly and severally liable for the execution of the entire Contract in accordance with the Contract terms, and a statement to this effect shall be included in the authorization mentioned under (d) above, as well as in the bid and in the Agreement [in case of a successful bid]“

ITB 4.1	<p>Add at the end of ITB 4.1 the following:</p> <ul style="list-style-type: none"> (c) the joint venture agreement should indicate precisely the role of all partners of JV in respect of planning, design, construction equipment, utilities, key personnel, carrying out of the Works, performance of the Services, and financing of the project etc. All partners of JV should have active participation in the execution during the currency of the contract. This should not be varied/modified subsequently without prior approval of the Employer; (d) one of the partners shall be nominated as the Representative, and this authorization shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the partners; (e) the Representative shall be authorized to incur liabilities and receive instructions for and on behalf of any and all partners of the joint venture and the entire execution of the contract, including payment, shall be done exclusively with the Representative; (f) In order for a Joint Venture to qualify, each of its partners must meet the criteria listed in Section III and all partners together must meet the qualification in full. Failure to comply with this requirement will result in rejection of the joint venture's bid; and (g) In the event of any default by any partner/(s) of Joint Venture, the other partners shall accept the liability and execute the contract in full. (h) Unless specified in the BDS, there is no limit on the number of members in a JV.
ITB 4.1	Maximum number of members in the JV shall be: 3
ITB 4.3 (i)	<p>In ITB 4.3(i) replace the word 'Engineer' with 'Project Manager or Supervision Consultant'.</p> <p>Throughout this document 'Project Manager' may also mean and include 'Supervision Consultant', if so appointed by the Employer.</p> <p><i>[Note: the term 'Supervision Consultant' may be modified to the nomenclature used for the Consultant appointed by the Employer for providing these services.]</i></p>
ITB 4.4	A list of debarred firms and individuals is available on the Bank's external website: http://www.worldbank.org/debarr .
ITB 4.8	This Bidding is open to all interested Bidders.

ITB 5.2	In ITB 5.2 replace the words ‘substantially in its basic characteristics’ with ‘substantially different in its basic characteristics’.
B. Bidding Documents	
ITB 6.3	<p>Replace ITB 6.3 with the following:</p> <p>“Unless obtained directly from the Employer, the Employer is not responsible for the completeness of the bidding document, responses to requests for clarification, the minutes of the pre-Bid meeting (if any), or Addenda to the bidding document in accordance with ITB 8. In case of any contradiction, documents obtained directly from the Employer shall prevail”</p>
ITB 7.1	<p>Electronic – Procurement System</p> <p>The Employer shall use the following electronic-procurement system to manage this Bidding process:</p> <p>https://eprocure.gov.in/eprocure/app</p> <p>Requests for clarification should be received by the Employer no later than: 21 days prior to the deadline for submission of bids.</p>
ITB 7.4	<p>A Pre-Bid meeting will take place at the following date, time and place:</p> <p>Date: 06th August, 2018</p> <p>Time: <u>1500 hrs IST</u></p> <p>Place: <u>Inland Waterways Authority of India (IWAI)</u></p>
C. Preparation of Bids	
ITB 10.1	<p>The language of the bid is: English</p> <p>All correspondence exchange shall be in English language.</p> <p>Language for translation of supporting documents and printed literature is English.</p>
ITB 11.2 (i)	<p>The Bidder shall submit the following additional documents in its Bid: <i>[list any additional document not already listed in ITB 11.2 that must be submitted with the Bid. The list of additional documents should include the following:]</i></p> <p style="padding-left: 40px;">(a) <i>Dredging Management Plan – Methodology</i></p> <p style="padding-left: 80px;"><i>Detailed methodology to indicate how various activities will be carried out to achieve the performance parameters laid down in Appendix A to the contract – Description of the Services.</i></p>

	<p>(w) <i>Detailed Dredger deployment plan with respect to:</i></p> <ul style="list-style-type: none"> • <i>Dredging Management Plan – Methodology (including disposal of dredged material)</i> • <i>No. of dredgers to be deployed at various point of time along with dredging capacities and manpower.</i> • <i>Frequency of bathymetric survey alongwith details of equipment and manpower to be deployed by them to meet the LAD requirements in the concerned stretch.</i> <p>(c) <i>List of major items of equipment proposed to carry out the contracted services using the format provided in Section IV - Bidding Forms</i></p> <p>(d) <i>To establish its qualifications to perform the contract(s) in accordance with Section III, Qualification Criteria and Requirements, the Bidder shall provide the information requested in the corresponding Information Sheets included in Section IV, Bidding Forms.</i></p> <p>(e) <i>Bidder to indicate whether they are presenting</i> <i>Single Entity Bid or</i> <i>Joint Venture Bid</i> <i>In the event of Joint Venture Bid or sub-contracting details of the Joint Venture Partner or the sub-contractor likely to be engaged to be identified & proposed in the Bid along with their credentials like (Experience, Financials & Profile) –</i></p> <p><i>Each of the JV member will be required to furnish legally enforceable JV Operating Agreement along with its Techno-commercial Bid holding themselves jointly & severally responsible and liable to IWAI to perform all contractual obligations, valid for entire period of Contract.</i></p> <p><i>As per the format enclosed in the bidding documents.</i></p> <p><i>Further,</i></p> <ul style="list-style-type: none"> • <i>No change in the composition of the JV without the written consents of the Employer after submission of Bid shall be allowed.</i> • <i>The leader should maintain at least 51% share in the JV at all the time during the period of contract</i> • <i>The Technical Member of the JV should meet at least 25% of the financial requirement.</i> <p>(f) <i>Wherever an Bidding Form requires an Bidder to state a monetary amount (for qualification purposes), Bidders should indicate the USD equivalent using the rate of exchange determined as follows:</i></p>
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	<p><i>For construction turnover or financial data required for each year - Exchange rate prevailing on the last day of the respective calendar year (in which the amounts for that year is to be converted) was originally established.</i></p> <p><i>Value of single contract - Exchange rate prevailing on the date of the contract.</i></p> <p><i>Exchange rates shall be taken from the publicly available source as Source of exchange rate: Exchange rates of RBI (Reserve Bank of India)</i></p> <ul style="list-style-type: none"> • <i>Date: as prevailing on the last date of bid submission</i> • <i>Any error in determining the exchange rates in the Bidding may be corrected by the Employer.</i> <p>Currency chosen for the purpose of conversion to a common currency: INR or USD</p> <p>Code of Conduct (ESHS)</p> <p>The Bidder shall submit its Code of Conduct that will apply to its employees and subcontractors, to ensure compliance with its Environmental, Social, Health and Safety (ESHS) obligations under the contract. <i>[Note: Complete and include the risks to be addressed by the Code in accordance with Section VI-Works' Requirements, e.g. Risks associated with: labor influx, spread of communicable diseases, sexual harassment, gender based violence, sexual exploitation and abuse, illicit behavior and crime, and maintaining a safe environment etc.]</i></p> <p>In addition, the Bidder shall detail how this Code of Conduct will be implemented. This will include: how it will be introduced into conditions of employment/engagement, what training will be provided, how it will be monitored and how the Contractor proposes to deal with any breaches.</p> <p>The Contractor shall be required to implement the agreed Code of Conduct upon contract award.</p> <p>Management Strategies and Implementation Plans (MSIP) to manage the (ESHS) risks</p> <p>The Bidder shall submit Management Strategies and Implementation Plans (MSIP) to manage the following key Environmental, Social, Health and Safety (ESHS) risks.</p> <p>The Bidder is required to assess which of the following risks are applicable for this contract and accordingly submit the MSIP along with the bid.</p>
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	<ul style="list-style-type: none"> • [e.g. <i>Traffic Management Plan to ensure safety of local communities from construction traffic</i>]; • [e.g. <i>Water Resource Protection Plan to prevent contamination of drinking water, Swamp Protection Plan, Dredged Material Disposal Plan, Biological Environment Plan</i>]; • [e.g. <i>Boundary Marking and Protection Strategy for mobilization and construction to prevent offsite adverse impacts</i>]; • [e.g. <i>Strategy for obtaining Consents/Permits prior to the start of relevant works such as opening a quarry or borrow pit</i>]; • [e.g. <i>Gender based violence and sexual exploitation and abuse (GBV/SEA) prevention and response action plan.</i>] <p>The Contractor shall be required to submit for approval, and subsequently implement, the Contractor's Environment and Social Management Plan (C-ESMP), in accordance with the Particular Conditions of Contract Sub-Clause 10.1, that includes the agreed Management Strategies and Implementation Plans described here.</p> <p><i>[Note: The extent and scope of these requirements should reflect the significant ESHS risks or requirements set out in Section VI as advised by the Environmental/Social specialist/s. The key risks to be addressed by the Bidder should be identified by Environmental/Social specialist/s, for example, from the Environmental and Social Impact Assessment (ESIA), Environmental and Social Management Plan (ESMP), Resettlement Action Plan (RAP), and/or Consent Conditions (regulatory authority conditions attached to any permits or approvals for the project), up to a maximum of four. The risks may arise during mobilization, construction, development dredging, improvement, or maintenance services and may include construction traffic impacts on the community, pollution of drinking water, depositing on private land and impacts on rare species etc. The management strategies and/or implementation plans to address these could include, as appropriate: mobilization strategy, strategy for obtaining consents/permits, traffic management plan, water resource protection plan, bio-diversity protection plan and a strategy for marking and respecting work site boundaries etc.]</i></p>
ITB 11.3 (d)	The Bidder shall submit the following additional documents in its Bid: <i>Nil</i>
ITB 12	<p>Note for Bidders: Bidders have to submit the bids on the e-procurement portal along with the relevant required documents. For this purpose, the bidders shall fill up online, the forms that are available for online filling on the e-procurement portal. The rest of the forms shall be download by the bidders and filled up. The filled-up pages shall then be scanned and uploaded on the e-procurement portal along with the scanned copies of the supporting documents.</p>

ITB 12.3	<p>For submission of original documents, the Employer's address is:</p> <p>Attention: Vice Chairman & Project Director (JMVP)</p> <p>Street Address: A-13,</p> <p>Floor/ Room number: Sector-1,</p> <p>City: Noida, Gautam Buddha Nagar</p> <p>PIN/Postal Code: 201301</p> <p>Country: INDIA</p>
ITB 13.2 and ITB 13.4	<p>In ITB 13.2 and ITB 13.4 replace the word 'Rehabilitation' with 'Restoration'.</p>
ITB 14.1, 14.3 and 14.4	<p>In ITB 14.1, ITB 14.3 and ITB 14.4 replace the words "Letter of Bid" with 'Letter of Bid – Financial Part'.</p>
ITB 14.8	<p>Add the following as sub-clause 14.8</p> <p>"14.8 Tax/duty exemptions: Bidders may like to ascertain availability of tax/duty exemption benefits available in India to the contracts financed under World Bank loan/credits. They are solely responsible for obtaining such benefits which they have considered in their bid and in case of failure to receive such benefits for reasons whatsoever, the Employer will not compensate the bidder (contractor). The bidder shall furnish along with his bid a declaration to this effect in the Declaration Format provided in Section IV of the bidding document.</p> <p>Where the bidder has quoted taking into account such benefits, it must give all information required for issue of certificates in terms of the Government of India's relevant notifications along with the bid as per form stipulated in section IV. In case the bidder has not provided the required information or has indicated to be furnished later on in the Declaration Format, the same shall be construed that the goods/ construction equipment/ dredging equipment for which certificate is required is Nil.</p> <p>To the extent the Employer determines the quantity indicated therein are reasonable keeping in view the quantities in bill of quantities, construction program and methodology, the certificates will be issued within 60 days of signing of the contract and no subsequent changes will be permitted. In case of materials pertaining to Variation items and quantities, the certificate shall be issued only on request from the contractor when in need and duly certified by the Project Manager.</p> <p>No certificate will be issued for items where no quantity/capacity of equipment is indicated in the statement.</p>

	<p>If the bidder has considered the tax/duty exemption for materials/ construction equipment/ dredging equipment to be bought for the work, the bidder shall confirm and certify that the Employer will not be required to undertake any responsibilities of the Government of India Scheme or the said exemptions being available during the contract execution, except issuing the required certificate. The bids which do not conform to the above provisions or any condition by the bidder which makes the bid subject to availability of tax/duty exemption for materials/construction equipment/ dredging equipment or compensation on withdrawal of any variations to the said exemptions will be treated as non-responsive and rejected.</p> <p>Any delay in procurement of the construction equipment/ dredging equipment/ machinery/goods as a result of the above shall not be a cause for granting any extension of time.</p>
ITB 15.1	<p>The currency(ies) of the bid shall be in accordance with Alternative s:_____B_____ as described below:</p> <p>Alternative B: (Bidders allowed to quote in local and foreign currencies):</p> <p>(a) The unit rates and prices shall be quoted by the Bidder in the Bill of Quantities separately in the following currencies:</p> <p>(i) for those inputs to the Works that the Bidder expects to supply from within the Employer's country, in Indian Rupees, and further referred to as "the local currency"; and</p> <p>(ii) for those inputs to the Works that the Bidder expects to supply from outside the Employer's country (referred to as "the foreign currency requirements"), in up to any three foreign currencies.</p>
ITB 16.1	In ITB 16.1 insert the words 'in the Technical Part of the Bid,' between the words 'technical proposal' and 'including'.
ITB 17.2	In ITB 17.2 replace the referred 'ITB 33.1' with 'ITB 38.1'.
ITB 17.2	Not Applicable.
ITB 18.1	The bid validity period shall be 180 days.
ITB 18.2	In ITB 18.2 replace the words 'twenty-eight days (28)' with 'forty-five days (45)'.
Itb 18.3	In ITB 18.3 replace the words 'the Contract price shall be adjusted by a factor specified in the request for extension' with 'the Contract price shall be adjusted by the factor specified in the BDS'

ITB 18.3	Not Applicable
ITB 19.1	In ITB 19.1 insert the words ‘part of the Technical’ between the words ‘furnish as’ and ‘part of its Bid’
ITB 19.1	<p><i>[Note: using this Two-envelope Bidding process requires including Bid Security in the Bid - Technical Part.]</i></p> <p>A bid security shall be required.</p> <p>If a bid security shall be required, the amount and currency of the bid security shall be: <u>INR 2.35 Crores or USD 361,000.00</u></p> <p>Bid security shall not be in the form of a Bid Bond.</p> <p><u>Bank details are as given below:</u></p> <p><u>Advising Bank: Syndicate Bank</u></p> <p><u>Bank Account no.: 87782140000890</u></p> <p><u>Name of beneficiary: IWAI – JMVP Fund</u></p> <p><u>Branch name: Sector 18, NOIDA (Morna)</u></p> <p><u>Address: Sector 18, NOIDA (Morna) - 201301</u></p> <p><u>IFSC Code: SYNB0008778</u></p>
ITB 19.2	<p>Replace the ITB 19.2 last paragraph with the following:</p> <p>“from a reputable source from an eligible country. If the bid security furnished by the bidder is issued by an institution / bank located outside the Employer’s Country, the issuing institution / bank shall have a correspondent financial institution / bank located in the Employer’s Country to make it enforceable. The Bid Security shall be submitted either using the Bid Security Form included in Section IV, Bidding Forms, in the case of a bank guarantee, or in another substantially similar format approved by the Employer prior to Bid submission. In either case, the form must include the complete name of the Bidder. The Bid Security shall be valid for forty-five (45) days beyond the original validity period of the Bid, or beyond any period of extension if requested under ITB 18.2.”</p>
ITB 19.2 (c)	<p>Replace the existing ITB Sub-clause 19.2 (c) with the following:</p> <p>“19.2(c) a cashier’s or certified check or demand draft: or</p>
ITB 19.2 (d)	Other types of acceptable securities: <i>None</i>

ITB 19.4	In ITB 19.4 replace the referred clause 'ITB 41' with 'ITB 44'.
ITB 19.6 (a)	In ITB 19.6 (a) replace the words 'Letter of Bid Form' with 'Letter of Bid – Form Technical Part and repeated in the Letter of Bid Form - Financial Part'.
ITB 19.6 (b)	In ITB 19.6(b)(i) replace the referred clause 'ITB 40' with 'ITB 43' In ITB 19.6(b)(ii) replace the referred clause 'ITB 41' with 'ITB 44'
ITB 19.8	In ITB 19.8 (a) replace words 'Letter of Bid' with 'Letters of Bid'. In ITB 19.8 (b) replace the referred clause 'ITB 40' with 'ITB 43'; and replace the referred clause 'ITB 41' with 'ITB 44'
ITB 20.2	The written confirmation of authorization to sign on behalf of the Bidder shall consist of: <i>(a) 'Legally valid Power of Attorney to demonstrate the authority of the signatory to sign the Bid along with Board Resolution, if applicable'; and</i> <i>(b) 'Power of Attorney signed by legally authorized signatories of all the members along with respective Board Resolutions, if applicable', in the case of Bids submitted by an existing or intended JV.</i>
D. Online Submission and Opening of Bids	
ITB 21.1	Class of DSC required is: Class II
ITB 22.1	The deadline for uploading the bids is: Date: 06 th September, 2018 Time: 1500 hrs IST
ITB 24.1	Re-submission of the bid is not allowed, if withdrawn.
E. Public Opening of Technical Parts of Bids	
ITB 25.1	The online bid opening shall take place at: <i>Inland Waterways Authority of India</i> Street Address: <u>A-13,</u> Floor/Room number: <u>Sector-1,</u> City : <u>Noida, GautamBuddha Nagar</u> Country: <u>India</u> Date: <u>06th September, 2018</u> Time: <u>1530 hrs IST</u>
F. Evaluation of Bids – General Provisions	
ITB 27.1	In ITB 27.1 replace the referred clause 'ITB 31' with 'ITB 36'
ITB 29.3	The adjustment shall be based on the highest price of the item or component as quoted in other substantially responsive Bids, subject to a maximum of the estimated price of the item. If the price of the item or component cannot

	be derived from the price of other substantially responsive Bids, the Employer shall use its best estimate.
G. Evaluation of Technical Parts of Bid	
ITB 33.1	At this time the Employer <i>does not intend</i> to execute certain specific parts of the Works by subcontractors selected in advance.
ITB 33.2	<p>Contractor's proposed subcontracting: Maximum percentage of subcontracting permitted is: <i>25% of the total contract amount.</i></p> <p>Bidders planning to subcontract more than 10% of total volume of work shall specify, in the Letter of Bid, the activity (ies) or parts of the Works to be subcontracted along with complete details of the subcontractors and their qualification and experience. The qualification and experience of the subcontractors must meet the minimum criteria for the relevant work to be subcontracted failing which such sub-contractors will not be permitted to participate.</p> <p><i>[Note-Work should not be split into small parts and sub-contracted].</i></p>
ITB 33.3	N/A
H. Public Opening of Financial Parts of Bids	
ITB 34.2 (c)	<p>Following the completion of the evaluation of the Technical Parts of the Bids, the Employer will notify all Bidders of the location, date and time of the online public opening of Financial Parts. <i>[Note: Financial Parts of the bids shall not be opened earlier than seven (7) days from the communication of technical evaluation results to the bidders]</i></p> <p>In addition to the above the Employer shall publish a notice of the public opening of the Financial Parts of the Bid on its website www.iwai.nic.in</p>
I. Evaluation of Financial Parts of Bids	
ITB 35.2 (f)	Discount factor to be used for calculation of NPV shall be 10% per year
ITB 35.6	<i>The corresponding clause in ITB stands deleted</i>
ITB 37.1	<p>The currency that shall be used for Bid evaluation and comparison purposes to convert at the selling exchange rate all Bid prices expressed in various currencies into a single currency is: INR</p> <p>The source of exchange rate shall be: Market exchange rates established by the Reserve Bank of India.</p> <p>The date for the exchange rate shall be: the deadline for submission of bids.</p>

	<p>The currency(ies) of the Bid shall be converted into a single currency in accordance with the procedure under Alternative B that follows:</p> <p><i>Alternative B: Bidders quote in local and foreign currencies</i></p> <p>The Employer will convert the amounts in various currencies in which the Bid Price, corrected pursuant to ITB 36, is payable (excluding Provisional Sums but including Daywork where priced competitively) to the single currency identified above at the rates established for similar transactions by the authority specified and on the date stipulated above.</p>
J. Award of Contract	
ITB 42.1	<p>The Contract Award Notice shall also be published on the e-portal or on a National website (GoI website http://tenders.gov.in or GoI Central Public Procurement Portal https://eprocure.gov.in/cppp/) or on the Employer's website with free access if available, or in at least one newspaper of national circulation in the Employer's Country, or in the official gazette.</p>
ITB 44.1 and 44.2	<p>The successful Bidder shall be required to submit an Environmental, Social, Health and Safety (ESHS) Performance Security.</p> <p><i>[Note: throughout this bidding document, the term 'performance security', unless the context clearly indicates otherwise means and includes both 'the performance security and the ESHS performance security' to be submitted by the successful bidder in the amounts specified in GC/ PC 53.3]</i></p>

Section III. Evaluation and Qualification Criteria

This Section contains all the criteria that the Employer shall use to evaluate bids and qualify Bidders. No other factors, methods or criteria shall be used. The Bidder shall provide all the information requested in the forms included in Section IV, Bidding Forms.

Wherever a Bidder is required to state a monetary amount, Bidders should indicate the USD equivalent using the rate of exchange determined as follows:

- For annual turnover or financial data required for each year - Exchange rate prevailing on the last day of the respective calendar year (in which the amounts for that year is to be converted) was originally established.
- Value of single contract - Exchange rate prevailing on the date of the contract.

Exchange rates shall be taken from the publicly available source identified in the ITB 37.1. Any error in determining the exchange rates in the Bid may be corrected by the Employer.

In line with the two-envelope bidding process, this section includes Evaluation and Qualification Criteria:

- (A.1) Technical Part; and**
- (B.2) Financial Part.**

A.1. Technical Part

1.1 Adequacy of Technical Proposal

Evaluation of the Bidder's Technical Proposal will include

(i) an assessment of the Bidder's technical capacity to mobilize key equipment and personnel for the contract consistent with its proposal regarding work methods, scheduling, and material sourcing in sufficient detail and fully in accordance with the requirements stipulated in Section VI, Works' and Services' Requirements.

For this purpose the Bidder shall submit:

Dredging Methodology:

(a) **Statement of Work Methods:** This shall demonstrate the Bidders capability to define, optimize and carry out on a timely basis the physical interventions detailed in the scope of requirements specified in Section VI. The work methodology shall include a mobilization and execution plan that details how the bidder will, **on the waterway (Mahendrapur – Barh) stretch**, carry out on a timely basis the following:

- i. Dredging/Bandalling Works to maintain Least Available Depth (LAD) and bottom width of 2.5m & 35m respectively for the first two years & 3.0m & 45m respectively for the 3rd, 4th and 5th year of the contract;
- ii. Erection and maintenance of Navigation aids (day channel marking) on the waterway stretch (Mahendrapur-Barh stretch);
- iii. Necessary Surveys services for the above activities;
- iv. An outline proposal on how the contractor shall minimize environmental impacts especially to sensitive and critical areas including but not limited to reed lands, mud flats, mangrove forests and migratory bird habitats taking into account:
 - The requirement for dredging sediment volumes in shallow waterways; placing dredged materials in-stream; and, early detection and quantification of hazardous sediment and its removal; and
 - The requirement to minimize noise, water and air pollution from its own operations.
- vii. An outline Quality Assurance Plan; and
- viii. A Health and Safety Plan specific to the proposed works

(b) **Work Program:** A Work Program compiled on a project management software (like MS Project, Primavera or similar) which must clearly show the major project works proposed and the corresponding timeline with the following characteristics:

- i. Show work stages (Mobilization, Survey, Dredging / Bandalling , Maintenance services, and Demobilization, etc.) and BOQ Items with the corresponding timeline;
 - ii. Show the leading, lagging and critical activities, with linkages to related activities, milestones, key personnel in charge, etc.;
 - iii. Resources (equipment, material, personnel, etc.) plan to achieve the Work Program.
- (c) **Site Organization and Communications Plans:** that clearly provide:
- i. An overall organization chart showing the division between site offices and head office responsibilities;
 - ii. A site organization chart clearly showing responsibilities and functions of key personnel. The person in-charge and the second in command for each location and their responsibilities;
 - iii. The proposed layout of the Contractor's facilities and equipment, including offices and accommodation units based on the proposed sites and waterways routes;
 - iv. Internal Communications Plan within the Contractor's organization and between its home office and the site offices;
 - v. External Communication Plan between the Contractor, the Project Manager/Supervision & Performance Monitoring Consultant, Related Stakeholders, Users, and Employer;
 - vi. Navigational protocol to assure free passage for ships during dredging or other works.
- (ii) an assessment of the details of subcontracting elements of works amounting to more than 10% of the bid price; for each element proposed to be sub contracted furnish details whether the identified Sub-contractor possesses the required qualifications and experiences to execute that element satisfactorily. [*Work should not be split into small parts and sub-contracted*].

1.2 Alternative Technical Solutions (Technical Part) for specified parts of Works

NOT APPLICABLE

1.3 Specialized Subcontractors

NOT APPLICABLE

1.4 Qualification Criteria

Pursuant to ITB 32.1, the Employer shall assess each Bid against the following Qualification Criteria. Requirements not included in the text below shall not be used in the evaluation of the Bidder's qualifications.

2. Qualification

<i>Factor</i>	2.1 ELIGIBILITY					
Sub-Factor	Criteria					Documentation Required
	Requirement	Bidder				
		Single Entity	Joint Venture (existing or intended)			
			All partners combined	Each partner	At least one partner (Lead Partner)	
2.1.1 Nationality	Nationality in accordance with ITB 4.2.	Must meet requirement	Must meet requirement	Must meet requirement	Must meet requirement	Form ELI –1.1 and 1.2, with attachments
2.1.2 Conflict of Interest	No- conflicts of interests as described in ITB 4.3.	Must meet requirement	Must meet requirement	Must meet requirement	Must meet requirement	Letter of Bid
2.1.3 Bank Ineligibility	Not having been declared ineligible by the Bank as described in ITB 4.4.	Must meet requirement	Must meet requirement	Must meet requirement	Must meet requirement	Letter of Bid
2.1.4 Government Owned Entity	Compliance with conditions of ITB 4.5	Must meet requirement	Must meet requirement	Must meet requirement	Must meet requirement	Form ELI –1.1 and 1.2, with attachments

Factor	2.1 ELIGIBILITY					
Sub-Factor	Criteria					Documentation Required
	Requirement	Bidder				
		Single Entity	Joint Venture (existing or intended)			
			All partners combined	Each partner	At least one partner (Lead Partner)	
2.1.5 Ineligibility based on a United Nations resolution or Borrower's country law	Not having been excluded as a result of the Borrower's country laws or official regulations, or by an act of compliance with UN Security Council resolution, in accordance with ITB 4.7 and Section V	Must meet requirement	Must meet requirement	Must meet requirement	Must meet requirement	Letter of Bid

Factor	2.2 HISTORICAL CONTRACT NON-PERFORMANCE					
Sub-Factor	Criteria					Documentation Required
	Requirement	Bidder				
		Single Entity	Joint Venture (existing or intended)			
			All partners combined	Each partner	At least one partner (Lead Partner)	
2.2.1 History of non-performing contracts	Non-performance of a contract did not occur within the last six (6) years prior to the deadline for bid submission, based on (i) all information on fully settled disputes or litigation. A fully settled dispute or litigation is one that has been resolved in accordance with the Dispute Resolution Mechanism under the respective contract, and where all appeal instances available to the bidder have been exhausted; and (ii) all contracts where (a) non performance was not	Must meet requirement	Must meet requirement	Must meet requirement	Must meet requirement	Form CON - 2

Factor	2.2 HISTORICAL CONTRACT NON-PERFORMANCE					
Sub-Factor	Criteria					Documentation Required
	Requirement	Bidder				
		Single Entity	Joint Venture (existing or intended)			
			All partners combined	Each partner	At least one partner (Lead Partner)	
	<i>challenged by the contractor, including through referral to the dispute resolution mechanism under the respective contract.</i>					
2.2.2 Suspension Based on Execution of Bid/Proposal Securing Declaration by the Employer	<i>Not under suspension based on-execution of a Bid/Proposal Securing Declaration pursuant to ITB 4.9 or withdrawal of the Bid. Pursuant to ITB 19.8.</i>	<i>Must meet requirement</i>	<i>Must meet requirement</i>	<i>Must meet requirement</i>	<i>Must meet requirement</i>	<i>Letter of Bid</i>

Factor	2.2 HISTORICAL CONTRACT NON-PERFORMANCE					
Sub-Factor	Criteria					Documentation Required
	Requirement	Bidder				
		Single Entity	Joint Venture (existing or intended)			
			All partners combined	Each partner	At least one partner (Lead Partner)	
2.2.3 Pending Litigation	All pending litigation shall in total not represent more than fifteen percent (15%) of the Bidder's net worth and shall be treated as resolved against the Bidder.	Must meet requirement	N / A	Must meet requirement	Must meet requirement	Form CON – 2
2.2.4 Litigation History	No consistent history of court/arbitral award decisions against the Bidder ⁶ since 1 st January 2012	Must meet requirement	Must meet requirement	Must meet requirement	Must meet requirement	Form CON – 2

⁶ The Bidder shall provide accurate information on the related Bid Form about any litigation or arbitration resulting from contracts completed or ongoing under its execution over the last five years. A consistent history of court/arbitral awards against the Bidder or any member of a joint venture may result in disqualifying the Bidder.

Factor	2.2 HISTORICAL CONTRACT NON-PERFORMANCE					
Sub-Factor	Criteria					Documentation Required
	Requirement	Bidder				
		Single Entity	Joint Venture (existing or intended)			
			All partners combined	Each partner	At least one partner (Lead Partner)	
2.2.5 Declaration: <i>Environmental, Social, Health, and Safety</i> (ESHS) past performance	Declare any civil work contracts that have been suspended or terminated and/or performance security called by an employer for reasons related to the non-compliance of any environmental, or social (including sexual exploitation and abuse (SEA) and gender based violence (GBV)), or health or safety requirements or safeguard in the past five years ⁷ .	Must make the declaration. Where there are Specialized Sub-contractor/s, the Specialized Sub-contractor/s must also make the declaration.	N/A	Each must make the declaration. Where there are Specialized Sub-contractor/s, the Specialized Sub-contractor/s must also make the declaration.	must make the declaration. Where there are Specialized Sub-contractor/s, the Specialized Sub-contractor/s must also make the declaration.	Form CON-3 ESHS Performance Declaration

⁷ The Employer may use this information to seek further information or clarifications in carrying out its due diligence

Factor	2.3 FINANCIAL SITUATION					
Sub-Factor	Criteria					Documentation Required
	Requirement	Bidder				
		Single Entity	Joint Venture (existing or intended)			
			All partners combined	Each partner	At least one partner (Lead Partner)	
2.3.1 <i>Historical Financial Performance</i>	<i>Submission of audited balance sheets or if not required by the law of the bidder’s country, other financial statements acceptable to the Employer, for the last three [3] years to demonstrate the current soundness of the bidders financial position and its prospective long term profitability.</i> <div>(a)Positive Net Worth</div>	<i>Must meet requirement</i>	<i>N / A</i>	<i>Must meet requirement</i>	<i>Must meet requirement</i>	<i>Form FIN – 3.1 with attachments</i>

Factor	2.3 FINANCIAL SITUATION					
Sub-Factor	Criteria					Documentation Required
	Requirement	Bidder				
		Single Entity	Joint Venture (existing or intended)			
			All partners combined	Each partner	At least one partner (Lead Partner)	
2.3.2. Average Annual Turnover	Minimum average annual turnover of (in at least two of the last five financial years) in Dredging work USD 7.30 Million or INR 47.36 Cr.), calculated as total certified payments received for contracts in progress or completed, within the last five (5) years	Must meet requirement	Must meet requirement	Must meet twenty five percent (25%) of the requirement	Must meet fifty percent (50%) of the requirement	Form FIN –3.2

Factor	2.3 FINANCIAL SITUATION					
Sub-Factor	Criteria					Documentation Required
	Requirement	Bidder				
		Single Entity	Joint Venture (existing or intended)			
			All partners combined	Each partner	At least one partner (Lead Partner)	
2.3.3.Financial Resources	The Bidder must demonstrate access to, or availability of, financial resources such as liquid assets, unencumbered real assets, lines of credit, and other financial means, other than any contractual advance payments to meet: (i) the following cash-flow requirement: INR 14.21 Cr. Or USD 2.19 Million ; and	Must meet requirement	Must meet requirement	Must meet atleast twenty five percent (25%) of the requirement	Must meet atleast fifty percent (50%) of the requirement	Form FIN –3.3

Factor	2.3 FINANCIAL SITUATION					
Sub-Factor	Criteria					Documentation Required
	Requirement	Bidder				
		Single Entity	Joint Venture (existing or intended)			
			All partners combined	Each partner	At least one partner (Lead Partner)	
	(ii) the overall cash flow requirements for this contract and its current commitments and for future contract commitments.	Must meet requirement	Must meet requirement	Must meet atleast twenty five percent (25%) of the requirement	Must meet atleast fifty percent (50%) of the requirement	Form FIN –3.3

Factor	2.4 EXPERIENCE					
Sub-Factor	Criteria					Documentation Required
	Requirement	Bidder				
		Single Entity	Joint Venture (existing or intended)			
			All partners combined	Each partner	At least one partner (Lead Partner)	
2.4.1General Dredging Experience in Ports / River Management of Vessel, Manning of Vessel or Vessel related Marine Works	Experience under contracts in the role of contractor, subcontractor, or management contractor for at least the last five [5] years prior to the bid submission deadline, and with activity in at least nine (9) months in each year.	Must meet requirement	N / A	Must meet requirement	Must meet requirement	Form EXP-4.1

Factor	2.4 EXPERIENCE					
Sub-Factor	Criteria					Documentation Required
	Requirement	Bidder				
		Single Entity	Joint Venture (existing or intended)			
			All partners combined	Each partner	At least one partner (Lead Partner)	
2.4.2Specific Experience	(a) A minimum number of ⁸ similar contracts specified below that have been satisfactorily and substantially ⁹ completed as a prime contractor, joint venture member ¹⁰ , management contractor or sub-contractor ¹⁰ between	Must meet requirement	Must meet requirements ¹²	Must meet the requirement for one contract of 25% value	Must meet the requirement for one contract of 50% value	Form EXP 2.4.2(a)

⁸ Bidder should have completed at least one contract for similar work of value not less than 80% of the estimated contract value of the work for which bids are invited, during the last five years. Cost of completed works of previous years shall be given weightage @5% per year based on rupees value to bring them to the price level of the financial year in which bids are received.

⁹ Substantial completion shall be based on 80% or more works completed under the contract.

¹⁰ For contracts under which the Bidder participated as a joint venture member or sub-contractor, only the Bidder's share, by value, shall be considered to meet this requirement

¹² In the case of JV, the value of contracts completed by its members shall not be aggregated to determine whether the requirement of the minimum value of a single contract has been met. Instead, each contract performed by each member shall satisfy the minimum value of a single contract as required for single entity. In determining whether the JV meets the requirement of total number of contracts, only the number of contracts completed by all members each of value equal or more than the minimum value required shall be aggregated.

Factor	2.4 EXPERIENCE					
Sub-Factor	Criteria					Documentation Required
	Requirement	Bidder				
		Single Entity	Joint Venture (existing or intended)			
			All partners combined	Each partner	At least one partner (Lead Partner)	
	1st April 2013 and bid submission deadline: (i) 01 contract, each of minimum value USD 30 million or INR 190 Cr.; Or (ii) Two (02) contracts, each of minimum value USD 19 million or INR 120 Cr., Or (iii) Three (03) contracts, each of minimum value USD 15 million or INR 95 Cr.					

Factor	2.4 EXPERIENCE					
Sub-Factor	Criteria					Documentation Required
	Requirement	Bidder				
		Single Entity	Joint Venture (existing or intended)			
			All partners combined	Each partner	At least one partner (Lead Partner)	
	<i>The similarity of the contracts¹¹ shall be based on the following: [Based on Section VI, Works Requirements, specify the minimum key requirements in terms of physical size, complexity, construction method, technology and/or other characteristics including part of the requirements that may be met by specialized subcontractors, if permitted in accordance with ITB BDS 33.3]</i>					

¹¹ Similarity may be expressed as appropriate in terms of (i) General Dredging Experience in Ports/ River; (ii) Manning and Management of Vessels; (iii) Specified Marine Works

2.4.2 <i>Specific Experience</i>	<p><i>b) For the above or other contracts [substantially completed and under implementation] as prime contractor, joint venture member, or management contractor between 1st April 2013 and Application submission deadline, a minimum construction experience in the following key activities successfully completed¹³: a minimum dredging experience of three (3) years having successfully completed</i></p> <p><i>a. River Dredging and management of dredge materials,</i></p> <p><i>b. Dredged material used in reclamation of port / harbour will also be considered.</i></p>	<p><i>Must meet requirements Dredging experience for Port / Harbour or River</i></p>	<p><i>Must meet requirements Dredging experience for Port / Harbour or River</i></p>	N / A	<p>Must meet the following requirements for key activities listed below</p> <p><i>Dredging experience for Port / Harbour or River</i></p>	<p><i>Form EXP-2.4.2(b)</i></p>
2.4.2 (c)	<p>Bid Capacity:</p> <p>Bidders who meet the minimum qualification criteria will be qualified only if their available bid capacity for construction work is equal to or more than the total bid value of the work. The available bid capacity will be calculated as under:</p>					

Factor	2.4 EXPERIENCE					
Sub-Factor	Criteria					Documentation Required
	Requirement	Bidder				
		Single Entity	Joint Venture (existing or intended)			
			All partners combined	Each partner	At least one partner (Lead Partner)	
	<p>Assessed Available bid capacity = (A*N*1.5-B)</p> <p>Where,</p> <p>A = Maximum value of civil engineering works executed in any one year during the last five years (updated to the price level of the current financial year at the rate of 5% per year), taking into account the completed as well as works in progress).</p> <p>N = 5 (Number of years prescribed for completion of the works for which bids are invited) (period up to 6 months to be taken as half-year and more than 6 months as one year).</p> <p>B = Value, at the current price level, of existing commitments and on-going works to be completed concurrently with the works specified upto the period of “N” above.</p>					
2.4.3 Quality Requirements						
2.4.3 (a) ISO 9001-2008/2015 quality management system requirement	Quality Management Certificate issued by the International Organization for Standardization	Must meet requirement	Must meet requirement	N/A	Must meet requirement	Valid ISO 9001 Certification. Form EXP – 5.0

¹³ Volume, number or rate of production of any key activity can be demonstrated in one or more contracts combined if executed during same time period.

Factor	2.4 EXPERIENCE					
Sub-Factor	Criteria					Documentation Required
	Requirement	Bidder				
		Single Entity	Joint Venture (existing or intended)			
			All partners combined	Each partner	At least one partner (Lead Partner)	
2.4.3 (b) International Standards for Hydrographic Surveys (IHO)	Experience in atleast one contract during the last 5 years where survey to quantify dredging or other needs assessment has been done	Must meet requirement	Must meet requirement	N/A	Must meet requirement	Information on atleast one contract using IHO standard survey. Form EXP – 5.0
2.4.3 (c) OHSAS 18001 - Occupational Health and Safety Assessment Series	Relevant OHSAS certificate and Experience in occupational health and safety management over the last 2 years, starting 1st April 2016.	Must meet requirement	Must meet requirement	N/A	Must meet requirement	Valid OHSAS certificate.
2.4.3 (d) ISO 14001: 2004 / 2015 Environmental Management systems	Relevant Environmental management certificate and experience with environmental management systems over the last 2 years, starting 1st January 2016.	Must meet requirement	Must meet requirement	N/A	Must meet requirement	Valid ISO 14001:2004/2015 certificate.

Factor	2.4 EXPERIENCE					
Sub-Factor	Criteria					Documentation Required
	Requirement	Bidder				
		Single Entity	Joint Venture (existing or intended)			
			All partners combined	Each partner	At least one partner (Lead Partner)	
2.4.3 (e) International Association of Dredging Companies (IADC) Quality Standards	Membership of IADC / WODA / EADA / CEDA	Must meet requirement	Must meet requirement	N/A	Must meet requirement	Membership certificate of IADC / WODA / EADA / CEDA.
2.4.3 (f) Safety Management Certificate (SMC)	Safety management certificate for safety of vessels of more than 500 GT in compliance with ISM standard	Must meet requirement	Must meet requirement	N/A	Must meet requirement	Valid SMC certificate.

Factor	2.4 EXPERIENCE					
Sub-Factor	Criteria					Documentation Required
	Requirement	Bidder				
		Single Entity	Joint Venture (existing or intended)			
			All partners combined	Each partner	At least one partner (Lead Partner)	
2.4.3 (g) Document of Compliance (DOC)	Document of Compliance of the contractor’s safety management system according to the International Management Code for the safe Operation of ships and for pollution prevention.	Must meet requirement	Must meet requirement	N/A	Must meet requirement	Valid Document of compliance.

2.5 Contractor's Representative and Key Personnel

The Bidder must demonstrate that it will have a suitably qualified (and in adequate numbers) minimum Key Personnel, as described in the table below, that are required to perform the Contract.

The Bidder shall provide details of the Key Personnel and such other Key Personnel that the Bidder considers appropriate, together with their academic qualifications and work experience. The Bidder shall complete the relevant Forms in Section IV, Bidding Forms.

The Contractor shall require the Employer's consent to substitute or replace the Contractor's Representative (reference the Particular Conditions of Contract 16.2.2) and Key Personnel (reference the Particular Conditions of Contract 19.1).

Key Personnel

Item No.	Position/specialization	Relevant academic qualifications	Minimum years of relevant work experience
1	<i>Contract Manager</i>	Contract Manager shall have a bachelor's degree in civil engineering and an experience of minimum 10 years', out of which at least 7 years' shall be in managing projects of similar nature. Personnel must have experience in executing dredging projects. The age of the personnel as on the date of bid submission shall not be more than 50 years;	7
2	<i>Crew</i>	Must have inland vessel certification	
Suitable experts in the following specializations			
3	Surveyor	Diploma in Hydrographic Survey	3
4	Dredger Master	Dredging experience in River / Canal / Port	7
5	<i>Social Expert</i>	Graduate or equivalent in social sciences	3
6	Environment Expert	Graduate in Environmental Engineering / Environmental Sciences	3
7	Health & Safety Expert	Graduate in Engineering / Sciences and must have Diploma / Certification in health and safety	3

The Bidder must not have in his employment:

- [i] the near relations (defined as first blood relations, and their spouses, of the bidder or the bidder's spouse) of persons of the following Government Departments.

All organisations / entities / agencies under Ministry of Shipping (Sagarmala)

.....

.....

- [ii] without Government permission, any person who retired as gazetted officer within the last two years.

Note:

The managerial and technical competence of a contractor is largely related to the key personnel on site. The extent to which the Bidder should demonstrate having staff with extensive experience should be limited to those requiring critical operational or technical skills. The criteria should therefore refer to a limited number of such key personnel, for instance, the project or contract manager and others working under the project manager who will be responsible for major components (*e.g., specialized in dredging, vessel management, environmental, health and safety, social issues, as required for each particular project*). Criteria of acceptability should be based on:

- (a) a minimum number of years of experience in a similar position; and
- (b) a minimum number of years of experience and/or number of comparable projects carried out in a specified number of preceding years.
- (c) all Key and Management Personnel should be able to communicate orally and in written form in English

2.6 Equipment

The Bidder must demonstrate that it has the key equipment listed hereafter:

No.	Equipment Type and Characteristics	Minimum Number required
1	Dredgers, 300 – 650 cum Solids per hour Capacity, 12 years Maximum Age	02
2	Tug Boats (Min. engines 2 nos.), 270 HP, 6T of Bollard Pull, 10 years Maximum Age	<u>02</u>
3	Survey Vessels, equipped with Multibeam eco-sounder, Altimeter, 5 years Maximum Age	<u>01</u>
4	House Boat, 5 years Maximum Age	<u>01</u>

The Bidder shall provide further details of proposed items of equipment using Form EQU in Section IV, Bidding Forms.

Note: The above list is only the minimum suggested major equipment. Bidders shall provide a list of the type and quantity of equipment needed to carry out on a timely basis the physical interventions detailed in the scope of requirements specified in Section VI. Choice in the type and quantity of equipment shall take into account the scope of the physical interventions required for the project waterways. In providing a list of type and quantity of equipment, Bidders shall specifically:

- i. Demonstrate that any equipment selected for works on waterways route must meet the works requirements on a timely basis, taking into account: equipment performance specifications; the geographical location waterway stretch and time for internal movements (transport); IWT classification characteristics (i.e. channel depth and width); environmental and social mitigation needs; and any other limiting conditions, including but not limited to physical and weather limiting conditions;
- ii. Demonstrate that equipment selected is designed, built, constructed, manned, operated and certified for inland waterway and environmental conditions that can be expected on waterways or parts thereof. For the avoidance of doubt, Bidders shall provide documentary evidence that all equipment is both licensed and classed to operate in the waterways/river conditions, including but not limited to wind, wave, swell, current and tidal stream conditions where development and

maintenance dredging, aid to navigation installation and maintenance, survey services and environmental monitoring are required. Ownership Registration with valid Licenses – Permission etc. to be submitted. These equipment must be owned/hired by bidder and by lead member in case of JV.

B.2. Financial Part**2.1 Margin of Preference - Not Applicable****2.2 DELETED****2.3 Alternative Completion Times (ITB 13.2)**

NOT APPLICABLE

2.4 Alternative Technical Solutions – Financial Part for specified parts of the Works (ITB 13.4)

NOT APPLICABLE

.....
.....

2.5 Other criteria (if permitted under ITB 35.2(g)):

NOT APPLICABLE

Section IV. Bidding Forms

Letter of Bid – Technical Part

INSTRUCTIONS TO BIDDERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE DOCUMENT

The Bidder must prepare this Letter of Bid on stationery with its letterhead clearly showing the Bidder's complete name and business address.

Note: *All italicized text in is to help Bidders in preparing this form.*

Date: _____

ICB No.: _____

Invitation for Bid No.: _____

Alternative No.¹⁴: _____

To: _____

We, the undersigned, hereby submit our Bid, in two parts, namely:

- (a) the Technical Part, and
- (b) the Financial Part

In submitting our Bid, we make the following declarations:

- (a) We have examined and have no reservations to the Bidding Document, including Addenda issued in accordance with Instructions to Bidders (ITB) 8 _____;
- (b) We have not been suspended nor declared ineligible by the Employer based on execution of a Bid-Securing Declaration or Proposal-Securing Declaration in the Employer's Country in accordance with ITB 4.9.
- (c) We offer to execute in conformity with the Bidding Document the following Works [insert a brief description of the Works]: _____;
- (d) Our bid shall be valid for a period of _____ days from the date fixed for the bid submission deadline in accordance with the Bidding Document, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;

¹⁴ Delete if not applicable

- (e) If our bid is accepted, we commit to obtain a performance security [*and an Environmental, Social, Health and Safety (ESHS) Performance Security, Delete if not applicable*] in accordance with the Bidding Document;
- (f) We, including any subcontractors or suppliers for any part of the contract, have or will have nationalities from eligible countries, in accordance with ITB-4.2;
- (g) We, including any subcontractors or suppliers for any part of the contract, do not have any conflict of interest in accordance with ITB-4.3;
- (h) We are not participating, as a Bidder or as a subcontractor, in more than one bid in this bidding process in accordance with ITB-4.3, other than alternative offers submitted in accordance with ITB-13;
- (i) We, along with any of our subcontractors, suppliers, consultants, manufacturers, or service providers for any part of the contract, are not subject to, and not controlled by any entity or individual that is subject to, a temporary suspension or a debarment imposed by a member of the World Bank Group or a debarment imposed by the World Bank Group in accordance with the Agreement for Mutual Enforcement of Debarment Decisions between the World Bank and other development banks. Further, we are not ineligible under the Employer's country laws or official regulations or pursuant to a decision of the United Nations Security Council;
- (j) We are not a government owned entity/We are a government owned entity but meet the requirements of ITB-4.5;¹⁵
- (k) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed; and
- (l) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.
- (m) We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in bribery.

Name _____ In the capacity of _____

Signed _____

¹⁵ Bidder to use as appropriate

Duly authorized¹⁶ to sign the bid for and on behalf of¹⁷ _____

Dated on _____ day of _____, _____

¹⁶ Person signing the Bid shall have the power of attorney given by the Bidder to be attached with the Bid

¹⁷ In the case of the Bid submitted by joint venture specify the name of the Joint Venture as Bidder

Appendix to Technical Part: Technical Proposal

Technical Proposal Forms

The bidder's Technical Proposal shall include the following elements:

SCHEDULE B.	Site Organizations
SCHEDULE C.	Subcontractors
SCHEDULE D.	Contractor's Equipment
SCHEDULE E.	Initial Tentative Program of Performance
SCHEDULE F.	Key Personnel Proposed
SCHEDULE G.	ESHS Management Strategies and Implementation Plans
SCHEDULE H.	Code of Conduct (ESHS)

Instructions on how to present the various schedules of the Technical Proposal are given on the following pages.

Appendix to Technical Part**SCHEDULE B****Site Organization**

Bidders shall give below full particulars of the organisation they propose to establish, direct, and administer the performance of the Contract. In particular, bidders shall indicate the location of site camps and the resources they intend to allocate to Self Control Units for planning and monitoring purposes.

- 1. SITE ORGANIZATION CHART**
- 2. NARRATIVE DESCRIPTION OF SITE ORGANISATION CHART**

SAMPLE**Appendix to Technical Part****SCHEDULE C****SUBCONTRACTORS**

Item	Element of work	Approximate value of sub-contract	Name and address of sub-contractor	Qualification and experience of sub-contractor on similar works of the elements executed

Bidders shall list those parts of the Works and Services which they propose to subcontract *[for those costing more than 10% of the bid price for each part]*, and state the approximate value of those parts and the names, addresses, and experiences of the proposed subcontractors.

The capability of the sub-contractor will also be assessed (on the same lines as for the main Contractor) before according approval to him.

(Work should not be split into small parts and sub-contracted. Sub-contracting of specialized elements of works specified in the bid document is acceptable).

SAMPLE

Appendix to Technical Part

SCHEDULE D

Contractor's Equipment

Form EQU

Bidders shall provide¹⁸ a list of the type and quantity of equipment needed to carry out on a timely basis the physical interventions detailed in the scope of requirements specified in Section VI. Choice in the type and quantity of equipment shall take into account the scope of the physical interventions required for the project waterways. In providing a list of type and quantity of equipment, Bidders shall specifically:

- i. Demonstrate that any equipment selected for works on more than one waterways route must meet the works requirements of all specified routes on a timely basis, taking into account: equipment performance specifications; the geographical location of such other route or routes and time for internal movements (transport); IWT classification characteristics (i.e. channel depth and width); environmental and social mitigation needs; and any other limiting conditions, including but not limited to physical and weather limiting conditions;
- ii. Demonstrate that equipment selected is designed, built, constructed, manned, operated and certified for marine and environmental conditions that can be expected on each waterways route or parts thereof. For the avoidance of doubt, Bidders shall provide documentary evidence that all equipment is both licensed and classed to operate in the waterways (river) conditions, including but not limited to wind, wave, swell, current and tidal stream conditions where development and maintenance dredging, aid to navigation installation and maintenance, survey services and environmental monitoring are required.

A separate Form shall be prepared for each item of equipment listed (with a current new purchase price exceeding US\$ 0.5 m)¹⁹, or for alternative equipment proposed by the Bidder. The Bidder shall provide all the information requested below, to the extent possible. Fields with asterisk (*) shall be used for evaluation.

¹⁸ This is a SAMPLE taken from a specific project, and should be suitably modified as necessary

¹⁹ Threshold of US\$ 0.5 m is only a Sample value, and should be modified as considered necessary

Item of equipment*		
Equipment information	Name of manufacturer	Model and power rating
	Capacity*	Year of manufacture*
Current status	Current location	
	Details of current commitments	
Source	Indicate source of the equipment <input type="checkbox"/> Owned <input type="checkbox"/> Rented <input type="checkbox"/> Leased <input type="checkbox"/> Specially manufactured	

Omit the following information for equipment owned by the Bidder.

Owner	Name of owner	
	Address of owner	
	Telephone	Contact name and title
	Fax	Telex
Agreements	Details of rental / lease / manufacture agreements specific to the project	

SAMPLE

Appendix to Technical Part

SCHEDULE E

Dredging Methodology²⁰

(a) Contractor's Statement of Work Methods

To demonstrate a clear understanding of the requirements of the Contract, Bidders shall provide in the form of a narrative descriptions, sketches and drawings, how the works shall be undertaken.

The Statement of Work Methods shall demonstrate the Bidders capability to define, optimize and carry out on a timely basis the physical interventions detailed in the scope of requirements specified in Section VI.

The Statement of Work Methods shall include a mobilization and execution plan that details how the bidder will, **on waterway stretch**, carry out on a timely basis the following:

- i. Dredging/Bandalling Works to maintain Least Available Depth (LAD) and bottom width of 2.5m & 35m respectively for the first two years & 3.0m & 45m respectively for the 3rd, 4th and 5th year of the contract;
- ii. Erection and maintenance of Navigation aids (day channel marking) on the waterway stretch (Mahendrapur-Barh stretch);
- iii. Necessary Surveys services for the above activities; and
- iv. An outline proposal on how the Contractor shall minimize environmental impacts especially to sensitive and critical areas including but not limited to reed lands, mud flats, mangrove forests and migratory bird habitats taking into account:
 - The requirement for dredging sediment volumes in shallow waterways; placing dredged materials in-stream or in-river; and, early detection and quantification of hazardous sediment and its removal; and,
 - The requirement to minimize noise, water and air pollution from its own operations.
- vii. An outline Quality Assurance Plan; and,
- viii. A Health and Safety Plan specific to the proposed works.

²⁰ The Dredging Methodology included here is a SAMPLE taken from a specific project, and should be suitably modified as necessary. It should correspond to the construction methodology specified in Section III Evaluation and Qualification Criteria.

(b) Contractor's Work Program: A Work Program compiled on a project management software (like MS Project, Primavera or similar) which must clearly show the major project works proposed and the corresponding timeline with the following characteristics:

- i. Show work stages (Mobilization, Survey, Dredging / Bandalling Work, Erection and Maintenance of Aids to Navigation, and Demobilization, etc.) and BOQ Items with the corresponding timeline;
- ii. Show the leading, lagging and critical activities, with linkages to related activities, milestones, key personnel in charge, etc.; and
- iii. Resources (equipment, material, personnel, etc.) plan to achieve the Work Program.

(c) Site Organization and Communications Plans: that clearly provide:

- i. An overall organization chart;
- ii. A site organization chart;
- iii. Preliminary layout of the Contractor's facilities and equipments;
- iv. Internal Communications Plan;
- v. External Communication Plan; and
- vi. Navigational protocol to assure free passage for ships during dredging or other works.

Appendix to Technical Part

SCHEDULE F

Form PER -1

Contractor's Representative and Key Personnel Schedule

Bidders should provide the names and details of the suitably qualified Contractor's Representative and Key Personnel to perform the Contract. The data on their experience should be supplied using the Form PER-2 below for each candidate.

Key Personnel

1.	²¹ Title of position: Contractor's Representative	
	Name of candidate:	
	Duration of appointment:	<i>[insert the whole period (start and end dates) for which this position will be engaged]</i>
	Time commitment: for this position:	<i>[insert the number of days/week/months/ that has been scheduled for this position]</i>
	Expected time schedule for this position:	<i>[insert the expected time schedule for this position (e.g. attach high level Gantt chart)]</i>
2.	Title of position: <i>[insert title]</i>	
	Name of candidate:	
	Duration of appointment:	<i>[insert the whole period (start and end dates) for which this position will be engaged]</i>
	Time commitment: for this position:	<i>[insert the number of days/week/months/ that has been scheduled for this position]</i>
	Expected time schedule for this position:	<i>[insert the expected time schedule for this position (e.g. attach high level Gantt chart)]</i>
3.	Title of position: <i>[insert title]</i>	
	Name of candidate:	
	Duration of appointment:	<i>[insert the whole period (start and end dates) for which this position will be engaged]</i>
	Time commitment: for this position:	<i>[insert the number of days/week/months/ that has been scheduled for this position]</i>
	Expected time schedule for this position:	<i>[insert the expected time schedule for this position (e.g. attach high level Gantt chart)]</i>
4.	Title of position: <i>[Environmental Specialist]</i>	

²¹ As listed in Section III (Evaluation and Qualification criteria).

	Name of candidate:	
	Duration of appointment:	<i>[insert the whole period (start and end dates) for which this position will be engaged]</i>
	Time commitment for this position:	<i>[insert the number of days/week/months/ that has been scheduled for this position]</i>
	Expected time schedule for this position:	<i>[insert the expected time schedule for this position (e.g. attach high level Gantt chart)]</i>
5.	Title of position: <i>[Health and Safety Specialist]</i>	
	Name of candidate:	
	Duration of appointment:	<i>[insert the whole period (start and end dates) for which this position will be engaged]</i>
	Time commitment for this position:	<i>[insert the number of days/week/months/ that has been scheduled for this position]</i>
	Expected time schedule for this position:	<i>[insert the expected time schedule for this position (e.g. attach high level Gantt chart)]</i>
6.	Title of position: <i>[Social Specialist]</i>	
	Name of candidate:	
	Duration of appointment:	<i>[insert the whole period (start and end dates) for which this position will be engaged]</i>
	Time commitment for this position:	<i>[insert the number of days/week/months/ that has been scheduled for this position]</i>
	Expected time schedule for this position:	<i>[insert the expected time schedule for this position (e.g. attach high level Gantt chart)]</i>
7.	Title of position: <i>[insert title]</i>	
	Name of candidate	
	Duration of appointment:	<i>[insert the whole period (start and end dates) for which this position will be engaged]</i>
	Time commitment for this position:	<i>[insert the number of days/week/months/ that has been scheduled for this position]</i>
	Expected time schedule for this position:	<i>[insert the expected time schedule for this position (e.g. attach high level Gantt chart)]</i>

Appendix to Technical Part

Form PER-2
Resume and Declaration
Contractor's Representative and Key Personnel

Resume of Proposed Personnel

Name of Bidder		
Position [#1]: [title of position from Form PER-1]		
Personnel information	Name:	Date of birth:
	Address:	E-mail:
	Professional qualifications:	
	Academic qualifications:	
	Language proficiency: <i>[language and levels of speaking, reading and writing skills]</i>	
Details	Address of employer:	
	Telephone:	Contact (manager / personnel officer):
	Fax:	
	Job title:	Years with present employer:

Summarize professional experience in reverse chronological order. Indicate particular technical and managerial experience relevant to the project.

Project	Role	Duration of involvement	Relevant experience
<i>[main project details]</i>	<i>[role and responsibilities on the project]</i>	<i>[time in role]</i>	<i>[describe the experience relevant to this position]</i>

Declaration

I, the undersigned Key Personnel, certify that to the best of my knowledge and belief, the information contained in this Form PER-2 correctly describes myself, my qualifications and my experience.

I confirm that I am available as certified in the following table and throughout the expected time schedule for this position as provided in the Bid:

Commitment	Details
Commitment to duration of contract:	<i>[insert period (start and end dates) for which this Key Personnel is available to work on this contract]</i>
Time commitment:	<i>[insert the number of days/week/months/ that this Key Personnel will be engaged]</i>

I understand that any misrepresentation or omission in this Form may:

- (a) be taken into consideration during Bid evaluation;
- (b) my disqualification from participating in the Bid;
- (c) my dismissal from the contract.

Name of Key Personnel: *[insert name]*

Signature: _____

Date: (day month year): _____

Countersignature of authorized representative of the Bidder:

Signature: _____

Date: (day month year): _____

Appendix to Technical Part**SCHEDULE G****Environmental, Social, Health and Safety
Management Strategies and Implementation Plans
(ESHS-MSIP)**

The Bidder shall submit comprehensive and concise Environmental, Social, Health and Safety Management Strategies and Implementation Plans (ESHS-MSIP) as required by ITB 11.2 (i) of the Bid Data Sheet. These strategies and plans shall describe in detail the actions, materials, equipment, management processes etc. that will be implemented by the Contractor, and its subcontractors.

In developing these strategies and plans, the Bidder shall have regard to the ESHS provisions of the contract including those as may be more fully described in the Works and Services Requirements described in Section VI.

*Appendix to Technical Part***SCHEDULE H****Code of Conduct****Environmental, Social, Health and Safety (ESHS)**

The Bidder shall submit the Code of Conduct that will apply to the Contractor's employees and subcontractors as required by ITB 11.2 (i) of the Bid Data Sheet. The Code of Conduct shall ensure compliance with the ESHS provisions of the contract, including those as may be more fully described in the Works and Services Requirements described in Section VI.

In addition, the Bidder shall submit an outline of how this Code of Conduct will be implemented. This will include: how it will be introduced into conditions of employment/engagement, what training will be provided, how it will be monitored and how the Contractor proposes to deal with any breaches.

Appendix to Technical Part

Bidder's Qualification Forms

Appendix to Technical Part Form ELI -1.1²²
Bidder Information Form
<div style="text-align: right;">Date: _____</div> <div style="text-align: right;">ICB No. and title: _____</div> <div style="text-align: right;">Page _____ of _____ pages</div>
<div style="border: 1px solid black; padding: 5px;"> <p>Bidder's name</p> <hr/> <p>In case of Joint Venture (JV), name of each member:</p> <hr/> <p>Bidder's actual or intended country of registration: <i>[indicate country of Constitution]</i></p> <hr/> <p>Bidder's actual or intended year of incorporation:</p> <hr/> <p>Bidder's legal address [in country of registration]:</p> <hr/> <p>Bidder's authorized representative information</p> <p>Name: _____</p> <p>Address: _____</p> <p>Telephone/Fax numbers: _____</p> <p>E-mail address: _____</p> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p>1. Attached are copies of original documents of</p> <p><input type="checkbox"/> Articles of Incorporation (or equivalent documents of constitution or association), and/or documents of registration of the legal entity named above, in accordance with ITB 4.2</p> <p><input type="checkbox"/> Authorization to represent the firm or JV named in above, in accordance with ITB 20.3.</p> <p><input type="checkbox"/> In case of JV, letter of intent to form JV or JV agreement, in accordance with ITB 4.1</p> <p><input type="checkbox"/> In case of state-owned enterprise or institution, in accordance with ITB 4.5, documents establishing:</p> <ul style="list-style-type: none"> • Legal and financial autonomy • Operation under commercial law • Establishing that the Bidder is not under the supervision of the Employer <p>2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.</p> </div>

²² This should be furnished by bidder as well as each member of JV.

Appendix to Technical Part

Form ELI -1.2

Bidder's JV Information Form

(to be completed for each member of Bidder's JV or Specialist Subcontractor)

Date: _____

ICB No. and title: _____

Page _____ of _____ pages

Bidder's JV or Specialist Subcontractor's name:
JV member's or Specialist Subcontractor's name:
JV member's or Specialist Subcontractor's country of registration:
JV member's or Specialist Subcontractor's year of constitution:
JV member's or Specialist Subcontractor's legal address in country of constitution:
JV member's or Specialist Subcontractor's authorized representative information Name: _____ Address: _____ Telephone/Fax numbers: _____ E-mail address: _____
1. Attached are copies of original documents of <input type="checkbox"/> Articles of Incorporation (or equivalent documents of constitution or association), and/or registration documents of the legal entity named above, in accordance with ITB 4.2. <input type="checkbox"/> Authorization to represent the firm or JV named in above, in accordance with ITB 20. <input type="checkbox"/> In case of a state-owned enterprise or institution, documents establishing legal and financial autonomy, operation in accordance with commercial law, and that they are not under the supervision of the Employer, in accordance with ITB 4.5. 2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.

Appendix to Technical Part

DETAILS OF PARTICIPATION IN THE JOINT VENTURE

PARTICIPATION DETAILS	FIRM 'A' (Lead Member)	FIRM 'B'	FIRM 'C'
Financial			
Name of the Banker(s)			
Planning			
Major Equipment and Vessels			
Key Personnel			
Execution of Work (Give details on proposed contribution of each)			

Appendix to Technical Part

Attachment to Bidder Information Form – Form ELI-1.3

Structure and Organization

1. The Bidder is _____
 - [a] an individual
 - [b] a proprietary firm
 - [c] a firm in partnership
 - [d] a Limited Company or Corporation
 - [e] a group of firms/joint venture
(If yes, give completion information in respect of each partner)

2. Attach the organization Chart showing the structure of the Organization, including the names of the directors and position of officers. _____

3. Number of years of experience
 - [a] as a Prime Contractor (Contractor shouldering major responsibility)
 - [i] in own country
 - [ii] in other countries (specify countries) _____

 - [b] **as a Management Contractor**
 - [i] in own country _____
 - [ii] in other countries (specify countries) _____

 - [c] in a Joint Venture
 - [i] in own country _____
 - [ii] in other countries (specify countries) _____

 - [d] **as sub-contractor (specify main contractor)**
 - [i] in own country _____
 - [ii] in other countries (specify countries) _____

4. Name and address of any associates the bidder has in India (in case the bidder happens to be from foreign country) who are knowledgeable in the procedure of customs, immigration, taxes and other information necessary to do the work. _____

5. For how many years has your organization been in

business of similar work under its present name?

What were your fields when your organization was established? Whether any new fields were added in your organization? And if so, when?

6. Were you ever required to suspend construction for a period of more than six months continuously after your started? If so, give the name of project and give reasons therefore.

7. Have you ever left the work awarded to you incomplete? (If so, give name of project and reasons for not completing work.)

8. In which fields of civil engineering construction do your claim specialization and interest?

9. Give details of your experience in Dredging and Management of dredging material. @

10. Give details of your experience in Installation and maintenance of aids to navigation including light buoys, shore beacons and channel markers. @

11. Give details of your experience in @

@ ***Employer to modify these as appropriate for the works for which qualification of the Bidders are to be checked. This should be furnished by bidder as well as each member of JV.***

Appendix to Technical Part

Form CON – 2: Historical Contract Non-Performance, Pending Litigation and Litigation History

Bidder's Name: _____

Date: _____

Joint Venture Member's Name: _____

ICB No. and title: _____

Page _____ of _____ pages

Non-Performed Contracts in accordance with Section III, Evaluation Criteria and Qualifications			
<input type="checkbox"/> Contract non-performance did not occur since 1 st January <i>[insert year]</i> specified in Section III, Evaluation Criteria and Qualifications, Sub-Factor 2.2.1.			
<input type="checkbox"/> Contract(s) not performed since 1 st January <i>[insert year]</i> specified in Section III, Evaluation Criteria and Qualifications, requirement 2.2.1			
Year	Non-performed portion of contract	Contract Identification	Total Contract Amount (current value, currency, exchange rate and US\$ equivalent)
<i>[insert year]</i>	<i>[insert amount and percentage]</i>	Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i> Name of Employer: <i>[insert full name]</i> Address of Employer: <i>[insert street/city/country]</i> Reason(s) for non performance: <i>[indicate main reason(s)]</i>	<i>[insert amount]</i>
Pending Litigation, in accordance with Section III, Evaluation Criteria and Qualifications			
<input type="checkbox"/> No pending litigation in accordance with Section III, Evaluation Criteria and Qualifications, Sub-Factor 2.2.3			
<input type="checkbox"/> Pending litigation in accordance with Section III, Evaluation Criteria and Qualifications, Sub-Factor 2.2.3 as indicated below.			
Year of dispute	Amount in dispute (currency)	Contract Identification	Total Contract Amount (currency), USD

			Equivalent (exchange rate)
		Contract Identification: _____ Name of Employer: _____ Address of Employer: _____ Matter in dispute: _____ Party who initiated the dispute: _____ Status of dispute: _____	
		Contract Identification: Name of Employer: Address of Employer: Matter in dispute: Party who initiated the dispute: Status of dispute:	
Litigation History in accordance with Section III, Evaluation and Qualification Criteria			
<input type="checkbox"/> No Litigation History in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.2.4. <input type="checkbox"/> Litigation History in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.2.4 as indicated below.			
Year of award	Outcome as percentage of Net Worth	Contract Identification	Total Contract Amount (currency), USD Equivalent (exchange rate)
<i>[insert year]</i>	<i>[insert percentage]</i>	Contract Identification: <i>[indicate complete contract name, number, and any other identification]</i> Name of Employer: <i>[insert full name]</i> Address of Employer: <i>[insert street/city/country]</i> Matter in dispute: <i>[indicate main issues in dispute]</i> Party who initiated the dispute: <i>[indicate “Employer” or “Contractor”]</i> Reason(s) for Litigation and award decision <i>[indicate main reason(s)]</i> Status of dispute: <i>[Indicate if it is being treated by the Adjudicator/DRB/DRE, under Arbitration or being dealt with by the Judiciary]</i>	<i>[insert amount]</i>

Appendix to Technical Part

Form LIT: Pending Litigation

Each Bidder or member of a JV must fill in the form

Pending Litigation			
<ul style="list-style-type: none"> • No pending litigation • Pending litigation 			
Year	Matter in Dispute	Value of Pending Claim in US\$ millions Equivalent	Value of Pending Claim as a Percentage of Net Worth

Appendix to Technical Part
Form CON – 3
Environmental, Social, Health, and Safety
Performance Declaration

[The following table shall be filled in for the Bidder, and each member of a Joint Venture and each Specialized Subcontractor]

Bidder's Name: *[insert full name]*

Date: *[insert day, month, year]*

Joint Venture Member's or Specialized Subcontractor's Name: *[insert full name]*

ICB No. and title: *[insert ICB number and title]*

Page *[insert page number]* of *[insert total number]* pages

Environmental, Social, Health, and Safety Performance Declaration in accordance with Section III, Qualification Criteria, and Requirements			
<input type="checkbox"/> No suspension or termination of contract: An employer has not suspended or terminated a contract and/or called the performance security for a contract for reasons related to Environmental, Social, Health, or Safety (ESHS) performance since the date specified in Section III, Qualification Criteria, and Requirements, Sub-Factor 2.2.5.			
<input type="checkbox"/> Declaration of suspension or termination of contract: The following contract(s) has/have been suspended or terminated and/or Performance Security called by an employer(s) for reasons related to Environmental, Social, Health, or Safety (ESHS) performance since the date specified in Section III, Qualification Criteria, and Requirements, Sub-Factor 2.2.5. Details are described below:			
Year	Suspended or terminated portion of contract	Contract Identification	Total Contract Amount (current value, currency, exchange rate and US\$ equivalent)
<i>[insert year]</i>	<i>[insert amount and percentage]</i>	Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i> Name of Employer: <i>[insert full name]</i> Address of Employer: <i>[insert street/city/country]</i> Reason(s) for suspension or termination: <i>[indicate main reason(s) e.g. for GBV/ SEA breaches]</i>	<i>[insert amount]</i>
<i>[insert year]</i>	<i>[insert amount and percentage]</i>	Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i>	<i>[insert amount]</i>

	Name of Employer: <i>[insert full name]</i> Address of Employer: <i>[insert street/city/country]</i> Reason(s) for suspension or termination: <i>[indicate main reason(s)]</i>	
...	<i>[list all applicable contracts]</i>	...
Performance Security called by an employer(s) for reasons related to ESHS performance		
Year	Contract Identification	Total Contract Amount (current value, currency, exchange rate and US\$ equivalent)
<i>[insert year]</i>	Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i> Name of Employer: <i>[insert full name]</i> Address of Employer: <i>[insert street/city/country]</i> Reason(s) for calling of performance security: <i>[indicate main reason(s) e.g. for GBV/ SEA breaches]</i>	<i>[insert amount]</i>

Appendix to Technical Part

Form FIN – 3.1:

Financial Situation and Performance

[to be filled for the Bidder and for each partner of a Joint Venture]

Bidder's Name: _____

Date: _____

JV Member's Name _____

ICB No. and title: _____

Page _____ of _____ pages

1. Financial data

Type of Financial information in (currency)	Historic information for previous _____ years, _____ (amount in currency, currency, exchange rate*, USD equivalent)				
	Year 1	Year 2	Year 3	Year 4	Year 5
Statement of Financial Position (Information from Balance Sheet)					
Total Assets (TA)					
Total Liabilities (TL)					
Total Equity/Net Worth (NW)					
Current Assets (CA)					
Current Liabilities (CL)					
Working Capital (WC)					
Information from Income Statement					
Total Revenue (TR)					

Profits Before Taxes (PBT)					
Cash Flow Information					
Cash Flow from Operating Activities					

*Refer to ITB 37 for the exchange rate

2. Sources of Finance

Specify sources of finance to meet the cash flow requirements on works currently in progress and for future contract commitments.

No.	Source of finance	Amount (US\$ equivalent)
1		
2		
3		

3. Financial documents

The Bidder and its parties shall provide copies of financial statements for _____ years pursuant Section III, Evaluation and Qualifications Criteria, Sub-factor 2.3.1. The financial statements shall:

- (a) reflect the financial situation of the Bidder or in case of JV member, and not an affiliated entity (such as parent company or group member).
- (b) be independently audited or certified in accordance with local legislation.
- (c) be complete, including all notes to the financial statements.
- (d) correspond to accounting periods already completed and audited.

- ☐ Attached are copies of financial statements²³ for the _____ years required above; and complying with the requirements

²³ If the most recent set of financial statements is for a period earlier than 12 months from the date of Bid, the reason for this should be justified.

Appendix to Technical Part

Form FIN – 3.2:

Average Annual Dredging Turnover

*[to be filled for the **Bidder** and for each partner of a Joint Venture]*

Bidder's Name: _____

Date: _____

JV Member's Name _____

ICB No. and title: _____

Page _____ of _____ pages

		Annual turnover data (construction only)	
Year	Amount Currency	Exchange rate	USD equivalent
<i>[indicate year]</i>	<i>[insert amount and indicate currency]</i>		
Average Annual Construction Turnover *			

* See Section III, Evaluation and Qualification Criteria, Sub-Factor 2.3.2. Annual construction turnover calculated as total certified payments received for work in progress or completed, for 5 years. This should be certified by a Chartered Accountant or a Professional with an equivalent internationally recognized title.

Appendix to Technical Part

JOINT VENTURE

Names of all partners of a joint venture
1. Partner in charge
2. Partner
3. Partner

Total value of annual dredging turnover, in terms of work billed to clients, in US\$ equivalent, converted at the rate of exchange at the end of the period reported:

Annual Turnover Data (construction only; US\$ equivalent)*							
Partner	Form 2 page no.	Year 1	Year 2	Year 3	Year 4	Year 5	Average
1. Partner in charge							
2. Partner							
3. Partner							
TOTALS							
Name and address of Bankers to the Joint Venture							

*** to be certified by a Chartered Accountant or a Professional with an equivalent internationally recognized title.**

Appendix to Technical Part**Form FIN-3.3****Financial Resources**

Specify proposed sources of financing, such as liquid assets, unencumbered real assets, lines of credit, and other financial means, net of current commitments, available to meet the total construction cash flow demands of the subject contract or contracts as indicated in Section III, Evaluation and Qualification Criteria

Source of financing	Amount (US\$ equivalent)
1.	
2.	
3.	
4.	

Appendix to Technical Part

Current Commitments / Financial Resources

Form CCC

Current Contract Commitments / Works in Progress

Bidders and each partner to a JVA should provide information on their current commitments on all contracts that have been awarded, or for which a letter of intent or acceptance has been received, or for contracts approaching completion, but for which an unqualified, full completion certificate has yet to be issued.

Current Contract Commitments				
Name of contract	Employer, contact address/tel/fax	Value of outstanding work (current US\$ equivalent)	Estimated completion date	Average monthly invoicing over last six months (US\$/month)
1.				
2.				
3.				
4.				
5.				
etc.				

Appendix to Technical Part

Form EXP - 4.1

General Dredging Experience

[The following table shall be filled in for the Bidder and for each member of a Joint Venture]

Bidder's Name: _____

Date: _____

JV Member's Name _____

ICB No. and title: _____

Page _____ of _____ pages

[Identify contracts that demonstrate continuous construction work over the past [5] years pursuant to Section III, Qualification Criteria and Requirements, Sub-Factor 2.4.1. List contracts chronologically, according to their commencement (starting) dates.]

Starting Year	Ending Year	Contract Identification	Role of Bidder [“Contractor” or “Subcontractor” or “Contract Manager”]
		Contract name: _____ Brief Description of the Works and Services performed by the Bidder: _____ Amount of contract: _____ Name of Employer: _____ Address: _____	
		Contract name: _____ Brief Description of the Works and Services performed by the Bidder: _____ Amount of contract: _____ Name of Employer: _____ Address: _____	
		Contract name: _____ Brief Description of the Works and Services performed by the	

		Bidder: _____ Amount of contract: _____ Name of Employer: _____ Address: _____	
--	--	---	--

Appendix to Technical Part

Form EXP – 2.4.2(a)

Specific Dredging and Contract Management Experience

[The following table shall be filled in for contracts performed by the Bidder, each member of a Joint Venture, and specialist sub-contractors]

Bidder's Name: _____

Date: _____

JV Member's Name _____

ICB No. and title: _____

Page _____ of _____ pages

Work performed as prime Contractor or Sub-Contractor or Management Contractor (in the same name and style) on construction works of a similar nature and volume over the last five years²⁴.
[Attach certificate from the Engineer-in-charge.]

Similar Contract No.	Information			
Contract Identification				
Award date				
Completion date				
Role in Contract	Prime Contractor <input type="checkbox"/>	Member in JV <input type="checkbox"/>	Management Contractor <input type="checkbox"/>	Sub- contractor <input type="checkbox"/>
Total Contract Amount			US\$	
If member in a JV or sub-contractor, specify participation in total Contract amount				
Employer's Name:				
Address:				
Telephone/fax number				
E-mail:				

²⁴ Immediately preceding the financial year in which bids are received.

Appendix to Technical Part**Form EXP – 2.4.2(a) (cont.)****Specific Dredging and Contract Management Experience
(cont.)**

Similar Contract No.	Information
Description of the similarity in accordance with Sub-Factor 2.4.2 (a) of Section III:	
1. Amount	
2. Physical size of required Works and Services items	
3. Complexity	
4. Methods/Technology	
5. Construction rate for key activities	
6. Other Characteristics	

Appendix to Technical Part

Form EXP – 2.4.2(b)

Dredging Experience in Key Activities

Bidder's Name: _____

Date: _____

Bidder's JV Member Name: _____

ICB No. and title: _____

Page _____ of _____ pages

All Sub-contractors for key activities must complete the information in this form as per ITB 33 and Section III, Qualification Criteria and Requirements, Sub-Factor 2.4.2.

1. Key Activity No One: _____

Information				
Contract Identification				
Award date				
Completion date				
Role in Contract	Prime Contractor <input type="checkbox"/>	Member in JV <input type="checkbox"/>	Management Contractor <input type="checkbox"/>	Sub-contractor <input type="checkbox"/>
Total Contract Amount			US\$	
Quantity (Volume, number or rate of production, as applicable) performed under the contract per year or part of the year	Total quantity in the contract (i)	Percentage participation (ii)		Actual Quantity Performed (i) x (ii)
Year 1				
Year 2				
Year 3				
Year 4				

	Information
Employer's Name:	
Address: Telephone/fax number E-mail:	

	Information
Description of the key activities in accordance with Sub-Factor 4.2(b) of Section III:	

2. Activity No. Two

3.

Appendix to Technical Part

DETAILS OF PRODUCTION LEVELS IN KEY DREDGING ACTIVITIES

(Sub-factor of 2.4.2(b) of Section III)

	Name of the Contract	Employer Contact address, Agreement No. and Date	Value	Year	Quantities Executed			
1.				2012-13 2013-14 2014-15 2015-16 2016-17				
2.								
3.								

SAMPLE**Appendix to Technical Part**

Form EXP – 5.0
Quality Requirements
 (Sub-factor of 2.4.3 of Section III)

Sl. No.	Item	Requirement	Compliance Requirement	Submission Requirements	Status of Compliance
2.4.3(a)	ISO 9001-2008/2015 quality management system requirement	Quality Management Certificate issued by the International Organization for Standardization	Must meet requirement	Valid ISO 9001 Certification	Yes/ No - Ref
2.4.3(b)	International Standards for Hydrographic Surveys (IHO)	Experience in atleast one contract during the last 5 years where survey to quantify dredging or other needs assessment has been done	Must meet requirement	Information on atleast one contract using IHO standard survey.	Yes/ No - Ref
2.4.3(c)	OHSAS 18001 - Occupational Health and Safety Assessment Series	Relevant OHSAS certificate and Experience in occupational health and safety management over the last 2 years, starting 1st April 2016.	Must meet requirement	Valid OHSAS certificate	Yes/ No - Ref
2.4.3(d)	ISO 14001: 2004 / 2015 Environmental Management systems	Relevant Environmental management certificate and experience with environmental management systems over the last 2 years, starting 1st January 2016.	Must meet requirement	Valid ISO 14001: 2004 / 2015 certificate	Yes/ No - Ref
2.4.3(e)	International Association of Dredging Companies (IADC) Quality Standards	Membership of IADC / WODA / EADA / CEDA	Must meet requirement	Valid Membership certificate of IADC / WODA / EADA / CEDA	Yes/ No - Ref
2.4.3(f)	Safety Management	Safety Management Certificate for safety of vessels of more	Must meet requirement	Valid SMC certificate	Yes/ No - Ref

	Certificate (SMC)	than 500 GT in compliance with ISM standard (SMC			
2.4.3(g)	Document of Compliance (DOC)	Document of the contractor's safety management system according to the International Management Code for the safe Operation of ships and for pollution prevention.	Must meet requirement	Valid Document of Compliance	Yes/ No - Ref

Appendix to Technical Part

Form.....

(Name of the Project)

**(Declaration regarding tax/duty exemption for materials/ dredging equipment
bought for the work – ITB Clause 14.8)**

(Bidder's Name and Address)

To:
(Name of the Employer &
address)

Dear Sir:

Re: [Name of Work].....

Certificate for Import/Procurement of Goods/Construction Equipment

Government Order/Circular Number under which tax/duty Exemption is being sought:

.....

1. We confirm that we are solely responsible for obtaining tax/duty waivers which we have considered in our bid and in case of failure to receive such waivers for reasons whatsoever, the employer will not compensate us.
2. We are furnishing below the information required by the Employer for issue of the necessary certificates in terms of the Government of India's relevant Notifications.
3. The goods/dredging equipment for which certificates are required are as under:

Items (insert the list suitably for each specific work)*	Make/ Brand Name	Capacity [where applicable]	Quantity	Value	State whether it will be procured locally or imported [if so from which country]	Remarks regarding justification for the quantity and their usage in works.
Goods						
Dredging Equipment						

4. We agree that no modification to the above list is permitted after bids are opened.

5. We agree that the certificate will be issued only to the extent considered reasonable by the Employer for the work, based on the Bill of Quantities and the dredging program and methodology as furnished by us along with the bid.
6. We confirm that the above goods and dredging equipment will be exclusively used for the above work and the dredging equipment will not be sold or otherwise disposed of in any manner for a period of five years from the date of acquisition.

Date: _____

Place: _____

(Signature) _____

(Printed Name) _____

(Designation) _____

(Common Seal) _____

[This certificate will be issued within 60 days of signing of contract and no subsequent changes will be permitted.]

**** Modify the above to suit the requirements given in Government of India's Notification as current of date of bidding.***

Appendix to Technical Part

Form of Bid Security (Bank Guarantee)

[Guarantor letterhead or SWIFT identifier code]

_____ *[Bank's Name, and Address of Issuing Branch or Office]*

Beneficiary: _____ *[Name and Address of Employer]*

ICB No and Title: _____ *[insert number and title of bidding process]*

Date: _____ *[Date of issue]*

BID GUARANTEE No.: _____ *[Insert guarantee reference number]*

We have been informed that _____ *[name of the Bidder]*²⁵ (hereinafter called "the Bidder") has submitted or will submit to you its bid dated _____ (hereinafter called "the Bid") for the execution of _____ *[name of contract]* under Invitation for Bids No. _____ ("the IFB").

Furthermore, we understand that, according to your conditions, Bids must be supported by a Bid guarantee.

At the request of the Bidder, we _____ *[name of Bank]*, as guarantor, hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of _____ *[amount in figures]* (_____) *[amount in words]*²⁶ upon receipt by us of your complying demand supported by a written statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that either the Bidder:

- (a) has withdrawn its Bid during the period of Bid validity specified by the Bidder in the Letter of Bid, or any extension thereto provided by the Bidder; or
- (b) having been notified of the acceptance of its Bid by the Employer during the period of Bid validity or any extension thereto provided by the Bidder, (i) has failed or refused to execute the Contract Agreement or (ii) has failed or refused to furnish the Performance Security and, if required, the Environmental, Social, Health and Safety (ESHS) Performance Security, in accordance with the Instructions to Bidders (ITB) of the Bidding document.

This guarantee will expire: (a) if the Bidder is the successful Bidder, upon our receipt of copies of the contract agreement signed by the Bidder and the performance security and, if required, the

²⁵ In the case of a JV, the bidder should be stated as "a Joint Venture consisting of, and".

²⁶ The Applicant should insert the amount of the guarantee in words and figures. This figure should be the same as shown in Clause 19.1 of the Instructions to Bidders.

Environmental, Social, Health and Safety (ESHS) Performance Security, issued to you in relation to such contract agreement; or (b) if the Bidder is not the successful Bidder, upon the earlier of (i) our receipt of a copy of your notification to the Bidder of the results of the Bidding process; or (ii) forty-five days after the end of the Bid Validity Period.

Consequently, any demand for payment under this guarantee must be received by us at the office indicated above on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758.

[signature(s)]

Note: All italicized text is for use in preparing this form and shall be deleted from the final product.

Letter of Bid – Financial Part

INSTRUCTIONS TO BIDDERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE DOCUMENT

The Bidder must prepare this Letter of Bid on stationery with its letterhead clearly showing the Bidder's complete name and business address.

Note: All italicized text in black font is to help Bidders in preparing this form.

Date: _____

ICB No.: _____

Invitation for Bid No.: _____

Alternative No.: _____

To: _____

We, the undersigned, hereby submit the second part of our Bid, the Bid Price and Bill of Quantities. This accompanies the Letter of Technical Part.

In submitting our Bid, we make the following additional declarations:

- (a) Our bid shall be valid for a period of _____ days from the date fixed for the bid submission deadline in accordance with the Bidding Document, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;

[Insert one of the options below as appropriate]

- (b) Our bid price, excluding any discounts offered in item (d) below, is composed of the following components:

Table – 1		
Providing assured depth and width (as specified) of navigational channel in Mahendrapur-Barh (71 km) stretch of National Waterway - 1 in each year of the Contract Period	Year wise Lump Sum prices Quoted shall be inclusive of ESHS & GST. (% age of GST considered shall to be indicated separately)	
	In figures	In words
Year 1 with LAD 2.5m & width 35M		
Year 2 with LAD 2.5m & width 35M		
Year 3 with LAD 3m & width 45M		
Year 4 with LAD 3m & width 45M		

Year 5 with LAD 3m & width 45M		
Total for 5 years		

(c)

(d) The discounts offered and the methodology for their application is:

(i) The discounts offered are: *[Specify in detail each discount offered.]*(ii) The exact method of calculations to determine the net price after application of discounts is shown below: *[Specify in detail the method that shall be used to apply the discounts];*

Employer's Country

(e) We have paid, or will pay the following commissions, gratuities, or fees with respect to the bidding process or execution of the Contract: *[insert complete name of each Recipient, its full address, the reason for which each commission or gratuity was paid and the amount and currency of each such commission or gratuity]*

Name of Recipient	Address	Reason	Amount
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

(If none has been paid or is to be paid, indicate "none.")

Name _____ In the capacity of _____

Signed _____

Duly authorized²⁷ to sign the bid for and on behalf of ²⁸ _____

Dated on _____ day of _____, _____

²⁷ Person signing the Bid shall have the power of attorney given by the Bidder to be attached with the Bid

²⁸ In the case of the Bid submitted by joint venture specify the name of the Joint Venture as Bidder

Appendix to Financial Part

Appendix to Bid

Schedule of Adjustment Data

[In Tables A, B, and C, below, the Bidder shall (a) indicate its amount of local currency payment, (b) indicate its proposed source and base values of indices for the different foreign currency elements of cost, (c) derive its proposed weightings for local and foreign currency payment, and (d) list the exchange rates used in the currency conversion. In the case of very large and/or complex contracts, it may be necessary to specify several families of price adjustment formulae corresponding to the different works involved.]

Table A. Local Currency

Index code*	Index description*	Source of index*	Base value and date*	Bidder's related currency amount	Bidder's proposed weighting
NA	Nonadjustable	—	—	—	A: <u>0.65</u> *
L	Labour — All India Consumer Price Index (CPI) for industrial workers	Labour Bureau, Ministry of Labour & Employment, Government of India	28 days preceding the bid submission date		B: <u>0.23</u>
F	High Speed Diesel — All India Wholesale Price Index (WPI)	Office of the Economic Advisor to the Govt. of India, Ministry of Commerce and Industry	28 days preceding the bid submission date		C: <u>0.12</u>
Total					1.00

Appendix to Financial Part

Table B. Foreign Currency

State type: [If the Bidder wishes to quote in more than one foreign currency, this table should be repeated for each foreign currency.]

Index code	Index description	Source of index	Base value and date	Bidder's related source currency in type/amount	Equivalent in FC1	Bidder's proposed weighting
NA	Nonadjustable	—	—	—		A: <u>0.65</u> *
L	Labour — All India Consumer Price Index (CPI) for Industrial workers		28 days preceding the bid submission date			B: <u>0.23</u>
F	High Speed Diesel — All India Wholesale Price Index (WPI)		28 days preceding the bid submission date			C: <u>0.12</u>
Total						1.00

Appendix to Financial Part

Table C. Summary of Payment Currencies

For[insert name of Section of the Works]

[Separate tables may be required if the various sections of the Works (or of the Bill of Quantities) will have substantially different foreign and local currency requirements. The Employer should insert the names of each Section of the Works.]

Name of payment currency	A Amount of currency	B Rate of exchange (local currency per unit of foreign)	C Local currency equivalent $C = A \times B$	D Percentage of Total Bid Price (TBP) $\frac{100 \times C}{NBP}$
Local currency _____		1.00		
Foreign currency #1 _____				
Foreign currency #2 _____				
Foreign currency # _____				
Net Bid Price				100.00
Provisional sums expressed in local currency				
BID PRICE				

Appendix to Financial Part**Table: Alternative B**

To be used only with Alternative B Prices directly quoted in the currencies of payment. (ITB 15.1)

Summary of currencies of the Bid for _____ *[insert name of Section of the Works]*

<i>Name of currency</i>	<i>Amounts payable</i>
Local currency: _____	
Foreign currency #1: _____	
Foreign currency #2: _____	
Foreign currency #3: _____	
Provisional sums expressed in local currency _____	

Appendix to Financial Part

Bills of Quantities

The bid includes the following Bills of Quantities:

- **Bill 1: Yearwise Lump-sum prices Including ESHS**
-

Appendix to Financial Part

1. Bill of Quantities for Yearwise Lump-sum prices (including ESHS)

Preamble

- a. The Bill of Quantities for Yearwise Lump-sum prices Including ESHS shall be read in conjunction with the Instructions to Bidders, Conditions of Contract, Specifications and the Drawings.
- b. This Bill of Quantities is the basis for payment of all payments to and from Employer's Country, set-up and site establishment.
- c.
- d. Payment shall be made in accordance with compliance to the actual program schedule for mobilization/ demobilization, set-up and establishment.
- e. The unit rates and prices bid in the priced Bill of Quantities shall, except in so far as is otherwise provided under the Contract, include all plant and equipment, transport and operation, labor, supervision, materials, erection, maintenance, insurance, profit, taxes and duties, together with all general risks, liabilities and obligations set out or implied in the Contract and not provided for separately under details of Bill of Quantities. References to the relevant sections of the Contract documentation including the Technical Specifications shall be made before entering rates or prices against each item in the Bill of Quantities.
- f.
- g. The method of measurement of completed work for payment shall be in accordance with the measurement and payment provisions of the relevant section in the Specifications.

Bill No 1

Sl. No.	Providing assured Least Available Depth (LAD) and minimum bottom width of navigational channel as specified in Mahendrapur – Barh (71 km) stretch of National Waterway – 1 in each year of the Contract period	Year wise Lumpsum Price shall be quoted including ESHS & GST		NPV Factor (Based on discount Factor of 10)*	NPV of quoted bid price for Maintenance Services Col 2 x Col 4 (in Rs)** <i>[only for evaluation purpose]</i>
	(1)	(2)	(3)	(4)	(5)
		In Figures	In Words		In Figures
1	Year 1			0.909	
2	Year 2			0.826	
3	Year 3			0.751	
4	Year 4			0.683	
5	Year 5			0.621	

Sl. No.	Providing assured Least Available Depth (LAD) and minimum bottom width of navigational channel as specified in Mahendrapur – Barh (71 km) stretch of National Waterway – 1 in each year of the Contract period	Year wise Lumpsum Price shall be quoted including ESHS & GST	NPV Factor (Based on discount Factor of 10)*	NPV of quoted bid price for Maintenance Services Col 2 x Col 4 (in Rs)** [only for evaluation purpose]
TOTAL AMOUNT ²⁹ FOR 5 YEARS – In Figures				In Words
Notes: * Employer shall modify the NPV factors listed in this column, calculated for the discount factor specified in BDS 35.2 (f). Values listed in the above table are shown as an illustration for the discount factor is 10%. ** NPV of quoted price for the work is calculated as specified in ITB/BDS 35.2 (f) for evaluation purposes only. The e-procurement system automatically calculates the NPV and populates the respective priced bill of quantities.				

²⁹ Total Amount (inclusive of all Taxes & Cess and Seigniorage charges)

Section V. Eligible Countries

Eligibility for the Provision of Goods, Works and Services in Bank-Financed Procurement

In reference to ITB 4.7 and 5.1, for the information of the Bidders, at the present time firms, goods and services from the following countries are excluded from this Bidding process:

Under ITB 4.7 (a) and 5.1: *None*

Under ITB 4.7 (b) and 5.1: *None*

PART 2 – Works Requirements

Section VI. Specifications

This Section contains the Specification, the Drawings, and supplementary information that describe the Services and Works to be procured. The Specifications have to be prepared specifically for each contract to be procured and shall also include the environmental, social (including sexual exploitation and abuse (SEA) and gender based violence (GBV)), health and safety (ESHS) requirements to be satisfied.

Section VI:

A. Specifications

This Section contains the specifications and supplementary information that describe the services and works to be procured. It is divided into two (2) parts:

Part A: Description of the Works and Services

Deleted

Deleted

Deleted

Deleted

Deleted

Part G: Environmental Social, Health and Safety (ESHS) Management and EMP

B. Drawings

C. Annexures

Annexure A: Water levels in the project Waterways

Annexure B: Studies of changes to the River Course in the last ten years

Annexure C: River reach images

Part A: Description of the Works and Services

OBJECTIVE OF WORKS AND SERVICES

1. Introduction Inland Waterways Authority of India (IWAI) is a statutory body set up in 1986 under the Ministry of Shipping, Road Transport & Highway, Govt. of India. The Authority is entrusted with development, maintenance and management of National Waterways for shipping and navigation.

The Ganga-Bhagirathi-Hooghly river system for a length of 1620 km connecting Haldia (Sagar) - Kolkata - Bhagalpur - Munger - Barh - Patna - Ghazipur - Varanasi – Allahabad was declared as National Waterway 1 (NW-1) in the year 1986. There is considerable difference between flood and lean season discharges and water level.
2. Objective **The Objective of the Works and Services is to maintain Least Available Depth (LAD) and bottom width of 2.5 m & 35 m respectively for the first two years & 3.0 m & 45 m respectively for the 3rd, 4th and 5th year of the contract in Mahendrapur – Barh reach of NW1 by dredging and bandalling as well as erection and maintenance of navigational aids (day channel markings).**
3. Scope of Services The Contractor will have to identify the best course of Navigation channel from time to time and remove shoals {shallow area w.r.t assured least available depth (LAD)}.

Maintenance of a navigation channel of 35m /45m width and a depth of 2.5 m and 3.0 m in subsequent years throughout the stretches as specified can be done by the combination of dredging and Bandalling system.

The scope of the contract shall include:
 - i. To Provide and maintain assured LAD of 2.5 m and Channel bottom width of 35 m with naturally side slopes during the first two years from the date of commencement of services.
 - ii. To Provide and maintain assured LAD of 3.0 m and Channel bottom width of 45 with naturally side slopes during the subsequent three years.
 - iii. To install and maintain the Day Channel Marking (Navigational Aids) throughout the Contract Period.
 - iv. Assistance to Normal barge and vessels / crafts movement in the channel during dredging operation.
4. Technical Specifications The material to be dredged is sand, silt, soft clay or a mixture of these materials, compact and sediment clay. If the dredger meets any strata such as boulders, ropes, sand stone, stone debris, wooden logs etc., such patches will also continue to be tackled with a modified cutter or cutter teeth like serrated etc. capable for dredging such materials for a length of up to 20 m. Further steps to be taken, should be decided mutually

between the Contractor and the Engineer-in-charge, if hard strata exists beyond 20 m.

To achieve the LAD of 2.5 / 3.0 m and channel bottom width of 35m / 45m the bidder / Contractor shall take into account tolerance of + 1 m from each edge of the channel and tolerance of +30 cm on the depth. There is however, no restriction on maximum width of the channel which may naturally be available. And no additional payments shall be admissible to this effect.

5. WATER LEVELS

The vertical water level difference is about 4-10 m. The current in the river ranges from 0.5 to 4 m/s. However, the current during the lean season seldom exceeds 1.5 m/s. Details of the water levels in Mahendrapur – Barh stretch are provided in **Annexure A**.

6. MEANDERING

There has been substantial meandering and details of changes to the river course in past ten years are given in **Annexure B**.

7. SHOALS

There is substantial braiding in the river which during lean season (Oct / Nov to June) results into shoals at various places which hinder navigation. 2015 Bathymetric survey shows around 26 shoal locations with a total dredge length of about 15.72 km, in Mahendrapur-Barh Stretch with depths less than 3.0 m. The location of shoals in Mahendrapur-Barh stretch is provided in **Annexure C**.

8. REACH & CHAINAGE

Table 2: Reach-wise Dredging Volume and No. of Shoals					
Reach	Description	Chainage	No. of Shoals	Length of Shoals	
				Dredging >1m	Dredging <1m
22	Mahendrapur-Semaria	(820-853)	07	6037	3160
23	Semaria-Barh	(853-891)	19	9682	5190
Total			26	15719	8350

9. QUANTITY OF DREDGING

The quantity of dredging and length of bandal are to be ascertained by the Contractor as per site conditions and own resources. The Bidder may also take into consideration data available in IWAI website, which gives details of LAD in the last ten years.

However, it is a fact that the quantum of dredging and bandalling varies year to year based on the condition of channel after flood season and it may vary to the tune of + 10% to 25%. It is advised that the Bidder should collect necessary information, data, navigational charts of NW-1 or any other site information related to availability of men, material, equipment's etc. and familiarize himself with the site conditions before bidding.

The indicative annual maintenance task to achieve assured LAD and specified Channel bottom widths (dredging and bandalling) are given in **Table 1**. These are based on average dry flow season and, an allowance of natural for side slopes.

Indicative amounts for Bandalling include work to erect and re-erect or relocate the same as and when necessary. Bandalling is typically deployed in length of 100-500 m at each deployment location. The number of bandalling location indicated in Table 1 are based on the assumption that bandalling will be required where a shoal is present.

However, the number of locations are tentative and shall be selected suitably subjected to the desired benefits in light of local conditions.

Dredged and Bandalling work is not normally required to be done during flood period (normally from June to September or October). The reach wise dredging volumes and number of shoals are given in Table 2.

9.1 Reach Wise Shoals

1: Location of Shoals are given below:					
	CRS:WGS84 UTM 45 North				DREDGE LENGTH (m)
	START		END		
	X	Y	X	Y	
22	418770.6902	2800413.5775	418189.5593	2801160.3300	946
	413910.2361	2805137.2555	413663.7209	2805219.3432	260
	413366.6229	2805257.9170	413346.6405	2805258.7576	20
	413126.7960	2805253.7574	413027.0567	2805246.5631	100
	411998.9650	2805098.7656	411299.3445	2804296.0880	1065
	405870.0527	2801070.5995	404350.4505	2802035.1908	1800
	402063.4674	2802768.4764	400824.7619	2804137.2360	1846
23	398811.8305	2807701.3435	398033.9882	2808054.2913	854
	396001.0404	2809299.7843	394757.6021	2809742.7946	1320
	393997.4285	2809990.6487	393939.0845	2810004.6477	60
	393652.8226	2810049.6397	393622.9655	2810052.5648	30
	393563.1532	2810057.1557	391456.7689	2810084.6738	2107
	388566.6020	2811486.8723	388558.8183	2811493.1503	10
	388505.4045	2811538.3834	388044.5870	2812120.5255	742
	388040.8819	2812129.8138	387980.6996	2812288.7639	170
	387974.0958	2812307.6422	387947.6133	2812393.6423	90
	387565.7099	2813672.8496	387169.4752	2814074.6708	564
	386969.6437	2814224.8918	386822.8430	2814360.0097	200
	386589.9726	2814778.6829	386856.0604	2815865.3325	1119
	386855.3803	2816420.5468	386617.4519	2816938.0292	570
	380790.3636	2820585.4245	380134.9283	2821863.8739	1437
	380123.6606	2821891.6775	380097.3694	2821956.5525	70
	372989.1500	2823021.7209	372823.5719	2822929.0635	190
	372696.7108	2822831.7250	372666.0995	2822805.9772	40
	372658.4467	2822799.5402	372621.1396	2822766.2648	50
	372392.9905	2822542.0482	372351.7544	2822498.4640	60
	418770.6902	2800413.5775	418189.5593	2801160.3300	946

9.2 Shoals Cum Bandals

Table 1: Indicative Annual Maintenance Task (Dredging and Bandalling) based on 2015 bathymetric and topographic survey and considering average flow conditions)						
Work Description	Year					Total
	1	2	3	4	5	
	2.5 m LAD & 35 m width		3.0 m LAD & 45 m width			
Dredging cubic meters)	410151	410151	803928	803928	803928	323,23,086
Shoal Nos	26	26	26	26	26	
Bandalling Length (m)	2600	2600	2600	2600	2600	
Length of bandalling is taken @100m at each shoal. Actual length required may vary depending upon site conditions and bandalling may not be required at all the shoals.						

10. Dredging

Dredging is to be carried out with suitable cutter suction dredgers having capacity of 300-650 cum solids per hour in shallow patches. Cutter suction dredgers can also be supported by backhoe dredgers, water injection dredgers and plough dredgers. Maintenance of a navigation channel of 35 m / 45 m width with naturally side slope throughout the stretches as specified can be done by the combination of dredging and bandalling system.

The maintenance methodology shall be determined by the selected Contractor taking into account the nature of the river and other

environmental characteristics, including the nature, location and size of shoals, and the contract period.

Sufficient number of manpower should be deployed by the Contractor on the dredgers and on other works throughout the contract period at his cost.

11. Dredgers

Contractor shall not change the type, numbers, size and make of dredgers indicated in its Bid without the prior written approval of the Engineer-in-charge.

Contractor shall mobilize additional resources like dredger, equipment's, etc. at his cost for maintaining the assured depth of 2.5/3.0 m in the entire stretch during the entire contract period.

In case of slow progress of work, the Engineer-in-charge may direct Contractor to deploy additional dredgers for completion of the work in time and in such case Contractor is bound to mobilize additional dredgers without any cost to the Employer.

If the dredger goes out of order, the Contractor shall arrange for its replacement with a dredger of equivalent capacity.

Contractor shall not be eligible for payment of costs involved in shifting the dredger and its accessories from one shoal to another shoal or from one area to another area in Sultanganj-Mahendrapur sector of NW-1.

12. Navigational Aids (Day channel Marking)

- i. Specified day channel markings are an essential component of navigation through the channel which is to be maintained by the Contractor under this contract. Contractor is advised to acquaint himself adequately with various types of channel marks specified by IWAI under regulation for Prevention of collision of national waterways regulations, 2002.
- ii. The inspection of the navigational channel for certifying the maintenance of assured LAD will also be carried out in the channel thus marked by the Contractor. The inland vessels (the end users) also use these channel marks as standard guiding aids for safe navigation.
- iii. The number and type of aids to navigation to be provided shall be based on the volume of traffic and degree of risk associated with navigation on the river route. Further, minimum number of day navigational marks is to be erected in the maintained channel during the lean and flood season are 220 & 110 respectively in the way it is safe for navigation and can be easily identified as navigation route by the end users during their course of navigation without any assistance.
- iv. The contract shall also include the maintenance of navigational aids to navigation delineating river fairways.
- v. The Contractor will also be required to deploy its own pilots for assisting cargo and passenger / tourist vessels for their movement based on written request by the end users. For this, the Contractors can charge the fee from the users as per IWAI's regulation.
- vi. In case any cargo vessel is grounded due to inadequacy of depths or channel marking, the service provider shall make arrangement for rescue of the vessels by providing rescue tugs at his own cost.

- vii. EIC has the right to take appropriate action if the contractor fails to satisfy EIC about number type and quality of channel markings or if an end user complains in writing with Prima facie evidence about absences, inadequacy or mistakes in channel marking erected by the contractor under this contract.

13. Day channel marking

Some important aspects of channel marking to be erected and maintained by the Contractor to meet the requirements of this contract are as follows:-

- A. The responsibility of the contract includes erection, supervision, safe keeping, re - erection and maintenance of the channel marks and other allied works and the provision of all labour, materials, mechanized boats, temporary works and everything whether of a temporary or permanent nature required for safe navigation as specified or reasonably to be inferred from the contract.

- B. For marking the channel, the material likely to used shall be bamboos, bamboo strips, bamboo mats, coir string, straw, lime, etc., above are only indicative and not mandatory.

Bidder may propose any better alternative to be used as material having better life and lesser maintenance and replacement costs.

The acceptance of such alternative material proposed by the bidder shall be subject to approval of the Employer. The materials and other tools and plants as may be required are to be arranged at different sectors at Contractor's own cost.

- C. Marks shall have to be erected at suitable places as per requirement of E-I-C or his representative and also as per Enclosure-3 herewith. In case, any marks are placed wrongly the same shall be rectified by the Contractor at his own cost.
- D. The Contractor shall at his risk and cost, make all arrangements for locating the navigable channels, sand churs, snags, etc., by means of regular soundings along the river and change the position of the marks to indicate the navigable channel by the end users during operating in the stretch.
- E. All the marks termed as right hand marks, left hand marks, channel closing marks and snags (for lean season) and right hand transit mark and left hand transit mark (for flood season) are of variable nature and this can be determined only after conducting the survey in the field. In case of additional requirement of marks, the Contractor shall erect the same without additional cost.
- F. The Contractor shall be liable to bear the expenditure of all manpower, material and equipment required for the work at his cost. He must, therefore, have thorough knowledge about the work prior to submission of his rates in the bid. No extra claim in this regard shall be entertained once the contract has been awarded. The marks shall be maintained during the entire contract period. The material used for channel marking thereafter shall have to be removed by the Contractor at his risk & cost.

- G. Bamboo Harauti of 18 to 23 cm circumference at 45 cm (1'-6") from the bottom about 7 to 7.5 mtrs. long are required for marking the channel. The marks shall be driven properly by using wooden hammer up to at least (one) 1 meter below the ground level. Submerged sand chars, submerged high banks and other possible navigational obstructions shall be duly marked. Beginning and end of a channel through churs shall be prominently marked using bamboo poles with bamboo mats reinforced with bamboo strips for being located. These shall also be painted with lime. The reference of marking shall be commenced from upstream of the river and marks shall be put up on the right hand side of the channel or the left hand side of channel as given in Enclosure 3.
- H. The navigable channel shall be at least 35 m / 45 m wide and 3.0 m deep throughout the year. Marks shall be erected after taking measurement across the river by marked bamboo poles.
- I. Navigational channel in the crossing from one bank to another shall be marked with transit marks. Where straight reach is available, marking shall be placed at longer distance but shall be visible from first mark. For marking the main channel passing through the shoal / churs the marks shall be erected in water close to the main navigational channel.
- J. All snags shall be marked with proper care. During the flood a number of trees, trunks & other permanent structures which are uprooted in the U/S of the river, flows down & get strangles at marking places even some time in the main channel. For safety of navigation, these obstructions known as snags should be detected first & marks properly. For this special marks (as mid water snag marks, left & right hand snag marks) are being used which may be seen in Enclosure-3. If they are deep in water lying on river bed but allowing sufficient navigation depth in lean period then marking is done by a navigation buoy made of a sealed 15 liter empty oil tin painted red, tied with a wire rope & sunk by a sinker.
- K. The materials used on the work shall be of good quality conforming to the specifications laid in the contract. The work shall be carried out in a workman like and expeditious manner and the quality of work at each stage shall be monitored by the Engineer-in-charge or its representatives. The Engineer-in-charge's decision as to the quality of such materials and work shall be final and binding on the Contractor.
- L. The Contractor shall bear full responsibility for the intimation to the Engineer-in-charge forthwith of any accident and take all necessary action required under relevant Acts and Rules, Marine Rules etc., as the case may be. The Contractor shall also report such accidents to the Competent Authority wherever such reports are required under rules. The Engineer-in-charge or his representative must however, be informed immediately in the event of any marine accident. The Contractor should also bear full responsibility for all accident, damages or injury caused to any of the Employer's employees, cause of which is established to be attributable to the Contractor's carelessness or negligence.

14. Bandalling

The Contractor shall for the purpose of maintenance of the required LAD and channel bottom width, undertake erection and maintenance of bandals as under, in addition to dredging works and other methods that may be employed by him.

- A. Bandals of required length are erected at shoal sites to increase the depth of main channel for the purpose of navigation or to maintain desired depth in dredged channel. It will include erection, supervision, safe keeping, re-erection and maintenance of bandals and other allied works complete with all labour, materials, boats, temporary and permanent works, taxes, levies, duties etc. as specified in the contract.
- B. Bandals are fabricated using new bamboos, mats and coir string. Length of each unit of bandal is normally about 30 m/ 15 m and size of screen is 1.2 m x 0.9 m. These bandals are placed at 30 degree to 45 degree angle to the direction of current driving bamboo poles. The bamboo mats are placed in such a way that only 10 cm. is above the water level and rest inside the water. It is required to be maintained at appropriate level by lowering/raising the mats depending on the change in water level.
- C. Bandal needs to be erected according to the drawings given in Enclosure 1 & 2. In A type bandal the 90 cm side of the mat will be in vertical position (i.e. 80 cm. inside water and 10 cm. above) and in B type bandal 120 cm. side is in vertical position
- D. New harauti/ Jati bamboo of 18-23 cm circumference at 45 cm from the bottom and 7 to 7.5 m long are used for horizontal, vertical and side support. The vertical bamboo pins are driven in proper line with spacing of 60 cm as per drawings enclosed. The number of bamboos required for 15 m length/30 m length are as under:

For 15 m – 40 Nos. and For 30 m – 80 Nos.

New bamboo mats 1.2 m x 0.9 m made of minimum 1 mm thick and minimum 1.5 to 2 cm. wide bamboo strips closely woven, tied together with the help of bamboo strips and coir string are fixed on vertical bamboo pins of bandal to act as screen as per drawing and direction of EIC. The no. of mats & quantity of thick and thin coir string required during erection of 15 m and 30 m length of bandals generally are as under :

Bandalling**Continued**

<u>For 30 m</u>	<u>For 15m</u>
Bamboo mats - 56 nos.	Bamboo mats - 28 nos.
Coir string (thick) – 10 kgs.	Coir string (thick) – 5 kgs.
Coir string (thin) – 5 kgs.	Coir string (thin) – 2.5 kgs.

- A. The bandals of specified length can be erected at the sites as per requirement to maintain the navigational channel/depth.
- B. Erected / re-erected bandals are maintained depending upon the requirements. After certain period sand chur may appear behind one or more length of bandal at one end of alignment of bandal. In that case such one or more units of bandal may require to be removed and re-erected at other alignment.
- C. During maintenance period, materials of bandal (e.g. bamboo, bamboo mats, coir strings) is changed due to decay of material only.
- D. For effective bandaling, sufficient anticipated amount of materials (e.g. bamboo, bamboo mats, coir string) is generally be stored at each bandal site so that during maintenance materials may be

replaced without any loss of time. Replacement of decayed mats is completed at shortest period and no part of bandal is kept without mats at any time.

- E. Sometimes it may be observed that the required depth of main channel is achieved at any shoal by erecting bandals, but after a period of time, continuing the bandals is no longer considered necessary. In that case the erected bandals are required to be removed.

Re-erection of bandal at new places is done with the help of salvaged materials obtained from the removed bandal and by using other fresh materials e.g. bamboo, bamboo mats and coir string, by substituting whatsoever may be found damaged in the process of re-erection.

Adequate number of boats / logistics are arranged by for erection and maintenance of the bandals at each site are to be arranged by the Contractor. Contractor may use power boats/ launches for timely erection and proper maintenance of bandal.

The above details of bandals are given only for the guidance of Contractor. However, the Contractor is free to alter the specification of bandals. In fact Contractor is also free to employ every other method of aid for maintenance of targeted LAD. This may include any type of temporary or semi-permanent river training works. It is to be reiterated that for performance of this contract or for payments to be made under the contract the only objective / measurement to be made is the LAD recorded on specified joint inspections and not either the quantity of dredging or bandalling or channel marking or anything else.

But if the Contractor wishes to employ any other method (other than traditional dredging or bandalling), he has to request for the same with sufficient details and obtain written permission from Engineer-in-charge for every innovative work. If such works are found prima facie practical, they will be accepted and encouraged.

15. Monitoring

Monitoring shall be undertaken by the Employer. This shall be done directly and or through an appointed Supervision Consultant. This may also include monitoring by placing survey sounders on select merchant ships passing through the part of the route. Any supervision and monitoring shall not relieve the Contractor of his obligations under the Contract, including his duty to make his own surveys.

16. Clearances (horizontal & vertical)

The Contractor shall inspect and ascertain himself details of horizontal & vertical clearances available at bridges/locks etc. within the National Waterway from the view point of safe mobilization / demobilization of their various equipment's to the specified dredging locations.

The Contractor shall be liable to bear the expenditure of all manpower, material and equipment required for all the related work. No extra claim in this regard shall be entertained once the contract has been awarded.

17. Environmental Management Plan

The Contractor shall be required to dispose of dredged materials complying with environmental consideration as detailed under Environmental Management Plan, which has been published on IWAI's website (<http://www.iwai.nic.in>) and same is appended to the bidding document as Part G

Part G**Environmental, Social, Health and Safety (ESHS)
Metrics for Progress Reports**

Metrics for regular reporting:

- a) Environmental incidents or non-compliances with contract requirements, including contamination, pollution or damage to ground or water supplies;
- b) Health and safety incidents, accidents, injuries and all fatalities that require treatment;
- c) Interactions with regulators: identify agency, dates, subjects, outcomes (report the negative if none);
- d) Status of all permits and agreements:
 - i. work permits: number required, number received, actions taken for those not received;
 - ii. status of permits and consents:
 - *list areas/facilities with permits required, dates of application, dates issued (actions to follow up if not issued), dates submitted to resident engineer (or equivalent), status of area (waiting for permits, working, abandoned without reclamation, decommissioning plan being implemented, etc.);*
 - *list areas with landowner agreements required, dates of agreements, dates submitted to resident engineer (or equivalent);*
 - *identify major activities undertaken in each area this month and highlights of environmental and social protection (boundary marking, traffic management, decommissioning planning, decommissioning implementation);*
- e) Health and safety supervision:
 - i. safety officer: number days worked, number of full inspections & partial inspections, reports to construction/project management;
 - ii. number of workers, work hours, metric of PPE use (percentage of workers with full personal protection equipment (PPE), partial, etc.), worker violations observed (by type of violation, PPE or otherwise), warnings given, repeat warnings given, follow-up actions taken (if any);
- f) Worker accommodations:
 - i. number of expats housed in accommodations, number of locals;
 - ii. date of last inspection, and highlights of inspection including status of accommodations' compliance with national and local law and good practice, including sanitation, space, etc.;
 - iii. actions taken to recommend/require improved conditions, or to improve conditions.
- g) HIV/AIDS: provider of health services, information and/or training, location of clinic, number of non-safety disease or illness treatments and diagnoses (no names to be provided);
- h) gender (for expats and locals separately): number of female workers, percentage of workforce, gender issues raised and dealt with (cross-reference grievances or other sections as needed);

- i) training:
 - i. number of new workers, number receiving induction training, dates of induction training;
 - ii. number and dates of toolbox talks, number of workers receiving Occupational Health and Safety (OHS), environmental and social training;
 - iii. number and dates of HIV/AIDS sensitization training, no. workers receiving training (this month and in the past); same questions for gender sensitization, flaglady/flagman training.
- j) environmental and social supervision:
 - i. environmentalist: days worked, areas inspected and numbers of inspections of each (e.g. road section, work camp, accommodations, spoil areas, swamps, forest crossings, etc.), highlights of activities/findings (including violations of environmental and/or social best practices, actions taken), reports to environmental and/or social specialist/construction/site management;
 - ii. sociologist: days worked, number of partial and full site inspections (by area: road section, work camp, accommodations, spoil areas, clinic, HIV/AIDS center, community centers, etc.), highlights of activities (including violations of environmental and/or social requirements observed, actions taken), reports to environmental and/or social specialist/construction/site management; and
 - iii. community liaison person(s): days worked (hours community center open), number of people met, highlights of activities (issues raised, etc.), reports to environmental and/or social specialist /construction/site management.
- k) Grievances: list this month's and unresolved past grievances by date received, complainant, how received, to whom referred to for action, resolution and date (if completed), data resolution reported to complainant, any required follow-up (Cross-reference other sections as needed):
 - i. Worker grievances;
 - ii. Community grievances
- l) Traffic and vehicles/equipment: (On Shore and off Shore)
 - (i) traffic accidents involving project vehicles & equipment: provide date, location, damage, cause, follow-up;
 - (ii) accidents involving non-project vehicles or property (also reported under immediate metrics): provide date, location, damage, cause, follow-up;
 - (iii) overall condition of vehicles/equipment (subjective judgment by environmentalist); non-routine repairs and maintenance needed to improve safety and/or environmental performance (to control smoke, etc.).
- m) Environmental mitigations and issues (what has been done):
 - (i) dust: number of working bowzers, number of waterings/day, number of complaints, warnings given by environmentalist, actions taken to resolve;
 - (ii) erosion control: controls implemented by location, status of water crossings, environmentalist inspections and results, actions taken to resolve issues, emergency repairs needed to control erosion/sedimentation;

-
- (iii) quarries, borrow areas, spoil areas, asphalt plants, batch plants (if any) : identify major activities undertaken this month at each, and highlights of environmental and social protection: land clearing, boundary marking, topsoil salvage, traffic management, decommissioning planning, decommissioning implementation;
 - (iv) blasting (if applicable): number of blasts (and locations), status of implementation of blasting plan (including notices, evacuations, etc.), incidents of off-site damage or complaints (cross-reference other sections as needed);
 - (v) spill cleanups, if any: material spilled, location, amount, actions taken, material disposal (report all spills that result in water or soil contamination);
 - (vi) waste management: types and quantities generated and managed, including amount taken offsite (and by whom) or reused/recycled/disposed on-site;
 - (vii) details of tree plantings and other mitigations (if applicable) required undertaken this month;
 - (viii) details of water and swamp protection mitigations required undertaken this month.
- n) compliance:
- (i) compliance status for conditions of all relevant consents/permits, for the Work, including quarries, etc.): statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance;
 - (ii) compliance status of ESMP/ESIP requirements: statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance
 - (iii) other unresolved issues from previous months related to environmental and social: continued violations, continued failure of equipment, continued lack of vehicle covers, spills not dealt with, continued compensation or blasting issues, etc. Cross-reference other sections as needed.

INLAND WATERWAYS AUTHORITY OF INDIA

Ministry of Shipping, Government of India

“CAPACITY AUGMENTATION OF NATIONAL WATERWAY-1”

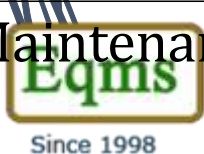
(Jal Marg Vikas
Project)

ENVIRONMENTAL IMPACT ASSESSMENT REPORTS

VOLUME – 8e:

Environmental Management Plan (EMP)
for

Maintenance Dredging Between Mahenderpur and
Barh, Bihar, River Ganga



May 2016
(Revised September 2016)



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Chapter 1. EMP FOR MAINTENANCE DREDGING

1.1. Introduction

Inland waterways Authority of India (IWAI) has proposed to augment the navigation capacity of waterway NW-1 (Haldia to Allahabad) and continue to maintain the entire stretch. Under this project, IWAI has proposed to develop the infrastructure facility like Multimodal terminals, Navigation aids for day & night navigation, River information system with all hardware and software, Ro-Ro jetties, Bank & slope protection, River training works, Equipment like tow barges, inland vessels, survey vessels including rescue boats & survey equipment and dredging of the navigation channel, to augment the navigation capacity of the waterway. Location map of NW-1 is given in **Figure 1.1**.

To improve the navigation in national waterways-1 IWAI has proposed a project “Capacity Augmentation of the Nation Waterway 1 (1620 kms, with minimum water depth of 2.2-3 m) between Haldia and Allahabad”. For which maintenance dredging is required at different locations along the NW-1 and to be carried out so as to maintain the least available depth (LAD).



Figure 1.1 : Location Map

1.2. Description of Environment

The NW-1 stretch starts from Haldia to Allahabad (1620 KM long) on Ganga - Bhagirathi Hooghly river system. The Bhagirathi Hooghly river portion of the waterway from Haldia to Nabadwip is under tidal influence. From Nabadwip to Jangipur the NW-1 stretch is formed by Bhagirathi Hooghly River. Bhagirathi Hooghly River flow is regulated through feeder canal from barrage at Farakka and Jangipur. The feeder canal originating from Farakka barrage acts as link between Bhagirathi Hooghly River and Ganga River (upstream of Farrakka Barrage)¹. NW-1 is passing through four states namely UP, Bihar, Jharkhand and

¹The ship movement beyond Farakka barrage to feeder canal is regulated through a Navigational lock. Upstream of Farakka the navigable route depends upon the main Ganga river flow.

West Bengal. The salient environmental features around NW-1 within, 500m, 2km and 10km stretches are summarised in Table 1.1.

Table 1.1 : Salient Environmental Features along the Mahenderpur – Barh Stretch as well as along the entire NW-1 Project Alignment

S. No.	Environmental Features	Within NW-1 (500 M)	Within 2 km area around NW-1	Within 10 km area around NW-1	Environmental Sensitivity Between Mahenderpur to Barh
1	2	3	4	5	6
1	Ecological Environment				
A	Presence of National Park/Biosphere Reserves, Tiger reserve etc.	None	None	None	None
B	Presence of Wildlife Sanctuary	Yes 1. Kashi Turtle Sanctuary at Varanasi 2. Vikramshila Dolphin Sanctuary Kahalgaon to Sultanganj 3. Hilsa Sanctuary stretch in	None	Yes Udhwa lake sanctuary in Jharkhand (about 9 km away from NW-1)	None
C	Reserved /Protected Forests	None	None	Yes (Bethuadahari RF, Bahadurpur RF & RF near	None
D	Wetland of state and national interest	None	None	Yes (Udhwa Bird sanctuary)	None
E	Migratory route for wild terrestrial animals	None	None	None	None
F	Presence of Schedule-I Terrestrial Fauna	None	Yes Migratory birds near Farakka Barrage	Yes Migratory birds at important birds' areas	None

S. No.	Environmental Features	Within NW-1 (500 M)	Within 2 km area around NW-1	Within 10 km area around NW-1	Environmental Sensitivity Between Mahenderpur to Barh
1	2	3	4	5	6
G	Presence of Schedule-I Aquatic	Yes Dolphin, and	None	None	None specific. Possibility of Dolphin and
H	Important Bird Area	Vikramshila sanctuary area	Yes 1. Danapur Cantonment area 2. Mokamatal 3. Kurseala river course and diyara floodplain	Yes Udhwa lake sanctuary	Yes Mokamatal within 2 Km radius around NW-1
I	Seismicity	NW-1 falls in Zone-III (moderate risk) and zone IV (high damage risk zone) as per Seismic Zoning Map of India			Stretch falls in zone IV (high damage risk zone) as per Seismic Zoning Map of India
B.	Social Environment				
J	Physical Setting	Rural, Industrial and Urban			Rural, Industrial and
K	Densely populated area	Allahabad, Sirsa, Mirzapur, Chunar, Varanasi, Zamania, Ghazipur, Gahmar, Buxar, Ballia, Chappra, Patna, Barh, Bihat, Munger, Bhgalpur, Kahalgaon, Sahibganj, Farakka, Berhampore, Katwa, Kalna, Kolkatta and Haldia are densely populated areas.			Populated city and towns: Barh, Nawada, Pundarakh, Mor, Mekra, Barahpur, Mokemeh Khas, Dularpur, Teghra. Barauni, Simariva.
L	Physical Sensitive Receptors	Yes Ghats, Temples, Schools, Colleges and Hospitals are present all along the NW-1.			Yes Ghats, Temples, Schools, Colleges and Hospitals are present all along the Stretch
M	Archaeological Monuments	Yes There are 9 archaeological sites located within 300 m area of the NW-1 and these are Kardmeshwar Mahadeva Mandir, Ramnagar			None

S. No	Environmental Features	Within NW-1 (500 M)	Within 2 km area around NW-1	Within 10 km area around NW-1	Environmental Sensitivity Between Mahenderpur to Barh
1	2	3	4	5	6
		excavation site, Varanasi, Manmahal and observatory, St. John's Church, Temple of Gour Chandra and Krishnachandra at Chatra (Gaur Chandra Ghat) Hazardwari Palace Sindhi Dalan			

1.3. Environmental Management Plans

Major activities associated with the project are construction and operation of the civil interventions, barge movement and maintenance dredging. Barge movement and maintenance dredging will be carried out during the operation phase of the project only whereas development of civil interventions will have components distributed during design, construction and operation phases. Civil interventions include construction of jetties, terminals, river training works, bend corrections, barge maintenance facilities, and RO-RO jetties. A detailed environmental management plan for each associated development for all the three phases of the project, i.e. design/pre-construction, construction and operation phase is prepared as applicable. EMP lists the activities involved, associated impact with each activity on environment, suggestive mitigation measures, allocated environment budget for impact mitigation, implementation plan covering monitoring, reporting and implementation and supervisory responsibility.

1.3.1. *Environmental Management Plan for Maintenance Dredging Between Mahenderpur and Barh*

Maintenance dredging will be carried out during operation phase of the project to maintain LAD for navigation. Maintenance dredging will be carried out as per the availability of the depth naturally and depth required for movement of the cargo depending on the size of the cargo planned to ply in the stretch. The design consultant had made estimation of the required amount of maintenance dredging in different stretch of the waterway. An analysis has been done during EIA study to establish the environmental, biological and social sensitivity of the waterway. The standalone dredging and dredge disposal management plans are prepared for each of the identified stretch separately.

Stretch between Mahenderpur and Barh lies in the State of Bihar and is 71 km in length. It is planned to maintain LAD (assured depth) of 3.0 m in this stretch for which dredging of

410,151 cum/year is required to be carried out. Dredging and dredge disposal management measures and detailed EMP for maintenance dredging the Mahenderpur and Barh stretch is given in **Table 1.2 and Table 1.3 respectively**.

1.4. Environment Monitoring Plan

An Environment Monitoring Plan (included as **Table 1.4**) is prepared to monitor the effectiveness of mitigation measures proposed and environmental conditions during dredging and post dredging activities.

1.5. Environment Health and Safety Cell

It is essential to establish environment health and safety cell for the project by contractor to ensure the health & safety of workers and environmental management of impacted area through effective implementation of EMP. Qualified and experienced EHS (Environment, Health and Safety) specialist shall be considered to man the cell who shall ensure the effective implementation of the environment management plan.

1.6. Reporting Requirements:

It is required that contractor will submit quarterly compliance report to Project Management Consultants (PMC) as well as to PMU (Project Management Unit) of IWAI. PMC will analyse the report and notify the corrective action if any required to contractor under intimation to IWAI

Table 1.2 :Dredging and Disposal Management Measures for Stretch Between Mahenderpur and Barh

Stretch/Dredging Quantity & Quality/Proposed Disposal Location	Biological, cultural, social and religious Sensitivity	Aquatic sensitivity		Management Measures
		Sensitive zone	Breeding & Spawning Period and grounds*	
1	2	3	4	5
Stretch: Mahenderpur to Barh Dredged Qty: 410,151 cum Dredged Quality: Not contaminated Disposal Location: In river/shoals/scours	Important Bird Area- MokamaTaal (Barah) Wetlands (Along NW-1) located within 2 Km from NW-1 Biological Sensitivity: None Presence of Dolphin: possible Religious locations: None to be impacted/relocated Archaeological : None Fest & Festivals: Chatt Pooja (Oct-Nov)	None	Major Birth season for Dolphin is October to March <i>Breeding Ground: Very shallow waters for giving birth</i>	Dredging should be regulated during breeding seasons of the dolphins from October to March. No dredging shall be carried out in and close to breeding areaif any such site is sited before start of dredging. Dredge disposal shall not be carried out near the river banks and shallow waters of the river. Dredge disposal should be carried out at minimum distance of 100 m from bank Dredging & disposal should not be carried out during time & location of festivals/ghats

Map Showing locations of breeding & spawning grounds identified in Mahenderpur to Barh stretch

of NW-1 is given in **Figure 1.2**



Figure 1.2 Fish Breeding and Spawning Grounds along NW-1 (Mahenderpur to Barh Stretch)

Table 1.3 : Environmental Management Plan for Maintenance Dredging

Environmental Issue /Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative / Mitigation Cost	Institutional Responsibility	
						Implementation	Supervision
1. Physical Environment							
Impact on Soil quality & River Bed sediments	Standards should be developed by concerned authorities for onshore and off-shore dredged material disposal and development of the process to ensure its compliance Dredged material shall be checked for toxicity and contamination prior to its disposal for prevention of contamination of water and its impacts on aquatic life. International standards : criteria for onshore & off-shore disposal of dredged material are given at Annexure 1.1 .	Water Act, 1974	Within River	During Dredging Operation	Part of Project Cost (IWAI & Contractor)	Contractor	IWAI/PMU/PMC²

² It is proposed to set up Project Management Unit (PMU) in IWAI to manage social and environmental aspect of NW1 augmentation. PMC (Project Management Consultants) anticipated to be appointed for project management and quality check.

Environmental Issue /Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative / Mitigation Cost	Institutional Responsibility	
						Implementation	Supervision
	<ul style="list-style-type: none"> ✓ If at any stage onland disposal of dredge material is required then dewatering of the dredged sediments should be carried out prior to its onland disposal. ✓ If dredge material is found contaminated at any particular location, then it should be disposed on land after decontamination. Onland disposal of dredged material should be carried out only at approved TSDF site such as located at Haldia Dock Complex, Sagar. The contaminated dredge material shall be collected in the leak proof container for decontamination and disposal to the landfill site. ✓ The disposal facilities should be designed with adequate liners to contain the leachate and also should have provision of leachate collection and testing to periodically check the functionality of the disposal site. ✓ Dredge material should not be disposed on river banks, Disposal should done following dredging sensitivity analysis and related measures defined at Table 1.2 above. ✓ If dredged material is disposed on land, then the care should be taken that the tail water is collected and made free from sediments prior to its discharge back to surface water body. 						

Environmental Issue /Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative / Mitigation Cost	Institutional Responsibility	
						Implementation	Supervision
Water and Air Quality	<p>Attempt shall be made to minimizing and optimizing the dredging requirements by effective assessment and study of the Thalweg profiles of the river. This can be achieved some of the following measures:</p> <ul style="list-style-type: none"> ○ Increase use of bandalling which helps in diverting the flow of river towards the channel and reduces the quantity of dredging ○ Low draft vessels should be deployed which will reduce the requirement of dredging <p>Dredged material shall be checked for toxicity and contamination prior its disposal onshore for prevention of contamination of water and its impacts on aquatic life. (reference shall be made to International criteria for onshore & off-shore disposal of dredged material given at Annexure 1.1).</p> <ul style="list-style-type: none"> ✓ Dredging should not be carried out during very low flow seasons so as to minimize the dispersion of fine sediments ✓ Usage of silt or air bubble screens/curtains should be explored to minimize the sediment release during dredging operations. Silt/air bubble screens can hang from surface floats or stands attached to the bottom and held upright by sub-surface floats (PIANC). (The use of silt curtains is reported to considerably reduce the loss of suspended sediments from the dredge area, by up to 75% where current velocities are very low. However, they are generally ineffective in areas with high current velocities which exceed 0.5 m/s) <p>To minimize the sediment dispersal during disposal of dredge sediments, it should be</p>	Water Act, 1974	Within River	During Dredging Operation	Part of Project Cost (IWAI & Contractor)	Contractor	IWAI/PMU/PMC ³

³ It is proposed to set up Project Management Unit (PMU) in IWAI to manage social and environmental aspect of NW1 augmentation. PMC (Project Management Consultants) anticipated to be appointed for project management and quality check.

Environmental Issue /Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative / Mitigation Cost	Institutional Responsibility	
						Implementation	Supervision
	<p>placed as close to the bed possible preferable at a level of 1m above the bed to minimise the dispersal of sediments.</p> <ul style="list-style-type: none"> ✓ Provision shall be made of emergency response equipment like floating blooms to deal with any emergency of oil spills or leakages. Regular servicing and maintenance of dredgers should be taken up so as to prevent any leakage of the dredged material. Leakage detection of the sediment transportation pipe shall be carried out regularly to prevent any sediment loss and water pollution at leakage location. Corrective actions should be taken immediately after detection of such leaks. ✓ Cutter head of CSD should be selected according to material to be dredged so as to maximize the dredged material transport from dredging point to suction mouth and prevention of sediment loss and re-suspension. ✓ Ratio of cutter revolutions and pump velocity should be adjusted to ensure that cutter advancement rate is not greater than the ability of the suction pump to remove the material that is cut. This will prevent the suspension of the dredged material. ✓ Dredge cuts and lifts should be designed so as to prevent undercutting of material and hence a collapse of material locally at the cutter head, leading to an increase in the sediment being disturbed by dredging. ✓ If dredge material is found contaminated at any particular location than it should be disposed off-shore. Off-shore disposal of dredged material should be carried out only at approved TSDF site. ✓ Dredge material if disposed on river banks or on land caution should be exercised as per the Dredging and Disposal 						

Environmental Issue /Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative / Mitigation Cost	Institutional Responsibility	
						Implementation	Supervision
	<p>Management Plan for NW-1 given at Table 1.2 above.</p> <ul style="list-style-type: none"> ✓ If dredged material is disposed at land, then the care should be taken that the tail water is collected and made free from sediments prior its discharge back to surface water body. Regular monitoring of the excess water should be done in case dredged material is disposed on land. This will help in assessing the efficiency of sediment trap system provided at site and controlling contamination of water by minimizing the sediments. ✓ Dredgers should be equipped with adequate stack height (above the dredger height). It should use low sulphur diesel for the engine operations. ✓ Dredger should not discharge any waste or oil or domestic waste to river. It should work on zero discharge concept (excluding the water suction and dredge disposal aspects). Mobile toilet and bath station equipped with anaerobic digestion facility shall be provided for workers and staff involved in dredging operations at each of dredging locations. 						
2. Biological Environment							
Aquatic Ecology-Removal of benthic communities, increasing underwater noise levels, increasing sediments/turbidity, release of locked pollutants in	<p>Dredging plan including timeframe should be prepared for each stretch prior to initiating dredging activity.</p> <ul style="list-style-type: none"> ✓ Dredging operations should not be carried out during the breeding and spawning season of the valued aquatic species which is from June to August (Monsoon season). Bends and meandering locations are the most potential breeding grounds as given at Fig 1.2 above.. ✓ Dredgers should be provided with Dolphin deflectors close to the sections near Dolphin Sanctuary at Sultanganj. This would prevent the sucking of the animals (fish) swimming nearby. But such dredgers are inefficient and costly. 	Wildlife Protection Act, 1972 & 1993 and Bio-diversity Act, 2002	Within River	During Dredging	Part of Project Cost (IWAI & Contractor)	Contractor	IWAI/PMU/PMC

Environmental Issue /Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative / Mitigation Cost	Institutional Responsibility	
						Implementation	Supervision
sediment, disposal of dredged material, increasing depth	<ul style="list-style-type: none"> Measures like provision of bubble curtains or creation of agitation in water should be carried out prior to carrying out dredging operations so as to provide avoidance time and let the species move away from dredging point and to prevent any injury/mortality. Dredging operations should be halted in case of sighting of aquatic mammal in adjacent locations. Contractors should submit SOPs and action time chart with risk management plan prior to any dredging work. Dredging contractor should follow the defined safety procedures to avoid accidents and spills, and IWAI should ensure that other vessel users are provided with adequate information and instruction to avoid conflict with the dredgers. 						
Avifauna (Migratory & water birds)	<ul style="list-style-type: none"> Dredging operations should be restricted to day time only, i.e. 6:00 Am-10:00 Pm only to minimize noise impacts on the avifauna. Dredgers should be equipped with the noise reduction/masking equipment to reduce the noise generation inside and outside water. Noise from dredgers can be reduced at source (dredger) by isolation of exhaust system, by keeping engine room doors shut and by shielding. 	Wildlife Protection Act, 1972 & 1993 and Bio-diversity Act, 2002	Within River & bird areas along NW-1	During Dredging	Part of Project Cost (IWAI & Contractor)	Contractor	IWAI/PMU/PMC
3. Socio-Economic Environment							
Location of Socio-economic importance and socio-economic environment	<ul style="list-style-type: none"> Dredging operations should be restricted to day time only, i.e. 6:00 Am-10:00 Pm only to minimize noise impacts on the residents of nearby settlements. Dredgers should be equipped with the noise reduction/masking equipment to reduce the noise generation Dredgers should be placed in consultation with the fishermen so as to minimize the impact on their equipment/gears and their fishing activities Dredging location should be away from bathing shelter 	--	Area near the dredging operations and dredging locations	During dredging operation	Part of project cost (IWAI/Contractor)	Contractor	IWAI/PMU/PMC

Environmental Issue /Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative / Mitigation Cost	Institutional Responsibility	
						Implementation	Supervision
	<p>being constructed for the women under this project. Dredge material should not be disposed close to these bathing shelters.</p> <ul style="list-style-type: none"> ✓ Dredging should not be carried out in the areas close to Ghats and buffer of 2 km should be maintained for dredging during time of religious gatherings during Chat and other important religious river related festivals. ✓ In case contaminated dredged material is disposed on land, then it should be disposed at approved TSDF sites to prevent any harm to community residing in nearby areas. ✓ Material to be disposed on land may create nuisance odour due to exposure of anaerobic sediments with air. Thus if land disposal is involved then disposal site should not be in upwind direction of any settlement area or sensitive locations like hospitals, schools etc. ✓ Post-dredging monitoring of the sediment nature, rate of sedimentation shall be made by the contractor. . This analysis output should be reviewed and dredging plan should be improved as may be required before start of next round of maintenance dredge. ✓ Re-use of dredged material should be explored if dredged material is not contaminated. Economically and environmentally feasible options can be adopted to minimize the dredge spoil burdens. Some of such measures include <ul style="list-style-type: none"> ○ Usage for beach nourishment/development of artificial beach/deposition on shoal & thus enrichment of habitat ○ Usage for coast/bank protection purpose/flood protection 						

Environmental Issue /Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative / Mitigation Cost	Institutional Responsibility	
						Implementation	Supervision
	<ul style="list-style-type: none"> Usage as construction material for land filling, road foundations, dikes, mounds, noise/wind barriers constructions. . 						
4. Occupational Health and Safety							
Safety for workers and community	<p>Contractor should provide adequate safety training to each worker involved. Workers should also be provided with requisite PPE (such as ear muffs, hand gloves, safety boots, floats).</p> <p>Log book should be maintained for recording the accidents at site/mortality of the any marine mammal should be maintained. Analysis shall be carried out to assess the reason for the accident/mortality and measures should be taken to prevent repetition of the event.</p> <p>Contractors having experience of dredging and well trained staff should only be allowed to carry out dredging. This will help in prevention of spillage of dredged material or any accidents during the dredging operations</p> <p>Contractors should submit method statement & risk assessment and Safety management plan prior to carrying out any dredging work. Dredger should follow the defined safety procedures to avoid accidents and spills, and IWAI should ensure that other vessel users are provided with adequate information and instruction to avoid conflict with the dredgers.</p> <p>Dredging plan should be prepared by contractor and submitted to IWAI for approval prior to carrying out dredging operations. Dredging plan should be reviewed considering its location w.r.t environmental sensitive locations/archaeological locations/cultural festival/pollution influx in the area/dredged material quality</p>	--	Area near the dredging operations and dredging locations	During dredging operation	Part of project cost (IWAI/Contractor)	Contractor	IWAI/PMU/PMC

Environmental Issue /Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative / Mitigation Cost	Institutional Responsibility	
						Implementation	Supervision
	& texture/available depth etc..						

Table 1.4 Environmental Monitoring Plan

Sr. No.	Aspect	Parameters to be monitored	No. of Sampling Locations & Frequency	Standard methods for sampling and analysis	Role & Responsibility	
					Implementation	Supervision
1.	Air Quality (Ambient Air Quality)	PM ₁₀ , PM _{2.5} , SO ₂ , NO ₂ , HC and CO	2 locations within 100 m and 500 m of dredger location with frequency of once in month at dredging location	Fine Particulate Samplers for PM _{2.5} Respirable Dust Sampler fitted PM ₁₀ Respirable Dust Sampler fitted with Gaseous sampling arrangements for SO ₂ and NO ₂ , CO analyser / portable CO meter for CO portable HC meter or tubes for HC; TO-14A, TO-15, USEPA method for sampling and analysis of VOCs in ambient air	Contractor	IWAI & PMC
2.	Surface Water Quality	Physical, chemical and biological parameters	3 locations at dredging location, 100 m and 500 m from dredging location with frequency of once per month for all Physical, chemical and biological parameters 1 sample at dredge material disposal area in river	Grab sampling and analysis by using standard methods	Contractor	IWAI & PMC
3.	Drinking Water Quality	Physical, chemical and biological parameters	Physical, chemical and biological parameters for drinking water provided to the employee and labour	Grab sampling and analysis by using standard methods	Contractor	IWAI & PMC
4.	Noise Level	Day time and	2 location	Noise meter	Contractor	IWAI & PMC

		night time noise level (max, min & Leq levels)	including 10 m of dredger location and 100 m of dredger location			
5.	Dredged soil	For heavy metal, pesticide & insecticide contamination	Dredged sand samples- two samples from each location	--	Contractor	IWAI & PMC
6.	Visual checks for safe and hygienic disposal of the sediments	Proper disposal as mentioned in EMP	All throughout dredge disposal works	--	Contractor	IWAI & PMC
7.	Aquatic ecology	Big fishes, dolphins, turtles etc dead or collided during dredging operation	All throughout dredge disposal works	Register maintenance for accidents	Contractor	IWAI & PMC

Annexure 1.1: Standards for onshore & off-shore disposal of dredged material

Criteria for Disposal of Harmful Bottom Sediments: No specific standards are defined in India for disposal of dredged material. If dredged material is toxic / harmful then these sediments should either be disposed off in landfill or in Sea. Criteria followed in Japan are given in the **Table 1**.

Table 1: Criteria for Harmful Bottom Sediments, Japan (unit: mg/l)

Contaminated Material	Dumping in Landfills (mg/l)	Dumping at sea (mg/l)
Alkyl mercuric compounds	Not detectable	Not detectable
Mercury and its compounds	0.005	0.005
Cadmium and its compounds	0.1	0.1
Lead and its compounds	1	1
Organophosphorus compounds	1	1
Chromium (VI) compounds	0.5	0.5
Arsenic and its compounds	0.5	0.5
Cyanogen compounds	1	1
PCB	0.003	0.003
Copper and its compounds	-	3
Zinc and its compounds	-	5
Fluoride	-	15

Note: Criteria are based on the examination of dissolution of contaminated materials

Source: Assessment of the Environmental Impact of Port Development, United Nations, New York, 1992

Criteria for Off-shore dumping of Dredged material: No criteria are defined for off-shore disposal of dredged material in India, thus reference to the UN standards can be made and is given in **Table 2**.

Table 2: Criteria for Off-Shore Dumping of Dredged Material (unit: ppm or ppb)

Substance	Canada	USA
PCB (ppb)	100	380
Hg (ppm)	0.5	0.15
Cd (ppm)	0.60	0.7
Zn (ppm)	169	105
Cu (ppm)	45	68
As (ppm)	(5 – 25)	12.5
Pb (ppm)	45	33
Organochlorine pesticide (ppb)	10 for any compound	5.0 Sum of DDT, DDE and DDD
Polyaromatic hydrocarbon (ppb)	(1,000) Sum of 16 compounds	680 Sum of six low mol. Wt. compounds 2,690 Sum of 10 high mol. Wt. compounds

Source: Assessment of the Environmental Impact of Port Development, United Nations, New York, 1992

Following Additional Environmental Safety Measures to be implemented by Contractor:

Sl. No.	Environmental Safety measures to be implemented	Responsibility
i.	‘Consent to Establish’ and ‘Consent to Operate’ shall be obtained from State Pollution Control Board under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.	Contractor
ii	The Project authority shall ensure that no rivers or tributaries are blocked due to any activities at the project site and free flow of water is maintained.	Contractor should ensure the same
iii	Shoreline shall not be disturbed due to dumping. Periodical study on shore line changes shall be conducted and mitigation carried out, if necessary.	Contractor should ensure the same.
iv	Dredging shall not be carried out during the fish/turtle breeding seasons.	Contractor
v	All vessels used in the river will be fitted with noise control and animal exclusion devices so that aquatic life is not unduly disturbed.	Contractor should ensure.
vi	Spillage of fuel / engine oil and lubricants from the construction site are a source of organic pollution which impacts aquatic life, particularly benthos. This shall be prevented by suitable precautions and also by providing necessary mechanisms to trap the spillage.	Contractor
vii	Construction waste including debris shall be disposed safely in the designated areas and in no case shall be disposed in the aquatic environment.	Contractor
viii	Vessels shall not discharge oil or oily water such as oily bilge water containing more than 15ppm of oil.	Contractor shall ensure and maintain record
ix	The project authority shall ensure that water traffic does not impact the aquatic wildlife sanctuaries that fall along the stretch of the river.	Contractor should ensure compliance of provisions for movement of vessel in the Wildlife Sanctuary as per statutory clearances
x	All Vessels will also have to comply with ‘Zero discharge’ standards to prevent solid or liquid waste from flowing into the river and affecting its biodiversity.	Contractor
xi	The Dredging shall be carried by integrated and systematic planning by selective grid method by allowing migratory movement of Benthic fauna.	Contractor
xii	All required noise and vibration control measures are to be adopted in Dredgers. Cutter suction Dredgers should be avoided as much as possible which produces more noise and vibration. No Drilling and Blasting is to be carried out.	Contractor
xiii	Pre geo-tectonic studies has to be completed and the strata to be dredged is predetermined with complete data pertaining to hardness, compressive and tensile strengths.	Contractor
xiv	Dredger type and other strata loosening methods shall be preconceived.	Contractor
xv	Staggered dredging shall be carried based on turbidity monitoring to minimize the impact of turbidity.	Contractor should comply and maintain record
xvi	Threshold level of turbidity, which has a minimal effect on fauna, has to be predetermined and Dredging planned accordingly.	Contractor
xvii	Further silt screens needs to be used for minimizing the spread of Turbidity.	Contractor
xviii	Disposal places of Dredged sediments needs to be predetermined, along the shore by assessment of suitability, which will not affect the shoreline (erosion) and also causing impacts during monsoon and flooding.	Contractor
xix	As much as possible, it shall not be disposed off in the river itself, and the site should be such that the dispersion is quicker by undertaking modelling studied.	Contractor
xx	Ballast water control and management measures shall be implemented.	Contractor
xxi	Waste and waste water reception facilities in Jetty shall be implemented.	Contractor should dispose the waste and wastewater at

Sl. No.	Environmental Safety measures to be implemented	Responsibility
		designated disposal place authorized by SPCB
xxii	The Risk and Disaster Management Plan has been prepared in consonance with the manual of terminals and harbours issued by the Ministry of Environmental and Forests dated 5 th May 2010.	Contractor should follow the risk and disaster management plan for the purpose of dredging in river accordance with the Statutory/regulatory guidelines.
xxiii	Standard Operating Procedures (SOP) and Emergency Response Plan (ERP) for onsite and offsite emergencies shall be prepared and implemented based on Hazard Identification and Risk Assessment to handle, process, store and transport of hazardous substances.	Contractor should prepare and follow the Standard Operating Procedures (SOP) and Emergency Response Plan (ERP) for onsite and offsite emergencies for dredging in river accordance with Statutory/regulatory guidelines and IWAI consent
xxiv	Oil spill contingency plan shall be prepared and part of DMP to tackle emergencies. The equipment and recovery of oil from a spill shall be assessed. Guidelines given in MARPOL and shipping Acts for oil spill management shall be followed.	Contractor should implement the Oil Spill Contingency Plan for dredging in river accordance with Statutory/regulatory guidelines.
xxv	No diversion of the natural course of the river shall be made without prior permission from the Ministry of Water resources.	Contractor should ensure the same.
xxvi	All the erosion control measures shall be taken at water front facilities.	Contractor should ensure the same.
xxvii	Necessary Air Pollution Control measures shall be taken during loading, unloading, handling, transport of the material at the Berthing and water front facilities.	Contractor
xxviii	The Vessels shall comply the emission norms prescribed from time to time.	Contractor
xxiv	All safety measures are to be implemented in coordination with the respective state government departments such as State Forest Department, Public Works Department, State Pollution Control Board etc.	Contractor

Annexure A: Water levels in the Project Waterways

1 Flow Discharges

The report “Status on River Ganga: State of the Environment and Water Quality” from the National River Conservation Directorate (2009) provides useful information in terms of understanding water discharges along the upstream reaches of NW-1. The report presents water discharges with a probability of exceedance of 50%, 10% and 90% at 6 stations: Allahabad, Mirzapur, Varanasi, Buxar, Patna and Azamabad during the low flow season. It also presents average post-monsoon flows (in October-November), average flows in December-February and in March-May periods. These values are summarised in below.

Table A- 1: Characteristic discharges obtained from the National River Conservation Directorate (2009) report

Flow regime Discharge (m ³ /s)	Allahabad	Mizarpur	Varanasi	Buxar	Patna	Azamabad
Q50 (flow with 50% probability of exceedance) during low season	300	300	300	450	1050	1400
Q90 (flow with 90% probability of exceedance) during low season	175	175	175	250	600	1050
Q10 (flow with 10% probability of exceedance) during low season	450	450	450	600	1600	2000
Average in October-November	2000	2200	2400	3100	5500	9500
Average in December-February	500	500	500	750	1300	2200
Average in March-May	400	400	400	500	1000	1500

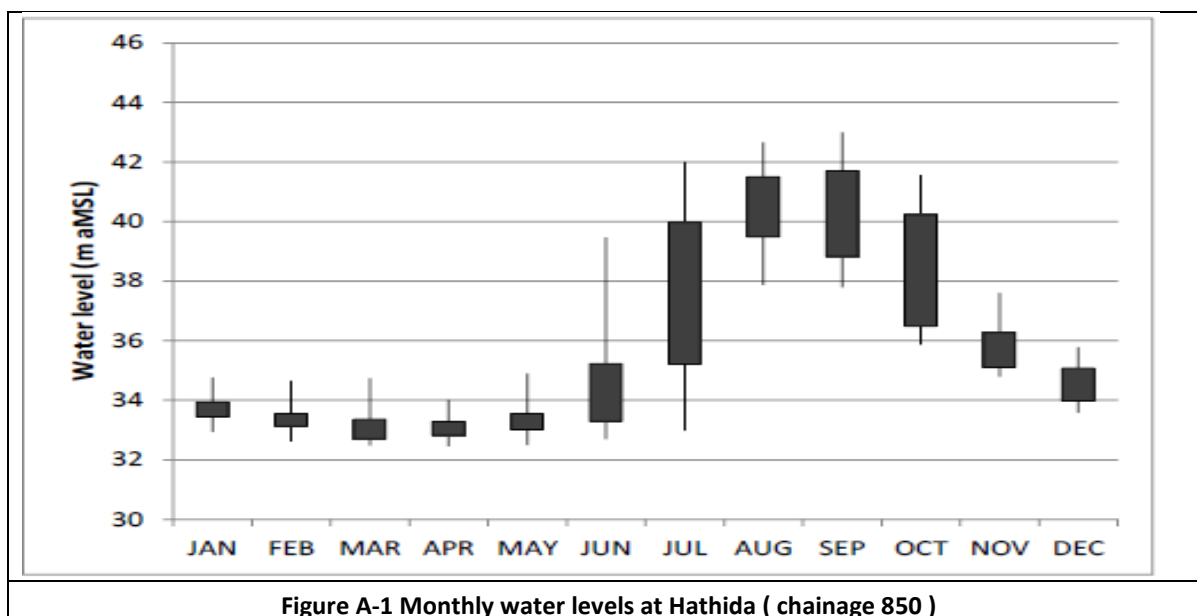
Source: The National River Conservation Directorate, Ministry of Environment and Forests, Government of India (2009)

2 Water Levels

Temporal series of water levels have been provided for Doriganj. The figure shows the variability of monthly water levels, which can be of the order of 10-12 m during the high season. In general, water levels are at their highest in August-September and sharply decrease in October-November. In general, they continue to decrease during the whole low flow season, from December to May, and start to raise again in June-July. The figure shows the maximum and minimum monthly values with the black block representing where 50% of the values concentrate.

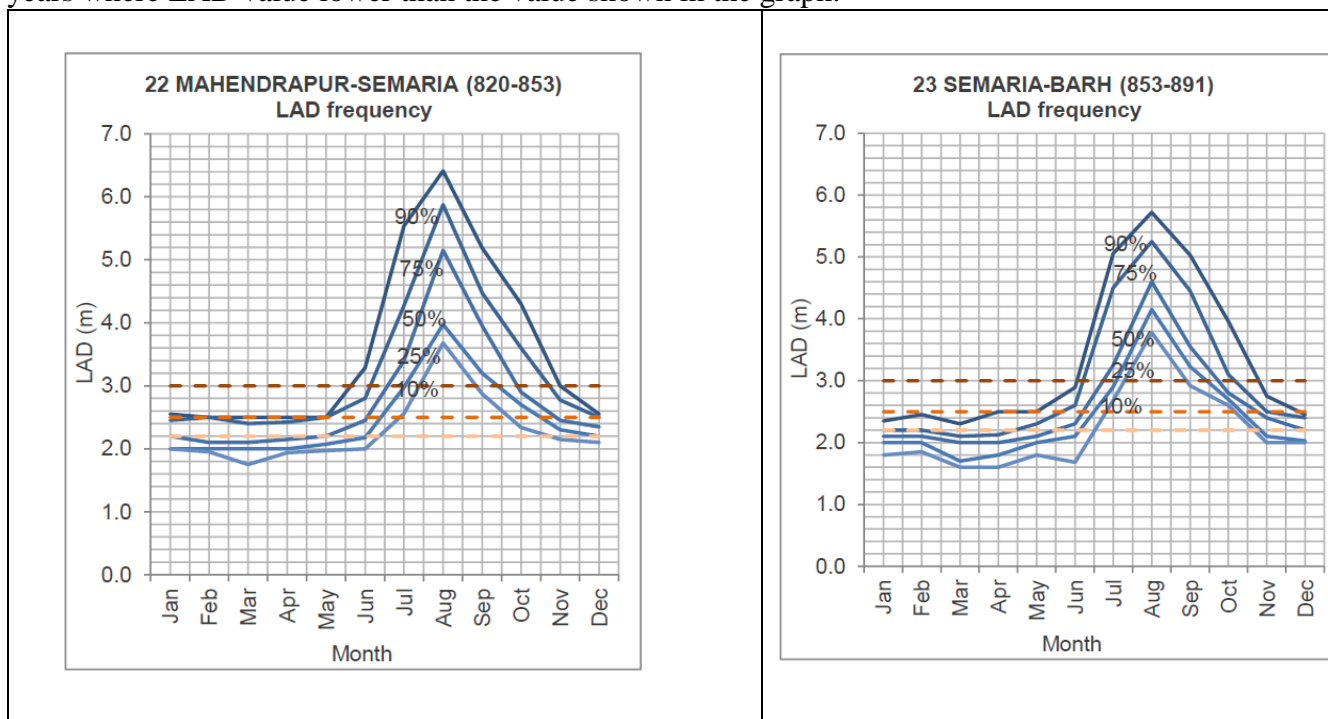
The period of the year in which the minimum water level can occur varies with location along the river.

Minimum water levels at Hathida with 50%, 10% and 1% annual probabilities of occurrence are 33.28 m, 32.59 m and 32.18 m, respectively. Maximum water levels at Hatida with 50%, 10% and 1% annual probabilities of occurrence are 41.78 m, 42.85 m and 43.01 m, respectively.



2.1 Analysis of LAD

Least Available Depth (LAD) available from Tribeni to Allahabad was analysed to get an understanding of the variations of water depths. Data for the period April 2002 to June 2015 was used to build probability curves of LAD. The probability curves for the reaches between Sultanganj-Mahendrapur are shown in Figure A-1. The curves show the percentage of the years where LAD value lower than the value shown in the graph.



This statistical information has also been analysed to show the periods when available water depths have a 50% probability to be lower than a certain value mentioned here. The information is presented in Table A- 2 below.

Table A- 2: 50% probability of LADs being lower than mentioned LAD (in metres)

	Name	Chainage (km)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20	Sultanganj - Munger	746-793	2.40	2.10	2.05	2.10	2.10	2.40	3.50	4.80	4.40	3.00	2.65	2.40
21	Munger - Mahendrapur	793-820	2.20	2.10	2.10	2.15	2.25	2.40	3.70	4.70	3.60	3.10	2.60	2.50
22	Mahendrapur - Semaria	820-853	2.20	2.10	2.10	2.15	2.20	2.45	3.50	5.20	3.90	2.90	2.40	2.30
23	Semaria - Barh	853-891	2.10	2.10	2.00	2.00	2.10	2.30	3.30	4.60	3.40	2.80	2.35	2.20

Key:

3.0m =< LAD

2.5m =< LAD < 3.0m

2.2m =< LAD < 2.5m

LAD < 2.2m

The different colours in show the range of minimum depths available. Green corresponds to the months when available depths are larger than 2.5 m. The table clearly shows the behaviour of water depths upstream of Doriganj. The LADs for the period 2006 & 2010-2015 are shown in the tables below.

Table A- 3: LAD for 2015 (in metres)

	Name	Chainage (km)	Jan IFN	Jan IIFN	Feb IFN	Feb IIFN	Mar IFN	Mar IIFN	Apr IFN	Apr IIFN	May IFN	May IIFN	Jun IFN	Jun IIFN	Jul	Aug	Sep	Oct IFN	Oct IIFN	Nov IFN	Nov IIFN	Dec IFN	Dec IIFN
20	Sultanganj - Munger	746-793	2.8	2.7	2.7	2.8	2.1	2.8	2.8	2.8	2.7	2.8	2.6	2.6	3.5	4.9	5.7	2.9	2.5	2.5	2.4	2.3	2.1
21	Munger - Mahendrapur	793-820	2.1	2.5	2.4	2.0	2.4	2.4	2.4	2.3	2.5	2.5	2.5	2.8	4.9	6.0	2.6	2.4	2.0	2.1	2.3	2.0	2.1
22	Mahendrapur - Semaria	820-853	2.2	2.1	2.1	1.7	2.3	2.4	2.5	2.4	2.5	2.5	2.6	2.8	4.7	5.9	2.6	2.4	2.0	2.2	2.2	2.1	2.1
23	Semaria - Barh	853-891	2.4	2.1	2.2	2.1	2.3	2.3	2.4	2.4	2.3	2.4	2.4	2.6	4.5	5.7	2.5	2.3	2.0	1.8	1.8	1.8	1.7

Key:

3.0m =< LAD

2.5m =< LAD < 3.0m

2.2m =< LAD < 2.5m

LAD < 2.2m

Table A- 4: LAD for 2014 (in metres)

	Name	Chainage (km)	Jan IFN	Jan IIFN	Feb IFN	Feb IIFN	Mar IFN	Mar IIFN	Apr IFN	Apr IIFN	May IFN	May IIFN	Jun IFN	Jun IIFN	Jul	Aug	Sep	Oct IFN	Oct IIFN	Nov IFN	Nov IIFN	Dec IFN	Dec IIFN
20	Sultanganj - Munger	746-793	2.7	2.6	3.1	2.7	2.8	2.6	2.7	2.6	2.5	2.5	2.7	2.8	3.5	5.6	4.7	3.0	2.9	2.8	2.6	2.5	2.7
21	Munger - Mahendrapur	793-820	2.4	2.6	2.6	2.5	2.5	2.5	2.5	1.6	2.5	2.6	2.6	2.8	3.4	5.5	3.6	2.5	3.5	2.6	2.3	2.5	2.5
22	Mahendrapur - Semaria	820-853	2.3	2.3	2.5	2.5	2.5	2.5	2.5	2.1	2.6	2.5	2.6	2.7	3.5	5.2	4.3	2.6	3.9	2.8	2.6	2.4	2.1
23	Semaria - Barh	853-891	1.7	1.8	2.1	2.1	2.0	1.6	1.6	1.6	2.2	2.3	2.6	2.7	2.9	4.3	3.2	2.6	3	2.4	2.3	2.4	2.5

Key:

3.0m =< LAD

2.5m =< LAD < 3.0m

2.2m =< LAD < 2.5m

LAD < 2.2m

Table A- 5: LAD for 2013 (in metres)

	Name	Chainage (km)	Jan IFN	Jan IIFN	Feb IFN	Feb IIFN	Mar IFN	Mar IIFN	Apr IFN	Apr IIFN	May IFN	May IIFN	Jun IFN	Jun IIFN	Jul	Aug	Sep	Oct IFN	Oct IIFN	Nov IFN	Nov IIFN	Dec IFN	Dec IIFN
20	Sultanganj - Munger	746-793	2.6	2.7	2.7	3.2	3.4	3.0	2.9	2.6	2.9	2.6	3.3	6.7	4.1	6.8	4.1	3.1	3.9	3.3	2.8	3.2	2.8
21	Munger - Mahendrapur	793-820	2.5	2.5	2.4	2.8	2.6	2.4	2.3	2.3	2.3	2.6	2.6	4.1	3.1	5.8	3.1	5.0	3.3	3.2	2.7	2.1	2.2
22	Mahendrapur - Semaria	820-853	2.5	2.6	2.5	2.9	2.7	2.4	2.4	2.5	2.5	2.5	2.8	3.1	3.2	5.6	3.2	3.5	2.7	3.5	3.0	2.5	2.4
23	Semaria - Barh	853-891	2.0	1.8	2.3	2.6	2.6	2.4	2.5	2.5	2.5	2.6	2.6	3.1	3.1	5.2	3.1	3.4	2.8	2.8	2.7	2.4	2.3

Key:

3.0m =< LAD

2.5m =< LAD < 3.0m

2.2m =< LAD < 2.5m

LAD < 2.2m

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Table A- 6: LAD for 2012 (in metres)

	Name	Chainage (km)	Jan IFN	Jan IIFN	Feb IFN	Feb IIFN	Mar IFN	Mar IIFN	Apr IFN	Apr IIFN	May IFN	May IIFN	Jun IFN	Jun IIFN	Jul	Aug	Sep	Oct IFN	Oct IIFN	Nov IFN	Nov IIFN	Dec IFN	Dec IIFN
20	Sultanganj - Munger	746-793	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.5	2.5	2.5	2.5	3.5	5.8	5.2	5.2	3.4	3.6	2.7	3.5	3.1	3.0
21	Munger - Mahendrapur	793-820	2.5	2.8	2.6	2.5	2.3	2.3	2.5	2.5	2.5	2.5	2.5	3.8	3.7	4.0	4.2	2.8	3.1	3.0	2.7	2.5	2.4
22	Mahendrapur - Semaria	820-853	2.5	2.5	2.5	2.5	2.2	2.4	2.5	2.5	2.5	2.1	2.5	3.7	3.8	3.9	3.9	2.8	3.6	3.0	2.8	2.5	2.5
23	Semaria - Barh	853-891	2.5	2.5	2.5	2.5	2.3	2.1	2.5	2.5	2.5	2.5	2.5	2.6	2.9	4.8	3.9	2.7	3.2	2.8	2.5	2.4	2.0

Key:

3.0m =< LAD	2.5m =< LAD < 3.0m	2.2m =< LAD < 2.5m	LAD < 2.2m
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Table A- 7: LAD for 2011 (in metres)

	Name	Chainage (km)	Jan IFN	Jan IIFN	Feb IFN	Feb IIFN	Mar IFN	Mar IIFN	Apr IFN	Apr IIFN	May IFN	May IIFN	Jun IFN	Jun IIFN	Jul	Aug	Sep	Oct IFN	Oct IIFN	Nov IFN	Nov IIFN	Dec IFN	Dec IIFN
20	Sultanganj - Munger	746-793	2.5	2.1	2.4	2.3	1.9	2.3	2.1	2.0	2.4	2.4	2.7	3.7	3.0	4.8	4.0	3.8	2.9	3.5	2.8	2.6	2.4
21	Munger - Mahendrapur	793-820	2.6	2.5	2.1	2.1	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3.3	4.4	6.0	4.8	3.1	3.2	3.1	3.1	3.1	2.5
22	Mahendrapur - Semaria	820-853	2.3	2.2	2.1	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3.6	4.0	6.1	5.4	2.9	2.9	2.6	2.7	2.6	2.5
23	Semaria - Barh	853-891	2.0	2.3	2.4	2.1	2.1	2.1	2.1	2.1	2.2	2.5	2.5	3.5	4.5	5.4	5.1	2.8	2.8	2.5	2.5	2.6	2.5

Key:

3.0m =< LAD	2.5m =< LAD < 3.0m	2.2m =< LAD < 2.5m	LAD < 2.2m
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Table A- 8: LAD for 2010 (in metres)

	Name	Chainage (km)	Jan IFN	Jan IIFN	Feb IFN	Feb IIFN	Mar IFN	Mar IIFN	Apr IFN	Apr IIFN	May IFN	May IIFN	Jun IFN	Jun IIFN	Jul	Aug	Sep	Oct IFN	Oct IIFN	Nov IFN	Nov IIFN	Dec IFN	Dec IIFN
20	Sultanganj - Munger	746-793	2.0	2.0	2.0	1.8	1.9	1.9	1.8	1.8	2.1	2.0	2.0	2.1	4.0	3.8	3.8	2.9	2.6	2.0	2.0	2.3	2.4
21	Munger - Mahendrapur	793-820	2.0	2.0	2.0	2.0	1.7	1.8	2.0	2.1	1.8	2.1	2.1	2.1	3.5	5.8	3.2	2.9	2.5	2.6	2.6	2.5	2.7
22	Mahendrapur - Semaria	820-853	2.0	2.1	2.0	1.9	1.7	1.6	1.8	1.8	1.8	1.8	1.8	2.0	3.0	5.8	3.3	2.9	2.3	2.1	2.0	2.0	2.3
23	Semaria - Barh	853-891	1.9	2.0	1.8	1.9	1.7	1.5	1.7	1.8	1.8	2.1	1.8	2.0	3.2	3.1	3.2	2.8	3.0	2.2	2.0	2.4	2.2

Key:

3.0m =< LAD	2.5m =< LAD < 3.0m	2.2m =< LAD < 2.5m	LAD < 2.2m
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Table A- 9: LAD for 2006 (in metres)

	Name	Chainage (km)	Jan IFN	Jan IIFN	Feb IFN	Feb IIFN	Mar IFN	Mar IIFN	Apr IFN	Apr IIFN	May IFN	May IIFN	Jun IFN	Jun IIFN	Jul IFN	Jul IIFN	Aug IFN	Aug IIFN	Sep IFN	Sep IIFN	Oct IFN	Oct IIFN	Nov IFN	Nov IIFN	Dec IFN	Dec IIFN
20	Sultanganj - Munger	746-793	1.8	2.0	2.0	2.0	1.9	1.7	2.0	2.2	2.2	2.1	2.5	2.2	4.5	4.8	5.0	4.2	4.4	3.2	2.3	2.0	2.0	2.2	2.4	2.1
21	Munger - Mahendrapur	793-820	2.0	2.2	2.1	2.2	2.2	2.0	2.2	2.2	2.2	2.2	2.4	2.3	6.2	4.2	4.7	4.5	3.6	3.0	2.1	2.0	2.5	2.5	2.5	2.5
22	Mahendrapur - Semaria	820-853	2.1	2.0	2.1	2.0	2.0	1.8	2.2	2.2	2.2	2.2	3.5	2.1	5.5	5.5	5.2	3.5	3.2	2.8	2.2	2.2	2.4	2.4	2.8	2.2
23	Semaria - Barh	853-891	1.7	1.8	1.9	1.8	1.7	1.5	1.8	1.8	1.8	2.2	2.4	2.2	3.7	4.5	4.2	4.6	3.3	2.5	2.2	2.1	2.0	2.4	2.4	2.0

Key:

3.0m =< LAD	2.5m =< LAD < 3.0m	2.2m =< LAD < 2.5m	LAD < 2.2m
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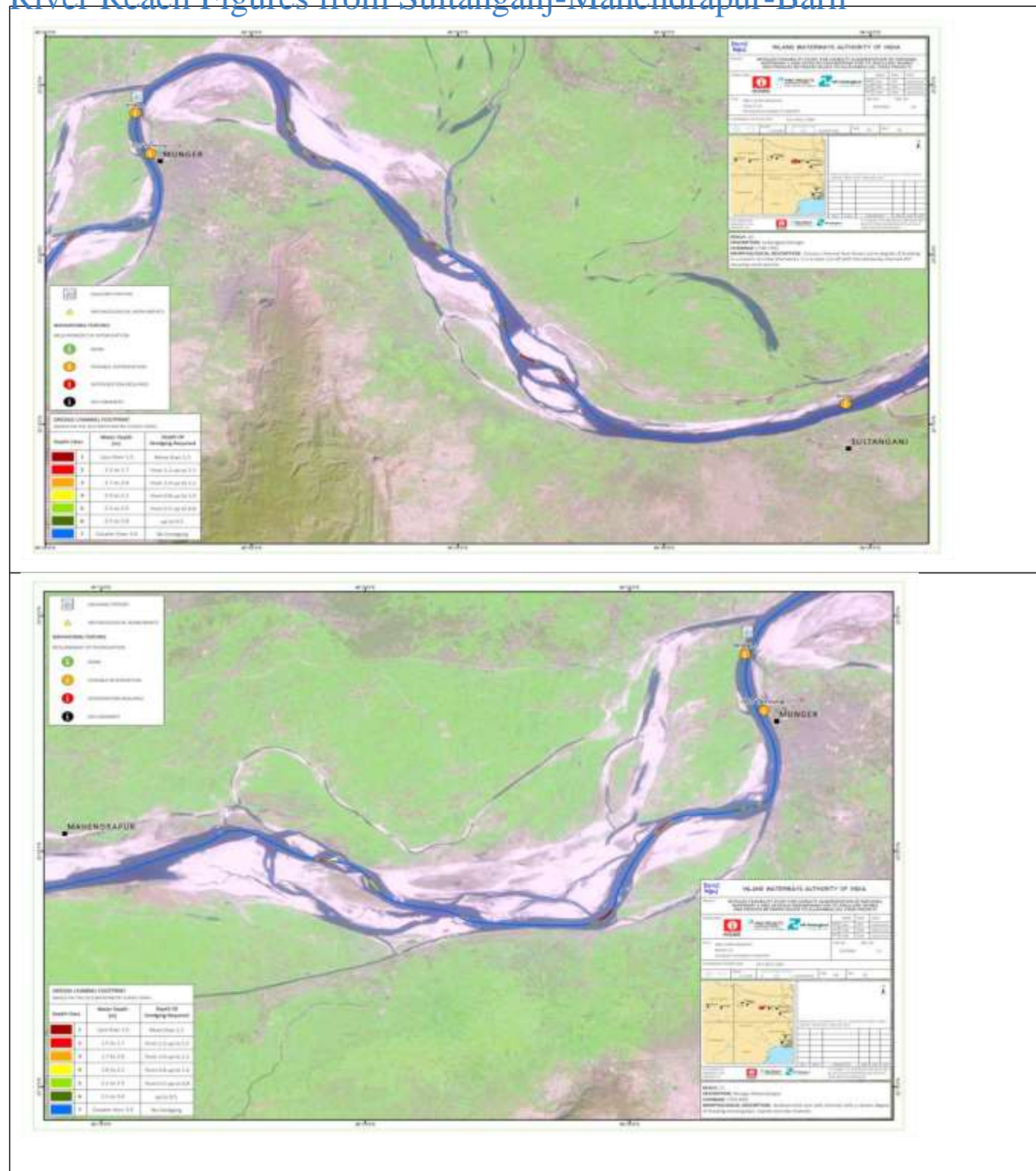
Annexure B: Studies of changes to the River course in the last 10 years

In this section, the general character of the river morphology is discussed having in mind its possible impacts to navigation. The River Ganga is a dynamic system which has continuous and unsteady inputs (e.g. water discharge, sediment transport) and thus, it is continuously adjusting in response to the changing inputs. Depending on those inputs, the river is significantly mobile, changing pattern from one season to another.

From the analysis of satellite images in the last 10 years, the general river typologies along each river reach have been identified. These are presented below.

Reach	Description	Chainage	Morphological description
22	MAHENDRAPUR-SEMARIA	(820-853)	Anabranched river with channels with a certain degree of braiding showing bars, islands and side channels
21	SEMARIA-BARH	(853-891)	Anabranched river with channels with a certain degree of braiding showing bars, islands and side channels

River Reach Figures from Sultanganj-Mahendrapur-Barh







PART 3 – CONDITIONS OF CONTRACT AND CONTRACT FORMS

Section VII. General Conditions (GC)

(This Section of the Bidding Document supplemented with 'E-Procurement Annexure to General Conditions' contains the general clauses to be applied in all contracts.

'E-Procurement Annexure to GC' provides revised GC clauses/ sub-clauses suitable for (i) dredging work; and (ii) two envelope e-procurement process. Clauses/Sub-clauses specified in 'E-Procurement Annexure to GC' replace the corresponding clauses listed in the Table below.)

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A. CONTRACT AND INTERPRETATION

1. Definitions

1.1 Boldface type is used to identify defined terms.

Bill of Quantities means the priced and completed Bill of Quantities forming part of the Contractor's Bid.

The **Certificate of Completion** is a document issued by the Project Manager upon completion of Development Dredging Works, Improvement Works and Emergency Works, or parts thereof, as applicable, in accordance with GC 54.1

The **Completion Date** is the date of completion of the Services and Works as certified by the Project Manager, in accordance with Sub-Clause 10.2.

The **Contract** is the Contract between the Employer and the Contractor to perform the services to be provided by the Contractor, and to execute, complete, and maintain the Works. It consists of the documents listed in Clause 3 below.

The **Contractor** is a person or corporate body whose Bid to carry out the Works and Services has been accepted by the Employer.

The **Contractor's Bid** is the completed bidding document submitted by the Contractor to the Employer.

The **Contract Price** is the price stated in the Letter of Acceptance and thereafter as adjusted in accordance with the provisions of the Contract.

Days are calendar days; **months** are calendar months.

A **Defect** is any part of the Works and Services not completed in accordance with the Contract.

The **Defects Liability Certificate** is the certificate issued by Project Manager upon correction of defects by the Contractor.

The **Defects Liability Period** is the period specified in the Contract and is applicable for Development Dredging Works and Improvement Works, with exclusions identified in the PC, if any.

Dispute Review Board (DRB) is a board of three members selected and act in accordance with rules and procedures defined in the Contract to seek to resolve any dispute of any kind that may arise between the Employer and the Contractor in connection with or arising out of the Contract, as provided for in Clause 6 hereunder.

Dispute Review Expert (DRE) is one expert selected and acting in accordance with rules and procedures defined in the Contract to seek to resolve any dispute of any kind that may arise between the Employer and the Contractor in connection with or arising out of the contract, as provided for in Clause 6 hereunder.

Drawings include calculations and other information provided by the Contractor for the execution of the Contract.

The **Employer** is the party who employs the Contractor to carry out the Works and Services.

Equipment is the Contractor's vessels and machinery brought temporarily to the Site to construct the Works and to carry out the Services.

Dredging / Bandalling Works are activities undertaken to restore a system or an item to its operable state. For the purpose of this Contract, **Dredging / Bandalling Work** is the activity of restoring the specified navigation channel depths and widths on the various Waterways the Contractor is required to carry out under the conditions of Contract, as defined in the Specifications.

The **Intended Completion Date** is the date on which it is intended that the Contractor shall complete the Works and Services. The Intended Completion Date is specified in the Particular Conditions (PC). The Intended Completion Date may be revised only by the Project Manager by issuing an extension of time.

Materials are all supplies, including consumables, used by the Contractor for incorporation in the Works and for provision of Services.

The **Project Manager** is the person named in the PC who is responsible for the overall administration of the Contract on behalf of the Employer, and the supervision of works and services to be performed thereunder. The Project Manager may delegate through a written instrument some of his functions to any other competent person, retaining however the overall responsibility for the actions of that person. The Project Manager may not delegate the overall administrative control of the Contract. Project Manager may also mean and include

‘Supervision and Performance Monitoring Consultant’, if so appointed by the Employer.

Services means all interventions on the Waterways under the Contract and all activities related to the management and evaluation of the Waterways which shall be carried out by the Contractor in order to achieve and keep the Waterways Performance Standards as defined by the Service Levels, and to receive full payment of the monthly fee under the contract

Service Levels are the minimum performance standards for the level of quality of conditions of the Waterways defined in the Specifications which the Contractor shall comply with.

The **Site** is the area defined as such in the PC.

Site Investigation Reports are those that were included in the bidding document and are factual and interpretative reports about the surface and subsurface conditions at the Site.

The **Start Date** is the date when the Contractor has started the physical execution of the Works and Services on the site. It does not necessarily coincide with any of the Site Possession Dates.

A **Subcontractor** is a person or corporate body who has a contractual agreement with the Contractor to carry out certain activities related to the services to be provided under the contract, which may include work on the Site.

Specifications means the Specifications of the Works and Services included in the Contract and any modification or addition made or approved by the Project Manager.

A **Variation** is an instruction given by the Project Manager which varies the Works or Services.

Waterway means a body of water consisting of one or more networks of shipping routes meant for navigation where the Works and Services are contracted under the Contract.

The **Waterway Management Office** is the location indicated by the Contractor from which the Waterway Manager operates, and where the Contractor shall receive notifications.

The **Waterway Manager** is a person appointed by the Contractor who is in charge of managing all activities of the Contractor under the Contract. He is also the Contractor's Representative for the purposes of this contract.

The **Works** are what the Contract requires the Contractor to construct, install, and turn over to the Employer, as covered under Dredging / Bandalling Works,.

Work Order is an order issued by the Project Manager to the Contractor authorizing the execution of Improvement Works and Emergency Works, as provided for in Clause 27 hereunder.

“ESHS” means environmental, social (including sexual exploitation and abuse (SEA) and gender based violence (GBV)), health and safety.

- 2. Interpretation** 2.1 In interpreting these General Conditions (GC), singular also means plural, male also means female or neuter, and vice versa. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Project

Manager will provide instructions clarifying queries about these General Conditions (GC).

**3. Documents
Forming the
Contract**

3.1 The documents forming the Contract shall be interpreted in the following order of priority:

- (1) Agreement,
- (2) Letter of Acceptance,
- (3) Contractor's Bid,
- (4) Particular Conditions (PC),
- (5) General Conditions (GC),
- (6) Specifications,
- (7) Drawings,
- (8) Bill of Quantities, and
- (9) any other document listed in the PC as forming part of the Contract.

**4. Language and
Law**

4.1 The language of the Contract and the law governing the Contract are stated in the PC.

5. Notices

5.1 Unless otherwise stated in the Contract, all notices to be given under the Contract shall be in writing, and shall be sent by personal delivery, airmail post, special courier, fax or E-mail to the address of the relevant party set out in the PC, with the following provisions:

5.1.1 Any notice sent by fax or E-mail shall be confirmed within two (2) days after dispatch by notice sent by airmail post or special courier, except as otherwise specified in the Contract.

5.1.2 Any notice sent by airmail post or special courier shall be deemed (in the absence of evidence of earlier receipt) to have been delivered ten (10) days after dispatch. In proving the fact of dispatch, it shall be sufficient to show that the envelope containing such notice was properly addressed, stamped and conveyed to the postal authorities or courier service for transmission by airmail or special courier.

5.1.3 Any notice delivered personally or sent by fax or E-mail shall be deemed to have been delivered on date of its dispatch.

5.1.4 Either party may change its postal, fax or E-mail address or addressee for receipt of such notices by ten (10) days' notice to the other party in writing.

5.2 Notices shall be deemed to include any approvals, consents, instructions, orders and certificates to be given under the Contract.

5.3 The Contractor shall provide at its own cost, and maintain in operation permanently during the duration of the Contract, such communications equipment which ensures that both written (fax or E-mail) and oral (voice) communications can be established at all times

(a) between the Road Manager and his senior field staff;

(b) between the Project Manager and the Road Manager;

(c) between the public telephone system and the Road Manager;

(d) The equipment to be provided and maintained includes the equipment located at the Project Manager's office.

5.4 At the Start Date of the Contract, the Contractor must communicate to the Employer the address of his office, including the postal, fax and E-mail address, which for the purposes of this contract is called the Road Management Office, where Notices will be addressed to. The Employer may require that the physical location of the Road Management Office is within the close geographical area of the Road. If the Contractor fails to communicate the address of his Road Management Office, and the Employer is otherwise unable to locate the Road Manager, all notifications to the Contractor shall be valid if they are deposited at a designated location within the office of the Project Manager, and if a copy is sent to the Contractor's legal address.

**6. Settlement of
Disputes
(Alternative
when using a
Dispute
Review
Board)**

6.1 Dispute Review Board

6.1.1 If any dispute of any kind whatsoever shall arise between the Employer and the Contractor in connection with or arising out of the Contract, including without prejudice to the generality of the foregoing, any question regarding its existence, validity or termination, or the execution of the Works and Services—whether during the progress of the execution or after completion and whether before or after the termination, abandonment or breach of the Contract—the parties shall seek to resolve any

such dispute or difference by mutual consultation. If the parties fail to resolve such a dispute or difference by mutual consultation, then the matter in dispute shall, in the first place, be referred in writing by either party to the Disputes Review Board ('the Board'), with a copy to the other party.

- 6.1.2 The Board shall be established when each of the three Board Members has signed a Board Member's Declaration of Acceptance as required by the DRB's Rules and Procedures (which, along with the Declaration of Acceptance form, are attached to the Contract). The Board shall comprise three Members experienced with the type of construction and services involved in the Contract and with the interpretation of contractual documents. One Member shall be selected by each of the Employer and the Contractor and approved by the other. If either of these Members is not so selected and approved within 28 days of the date of the Letter of Acceptance, then upon the request of either or both parties such Member shall be selected as soon as practicable by the Appointing Authority specified in the PC. The third Member shall be selected by the other two and approved by the parties. If the two Members selected by or on behalf of the parties fail to select the third Member within 14 days after the later of their selections, or if within 14 days after the selection of the third Member, the parties fail to approve that Member, then upon the request of either or both parties such third Member shall be selected promptly by the same Appointing Authority specified in the PC who shall seek the approval of the proposed third Member by the parties before selection but, failing such approval, nevertheless shall select the third Member. The third Member shall serve as Chairman of the Board.
- 6.1.3 In the event of death, disability, or resignation of any Member, such Member shall be replaced in the same manner as the Member being replaced was selected. If for whatever other reason a Member shall fail or be unable to serve, the Chairman (or failing the action of the Chairman then either of the other Members) shall inform the parties and such nonserving Member shall be replaced in the same manner as the Member being replaced was selected. Any replacement made by the parties shall be completed within 28 days after the event giving rise to the vacancy on the Board, failing which the replacement shall be made by the Appointing Authority in the same manner as

described above. Replacement shall be considered completed when the new Member signs the Board Member's Declaration of Acceptance. Throughout any replacement process the Members not being replaced shall continue to serve and the Board shall continue to function and its activities shall have the same force and effect as if the vacancy had not occurred, provided, however, that the Board shall not conduct a hearing nor issue a Recommendation until the replacement is completed.

- 6.1.4 Either the Employer or the Contractor may refer a dispute to the Board in accordance with the provisions of the DRB's Rules and Procedures, attached to the Contract. The Recommendation of the Board shall be binding on both parties, who shall promptly give effect to it unless and until the same shall be revised, as hereinafter provided, in an arbitral award. Unless the Contract has already been repudiated or terminated, the Contractor shall continue to proceed with the Works and Services in accordance with the Contract.
- 6.1.5 If either the Employer or the Contractor is dissatisfied with any Recommendation of the Board, or if the Board fails to issue its Recommendation within 56 days after receipt by the Chairman of the Board of the written Request for Recommendation, then either the Employer or the Contractor may, within 14 days after his receipt of the Recommendation, or within 14 days after the expiry of the said 56-day period, as the case may be, give notice to the other party of his intention to commence arbitration, as hereinafter provided, as to the matter in dispute. Such notice shall establish the entitlement of the party giving the same to commence arbitration, as hereinafter provided, as to such dispute and, subject to Sub-Clause 6.3, no arbitration in respect thereof may be commenced unless such notice is given.
- 6.1.6 If the Board has issued a Recommendation to the Employer and the Contractor within the said 56 days and no notice of intention to commence arbitration as to such dispute has been given by either the Employer or the Contractor within 14 days after the parties received such Recommendation from the Board, the Recommendation shall become final and binding upon the Employer and the Contractor.

- 6.1.7 Whether or not it has become final and binding upon the Employer and the Contractor, a Recommendation shall be admissible as evidence in any subsequent dispute resolution procedure, including any arbitration or litigation having any relation to the dispute to which the Recommendation relates.
- 6.1.8 All Recommendations that have become final and binding shall be implemented by the parties forthwith.

6.2 Arbitration

6.2.1 If either the Employer or the Contractor is dissatisfied with the Board's decision, then either the Employer or the Contractor may, in accordance with Sub-Clause 6.1.5, give notice to the other party of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given. The arbitral tribunal shall have full power to open up, review, and revise any decision, opinion, instruction, determination, certificate, and any Recommendation(s) of the Board.

6.2.2 Any dispute in respect of which a notice of intention to commence arbitration has been given, in accordance with GC Sub-Clause 6.2.1, shall be finally settled by arbitration. Neither party shall be limited in the proceedings before such arbitration tribunal to the evidence or arguments put before the Board for the purpose of obtaining his Recommendation(s) pursuant to Sub-Clause 6.2.1. No Recommendation shall disqualify the Board from being called as a witness and giving evidence before the arbitrator(s) on any matter whatsoever relevant to the dispute. Arbitration may be commenced prior to or after completion of the Works and Services.

6.2.3 Arbitration proceedings shall be conducted in accordance with the rules of procedure designated in the PC.

6.3 Where neither the Employer nor the Contractor has given notice of intention to commence arbitration of a dispute within the period stated in Sub-Clause 6.1.5 and the related Recommendation has become final and binding, either party may, if the other party fails to comply with such Recommendation and without prejudice to any other right it may have, refer the failure to arbitration in accordance with Sub-Clause 6.2. The provisions of Sub-Clause 6.1 shall not apply to any such reference

6.4 Notwithstanding any reference to the Board or Arbitration herein,

(a) the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree

- (b) the Employer shall pay the Contractor any monies due the Contractor.

B. ASSIGNMENT OF RESPONSIBILITIES

7. Scope of Works and Services

- 7.1 Unless otherwise expressly limited in the Specifications, the Contractor's obligations cover the Design, the carrying out of all Works and the performance of all Services required for keeping the Road in accordance with the Service Levels defined in the Specifications, while at the same time respecting the plans, procedures, specifications, drawings, codes and any other documents as identified in the Specifications. Such specifications include, but are not limited to, the provision of supervision and engineering services; the supply of labor, materials, equipment; Contractor's Equipment; construction utilities and supplies; temporary materials, structures and facilities; transportation (including, without limitation, unloading and hauling to, from and at the Site); and storage, except for those supplies, works and services that will be provided or performed by the Employer, if any, as set forth in the corresponding Specifications.
- 7.2 The Contractor shall, unless specifically excluded in the Contract, perform all such work, services and/or supply all such items and materials not specifically mentioned in the Contract but that can be reasonably inferred from the Contract as being required for attaining the Performance Standards (as specified in Clause 24 of GC) as if such work, services and/or items and materials were expressly mentioned in the Contract.

8. Design Responsibility

- 8.1 The Contractor shall be responsible for the design and programming of the Works and Services, and for the accuracy and completeness of the information used for that design and programming in accordance with the requirements established in the Specifications.
- 8.2 Specifications and Drawings
- 8.2.1 The Contractor shall execute the basic and detailed design and the engineering work in compliance with the provisions of the Contract and the Specifications, or where not so specified, in accordance with good engineering practice.

The Contractor shall be responsible for any discrepancies, errors or omissions in the specifications, drawings and other technical documents that it has prepared, whether such specifications, drawings and other documents have been approved by the Project Manager or not, provided that such discrepancies, errors or omissions are not because of inaccurate information furnished in writing to the Contractor by or on behalf of the Employer.

- 8.2.2 The Contractor shall be entitled to disclaim responsibility for any design, data, drawing, specification or other document, or any modification thereof, provided or designated by, or on behalf of, the Employer, by giving a notice of such disclaimer to the Project Manager.

8.3 Codes and Standards

Wherever references are made in the Contract to codes and standards in accordance with which the Contract shall be executed, the edition or the revised version of such codes and standards current at the date twenty-eight (28) days prior to date of bid submission shall apply unless otherwise specified. During Contract execution, any changes in such codes and standards shall be applied after approval by the Employer and shall be treated in accordance with GC Clause 63.

8.4 Approval/Review of Technical Documents by Project Manager

- 8.4.1 For those Works specified in the PC, the Contractor shall prepare (or cause its Subcontractors to prepare) and furnish to the Project Manager the documents listed in the Specifications (List of Documents for Approval or Review) for its approval or review.

Unless otherwise specified in the PC, the Contractor shall not be required to submit for the Employer's approval the Design or other technical documents concerning the Maintenance Services remunerated through monthly lump-sum payments.

Any part of the Works covered by or related to the documents to be approved by the Project Manager shall be executed only after the Project Manager's approval thereof.

GC Sub-Clauses 8.4.2 through 8.4.7 shall apply only to those documents requiring the Project Manager's approval, but not to those furnished to the Project Manager for his information or review only.

- 8.4.2 Within fourteen (14) days after receipt by the Project Manager of any document requiring the Project Manager's approval in accordance with GC Sub-Clause 8.4.1, the Project Manager shall either return one copy thereof to the Contractor with its approval endorsed thereon or shall notify the Contractor in writing of its disapproval thereof and the reasons therefore and the modifications that the Project Manager proposes.

If the Project Manager fails to take such action within the said fourteen (14) days, then the said document shall be deemed to have been approved by the Project Manager.

- 8.4.3 The Project Manager shall not disapprove any document, except on the grounds that the document does not comply with some specified provision of the Contract or that it is contrary to good engineering practice.
- 8.4.4 If the Project Manager disapproves the document, the Contractor shall modify the document and resubmit it for the Project Manager's approval in accordance with GC Sub-Clause 8.4.2. If the Project Manager approves the document subject to modification(s), the Contractor shall make the required modification(s), whereupon the document shall be deemed to have been approved.
- 8.4.5 If any dispute or difference occurs between the Employer and the Contractor in connection with or arising out of the disapproval by the Project Manager of any document and/or any modification(s) thereto that cannot be settled between the parties within a reasonable period, then such dispute or difference may be referred to the DRB (or DRE) for determination in accordance with GC Sub-Clause 6.1 hereof. If such dispute or difference is referred to the DRB (or DRE), the Project Manager shall give instructions as to whether and if so, how, performance of the Contract is to proceed. The Contractor shall proceed with the Contract in accordance

with the Project Manager's instructions, provided that if the DRB (or DRE) upholds the Contractor's view on the dispute and if the Employer has not given notice under GC Sub-Clause 6.1.5 hereof, then the Contractor shall be reimbursed by the Employer for any additional costs incurred by reason of such instructions and shall be relieved of such responsibility or liability in connection with the dispute and the execution of the instructions as the DRB (or DRE) shall decide, and the Time for Completion shall be extended accordingly.

8.4.6 The Project Manager's approval, with or without modification of the document furnished by the Contractor, shall not relieve the Contractor of any responsibility or liability imposed upon it by any provisions of the Contract except to the extent that any subsequent failure results from modifications required by the Project Manager.

8.4.7 The Contractor shall not depart from any approved document unless the Contractor has first submitted to the Project Manager an amended document and obtained the Project Manager's approval thereof, pursuant to the provisions of this GC Sub-Clause 8.4.

If the Project Manager requests any change in any already approved document and/or in any document based thereon, the provisions of GC Clause 63.2 shall apply to such request.

9. Copyright

9.1 The copyright in all drawings, documents and other materials containing data and information furnished to the Employer by the Contractor herein shall remain vested in the Contractor or, if they are furnished to the Employer directly or through the Contractor by any third party, including suppliers of materials, the copyright in such materials shall remain vested in such third party.

10. Start Date and Completion

10.1 The Contractor shall start the Works and Services within the period specified in the PC. Upon request from the Contractor, the Employer shall confirm in writing the Start Date, after verifying that works and services have started on the Site.

10.2 The Contractor shall attain the required Service Levels and the Completion of the Rehabilitation and Improvement Works (or of a part where a separate time for Completion of such part is specified

in the Contract) within the time schedules included in the PC and the Specifications, or within such extended time to which the Contractor shall be entitled under GC Clause 64 hereof.

**11. Contractor's
Responsibilities**

11.1 The Contractor shall design and carry out the Works and Services (including associated purchases and/or subcontracting) necessary to comply with the requirements established in the Specifications with due care and diligence in accordance with the Contract.

11.2 The Contractor confirms that it has entered into this Contract on the basis of a proper examination of the data relating to the Works and Services required, including any data and tests provided by the Employer, and on the basis of information that the Contractor could have obtained from a visual inspection of the Site and of other data readily available to it relating to the Road as of the date twenty-eight (28) days prior to bid submission. The Contractor acknowledges that any failure to acquaint itself with all such data and information shall not relieve its responsibility for properly estimating the difficulty or cost of successfully performing the Works and Services.

11.3 The Contractor shall acquire in its name all permits, approvals and/or licenses from all local, state or national government authorities or public service undertakings in the country of the Employer that are necessary for the performance of the Contract, including, without limitation, visas for the Contractor's and Subcontractor's personnel and entry permits for all imported Contractor's Equipment. The Contractor shall acquire all other permits, approvals and/or licenses that are not the responsibility of the Employer under GC Sub-Clause 14.3 hereof and that are necessary for the performance of the Contract.

11.4 The Contractor shall comply with all laws in force in the country of the Employer and where the Works and Services are carried out. The laws will include all local, state, national or other laws that affect the performance of the Contract and bind upon the Contractor. The Contractor shall indemnify and hold harmless the Employer from and against any and all liabilities, damages, claims, fines, penalties and expenses of whatever nature arising or resulting from the violation of such laws by the Contractor or its personnel, including the Subcontractors and their personnel, but without prejudice to GC Sub-Clause 14.1 hereof.

- 11.5 Any Plant, Material and Services that will be incorporated in or be required for the Works and Services and other supplies shall have their origin in an eligible Country as defined under the Bank's procurement guidelines.
- 11.6 The Contractor shall permit the Bank and/or persons appointed by the Bank to inspect the Site and/or the accounts and records of the Contractor and its subcontractors relating to the performance of the Contract, and to have such accounts and records audited by auditors appointed by the Bank if required by the Bank. The Contractor's attention is drawn to Sub-Clause 59.2.1 which provides, inter alia, that acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under Sub-Clause 11.6 constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility under the Procurement Guidelines).
- 12. Subcontracting** 12.1 The Contractor may subcontract activities listed in the PC. Any other activity under the Contract may be subcontracted only when approved by the Project Manager. The Contractor may not assign the entire Contract without the approval of the Employer in writing. Subcontracting shall not alter the Contractor's obligations nor relieve the Contractor from any liability or obligation under the Contract and he shall be responsible for the acts, defaults and neglects of any Subcontractor, his agents, servants or workmen as fully as if they were the acts, defaults or neglects of the Contractor, his agents, servants or workmen.
- 12.2 Notwithstanding GC Sub-Clause 12.1, the Contractor may subcontract under his own responsibility and without prior approval of the Employer the small Works and Services also listed in the PC.
- 13. Assignment of Contract** 13.1 Neither the Employer nor the Contractor shall, without the express prior written consent of the other party (which consent shall not be unreasonably withheld), assign to any third party the Contract or any part thereof, or any right, benefit, obligation or interest therein or thereunder, except that the Contractor shall be entitled to assign either absolutely or by way of charge any monies due and payable to it or that may become due and payable to it under the Contract.
- 14. Employer's Responsibilities** 14.1 The Employer shall apply due diligence to ensure the accuracy of all information and/or data to be supplied to the Contractor as

described in the Specifications, except when otherwise expressly stated in the Contract.

- 14.2 The Employer shall be responsible for acquiring and providing legal and physical possession of the Site and access thereto, and for providing possession of and access to all other areas reasonably required for the proper execution of the Contract, including all requisite rights of way, as specified in the corresponding Specifications. The Employer shall give full possession of and accord all rights of access thereto on or before the date(s) specified in the PC.
- 14.3 The Employer shall acquire and pay for all permits, approvals and/or licenses from all local, state or national government authorities or public service undertakings in the country where the Site is located, when such authorities or undertakings require the Employer to obtain them in the Employer's name, are necessary for the execution of the Contract, and are specified in the corresponding Specifications.
- 14.4 If requested by the Contractor, the Employer shall use its best endeavors to assist the Contractor in obtaining in a timely and expeditious manner all permits, approvals and/or licenses necessary for the execution of the Contract from all local, state or national government authorities or public service undertakings that such authorities or undertakings require the Contractor or Subcontractors or the personnel of the Contractor or Subcontractors, as the case may be, to obtain.
- 14.5 The Employer shall be responsible for the continued operation of the Road after Completion, in accordance with GC Sub-Clause 28, and shall be responsible for facilitating the Guarantee Test(s) for the Road, in accordance with GC Sub-Clause 20.
- 14.6 All costs and expenses involved in the performance of the obligations under this GC Clause 14 shall be the responsibility of the Employer, save those to be incurred by the Contractor with respect to the performance of Guarantee Tests, in accordance with GC Sub-Clause 20.

15. Confidential Information

- 15.1 The Employer and the Contractor shall keep confidential and shall not, without the written consent of the other party hereto, divulge to any third party any documents, data or other information furnished

directly or indirectly by the other party hereto in connection with the Contract, whether such information has been furnished prior to, during or following termination of the Contract. Notwithstanding the above, the Contractor may furnish to its Subcontractor(s) such documents, data and other information it receives from the Employer to the extent required for the Subcontractor(s) to perform its work under the Contract, in which event the Contractor shall obtain from such Subcontractor(s) an undertaking of confidentiality similar to that imposed on the Contractor under this GC Clause 15.

15.2 The Employer shall not use such documents, data and other information received from the Contractor for any purpose other than the operation and maintenance of the Road. Similarly, the Contractor shall not use such documents, data and other information received from the Employer for any purpose other than the design, procurement of Plant and Equipment, construction or such Works and Services as are required for the performance of the Contract.

15.3 The obligation of a party under GC Sub-Clauses 15.1 and 15.2 above, however, shall not apply to that information which

- (a) now or hereafter enters the public domain through no fault of that party;
- (b) can be proven to have been possessed by that party at the time of disclosure and which was not previously obtained, directly or indirectly, from the other party hereto;
- (c) otherwise lawfully becomes available to that party from a third party that has no obligation of confidentiality.

15.4 The above provisions of this GC Clause 15 shall not in any way modify any undertaking of confidentiality given by either of the parties hereto prior to the date of the Contract in respect of the Works and Services or any part thereof.

15.5 The provisions of this GC Clause 15 shall survive termination, for whatever reason, of the Contract.

C. EXECUTION OF WORKS AND SERVICES

**16. Representa-
tives****16.1 Project Manager**

If the Project Manager is not named in the Contract, then within fourteen (14) days of the issuance of the Letter of Acceptance by the Employer, the Employer shall appoint and notify the Contractor in writing of the name of the Project Manager. The Employer may from time to time appoint some other person as the Project Manager in place of the person previously so appointed, and shall give a notice of the name of such other person to the Contractor without delay. No such appointment shall be made at such a time or in such a manner as to impede the progress of the Works and Services. Such appointment shall only take effect upon receipt of such notice by the Contractor. The Project Manager shall represent and act for the Employer at all times during the period of the Contract. All notices, instructions, orders, certificates, approvals and all other communications under the Contract shall be given by the Project Manager, except as herein otherwise provided.

All notices, instructions, information and other communications given by the Contractor to the Employer under the Contract shall be given to the Project Manager, except as herein otherwise provided.

The Project Manager may delegate any of his duties and responsibilities to other people, except to the Adjudicator, after notifying the Contractor, and may cancel any delegation after notifying the Contractor.

16.2 Road Manager

16.2.1 If the Road Manager is not named in the Contract, then the Contractor shall appoint the Road Manager before the Start Date and shall request the Employer in writing to approve the person so appointed. If the Employer makes no objection to the appointment within fourteen (14) days, the Road Manager shall be deemed to have been approved. If the Employer objects to the appointment within fourteen (14) days giving the reason therefore, then the Contractor shall appoint a replacement within fourteen (14) days of such objection, and the foregoing provisions of this GC Sub-Clause 16.2.1 shall apply thereto.

16.2.2 The Road Manager shall represent and act for the Contractor at all times during the period of the Contract and shall give

to the Project Manager all the Contractor's notices, instructions, information and all other communications under the Contract. The Road Manager shall be in charge of the day-to-day management of the works and services to be provided under the contract on behalf of the Contractor, and shall have legal and all other faculties to take all necessary decisions related to the execution of the contract.

All notices, instructions, information and all other communications given by the Employer or the Project Manager to the Contractor under the Contract shall be given to the Road Manager or, in its absence, its deputy, except as herein otherwise provided.

The Contractor shall not revoke the appointment of the Road Manager without the Employer's prior written consent, which shall not be unreasonably withheld. If the Employer consents thereto, the Contractor shall appoint some other person as the Road Manager, pursuant to the procedure set out in GC Sub-Clause 16.2.1.

16.2.3 The Road Manager may, subject to the approval of the Employer (which shall not be unreasonably withheld), at any time delegate to any person any of the powers, functions and authorities vested in him or her. Any such delegation may be revoked at any time. Any such delegation or revocation shall be subject to a prior notice to the Project Manager signed by the Road Manager, and shall specify the powers, functions and authorities thereby delegated or revoked. No such delegation or revocation shall take effect unless and until a copy thereof has been delivered to the Project Manager.

Any act or exercise by any person of powers, functions and authorities so delegated to him or her in accordance with this GC Sub-Clause 16.2.3 shall be deemed to be an act or exercise by the Road Manager.

16.2.4 From the Start Date until Completion, the Road Manager shall supervise all work and services done at the Site by the Contractor and shall be present at the Site throughout normal working hours except when on leave, sick or absent for reasons connected with the proper performance of the Contract. Whenever the Road Manager is absent from the

Site, a suitable person shall be appointed to act as his or her deputy.

16.2.5 The Employer may by notice to the Contractor object to any representative or person employed by the Contractor in the execution of the Contract who, in the reasonable opinion of the Employer, may behave inappropriately, may be incompetent or negligent, or may commit a serious breach of the Site regulations provided under the Specifications. The Employer shall provide evidence of the same, whereupon the Contractor shall remove such person from the Site.

16.2.6 If any representative or person employed by the Contractor is removed in accordance with GC Sub-Clause 16.2.5, the Contractor shall, where required, promptly appoint a replacement.

17. Work Program

17.1 Contractor's Organization

The Contractor shall supply to the Project Manager a chart showing the proposed organization to be established by the Contractor for carrying out the Works and Services. The chart shall include the identities of the key personnel together with the curricula vitae of such key personnel to be employed as included in the Contractor's Bid. The Contractor shall promptly inform the Project Manager in writing of any revision or alteration of such an organization chart.

17.2 Program of Performance

Not later than the Start Date, the Contractor shall prepare and supply to the Project Manager a program of performance of the Contract, made in the form specified in the Specifications and showing the sequence in which it proposes to design and carry out the Works and Services, as well as the date by which the Contractor reasonably requires that the Employer shall have fulfilled its obligations under the Contract so as to enable the Contractor to execute the Contract in accordance with the program and to achieve Completion in accordance with the Contract. The Contractor shall update and revise the program as and when appropriate, but without modification in the Times for Completion given in the PC and any extension granted in accordance with GC Clause 64, and shall supply all such revisions to the Project Manager.

17.3 Progress Report

The Contractor shall monitor progress of all the activities specified in the program referred to in GC Sub-Clause 17.2 above, and supply a progress report to the Project Manager every month together with his Monthly Statement. The progress report shall be in a form acceptable to the Project Manager in accordance with the Specifications.

17.4 Progress of Execution

If at any time the Contractor's actual progress falls behind the program referred to in GC Sub-Clause 17.2, or it becomes apparent that it will so fall behind, the Contractor shall prepare and supply to the Project Manager a revised program, taking into account the prevailing circumstances, and shall notify the Project Manager of the steps being taken to expedite progress so as to attain Completion of the Works and Execution of Services activities within the Time for Completion under GC Sub-Clause 10.2, any extension thereof entitled under GC Sub-Clause 64, or any extended period as may otherwise be agreed upon between the Employer and the Contractor.

17.5 Work Procedures

The Contract shall be executed in accordance with the Contract Documents and the procedures given in the Specifications.

18. Execution of Works

18.1 Setting Out/Supervision/Labor

18.1.1 *Bench Mark*. The Contractor shall be responsible for the true and proper setting-out of the Works in relation to bench marks, reference marks and lines provided to it in writing by or on behalf of the Employer.

If, at any time during the progress of execution of the Works, any error shall appear in the position, level or alignment of the Works, the Contractor shall forthwith notify the Project Manager of such error and, at its own expense, immediately rectify such error to the reasonable satisfaction of the Project Manager. If such error is based on incorrect data provided in writing by or on behalf of the Employer, the expense of rectifying the same shall be borne by the Employer.

18.1.2 *Contractor's Supervision.* The Contractor shall give or provide all necessary supervision during the execution of the Works, and the Road Manager or its deputy shall be on the Site to provide full-time supervision of the execution. The Contractor shall provide and employ only technical personnel who are skilled and experienced in their respective callings and supervisory staff who are competent to adequately supervise the work at hand.

18.2 Contractor's Equipment

18.2.1 All Contractor's Equipment brought by the Contractor onto the Site shall be deemed to be intended to be used exclusively for the execution of the Contract. The Contractor shall not remove the same from the Site without informing the Project Manager.

18.2.2 Unless otherwise specified in the Contract, upon completion of the Works and Services, the Contractor shall remove from the Site all Equipment brought by the Contractor onto the Site and any surplus materials remaining thereon.

18.2.3 The Employer will, if requested, use its best endeavors to assist the Contractor in obtaining any local, state or national government permission required by the Contractor for the export of the Contractor's Equipment imported by the Contractor for use in the execution of the Contract that is no longer required for the execution of the Contract.

18.3 Site Regulations and Safety

The Employer and the Contractor shall establish Site regulations setting out the rules to be observed in the execution of the Contract at the Site and shall comply therewith. The Contractor shall prepare and submit to the Employer, with a copy to the Project Manager, proposed Site regulations for the Employer's approval, which approval shall not be unreasonably withheld.

Such Site regulations shall include, but shall not be limited to, rules in respect of security, safety, traffic control, accident response, gate control, sanitation, medical care, and fire prevention.

18.4 Access to site for Other Contractors

18.4.1 The Contractor shall, upon written request from the Employer or the Project Manager, give site access to other contractors employed by the Employer on or near the site.

18.5 Site Clearance

18.5.1 *Site Clearance in Course of Execution:* In the course of carrying out the Contract, the Contractor shall keep the Site reasonably free from all unnecessary obstruction, store or remove any surplus materials, clear away any wreckage, rubbish or temporary works from the Site, and remove any Contractor's Equipment no longer required for execution of the Contract.

18.5.2 *Clearance of Site after Completion:* After Completion of all parts of the Works and Services, the Contractor shall clear away and remove all wreckage, rubbish and debris of any kind from the Site, and shall leave the Site and the Road clean and safe.

18.6 Watching and Lighting

The Contractor shall provide and maintain at its own expense all lighting, fencing, and watching when and where necessary for the proper execution and the protection of the Works and Services, for the protection of his own installations and his equipment, for the safety of the owners and occupiers of adjacent property and for the safety of the public.

18.7 Access to the Site

The Contractor shall allow the Project Manager and any person authorized by the Project Manager access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out.

18.8 Management Meetings

18.8.1 Either the Project Manager or the Contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for

remaining work and to deal with matters raised by either the Contractor or the Employer.

18.8.2 The Project Manager shall record the business of management meetings and provide copies of the record to those attending the meeting and to the Employer. The responsibility of the parties for actions to be taken shall be decided by the Project Manager either during or after the management meeting and stated in writing to all who attended the meeting.

19. Staff and Labor

19.1 The Contractor shall employ the key personnel named in the Contractor's Bid, to carry out the functions stated in the Specifications or other personnel approved by the Project Manager. The Project Manager will approve any proposed replacement of key personnel only if their relevant qualifications and abilities are substantially equal to or better than those of the personnel listed in the Contractor's Bid.

19.2 Labor

- (a) The Contractor shall provide and employ on the Site for the execution of the Works and Services such skilled, semi-skilled and unskilled labor as is necessary for the proper and timely execution of the Contract. The Contractor is encouraged to use local labor that has the necessary skills.
- (b) Unless otherwise provided in the Contract, the Contractor shall be responsible for the recruitment, transportation, accommodation and catering of all labor, local or expatriate, required for the execution of the Contract and for all payments in connection therewith.
- (c) The Contractor shall be responsible for obtaining all necessary permit(s) and/or visa(s) from the appropriate authorities for the entry of all labor and personnel to be employed on the Site into the country where the Site is located.
- (d) The Contractor shall at its own expense provide the means of repatriation to all of its and its Subcontractor's personnel employed on the Contract at the Site to their various home countries. It shall also provide suitable temporary maintenance of all such persons from the cessation of their

employment on the Contract to the date programmed for their departure. In the event that the Contractor defaults in providing such means of transportation and temporary maintenance, the Employer may provide the same to such personnel and recover the cost of doing so from the Contractor.

- (e) The Contractor shall at all times during the progress of the Contract use its best endeavors to prevent any unlawful, riotous or disorderly conduct or behavior by or amongst its employees and the labor of its Subcontractors.
- (f) The Contractor shall provide lodging, medical assistance, alimentation and sanitary installations for the employees living in the contractor's base camps to comply with the Social, Sanitary and Health Conditions of Labor requirements established in the Specifications.
- (g) The Contractor shall, in all dealings with its labor and the labor of its Subcontractors currently employed on or connected with the Contract, pay due regard to all recognized festivals, official holidays, religious or other customs and all local laws and regulations pertaining to the employment of labor.
- (h) HIV-AIDS Prevention. If so indicated in the PC, the Contractor shall conduct an HIV-AIDS awareness programme via an approved service provider or specialized NGO, and shall undertake such other measures as are specified in this Contract to reduce the risk of the transfer of the HIV virus between and among the Contractor's personnel (including Sub-Contractors) and the local community, to promote early diagnosis and to assist affected individuals. The Contractor shall throughout the contract: (i) conduct Information, Education and Consultation Communication (IEC) campaigns, at least every other month, addressed to all the Site staff and labor (including all the Contractor's employees, all Sub-Contractors and Consultants' employees working on the Site, and truck drivers and crew making deliveries to the Site for Works and Services executed under the contract, and to the immediate local communities, concerning the risks, dangers and impact, and appropriate

avoidance behavior with respect to of Sexually Transmitted Diseases (STD)—or Sexually Transmitted Infections (STI) in general and HIV/AIDS in particular; (ii) provide male or female condoms for all Site staff and labor as appropriate; and (iii) provide for STI and HIV/AIDS screening, diagnosis, counseling and referral to a dedicated national STI and HIV/AIDS program, (unless otherwise agreed) of all Site staff and labor.

- (i) If so indicated in the PC, the Contractor shall include in the program to be submitted for the execution of the Works and Services under Sub-Clause 17 a program for Site staff and labour and their families in respect of Sexually Transmitted Infections (STI) and Sexually Transmitted Diseases (STD) including HIV/AIDS. The STI, STD and HIV/AIDS alleviation program shall indicate when, how and at what cost the Contractor plans to satisfy the requirements of this Sub-Clause and the related specification. For each component, the program shall detail the resources to be provided or utilized and any related sub-contracting proposed. The program shall also include provision of a detailed cost estimate with supporting documentation. Payment to the Contractor for preparation and implementation this program shall not exceed the Provisional Sum dedicated for this purpose.

19.3 Removal of staff

If the Project Manager asks the Contractor to remove a person who is a member of the Contractor's staff or work force, stating the reasons, the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the work in the Contract.

19.4 Work at Night and on Holidays

- 19.4.1 Unless otherwise provided in the Contract, if and when the Contractor considers it necessary to carry out work at night or on public holidays so as to meet the Service Levels and the Time for Completion, and requests the Employer's consent thereto (if such consent is needed), the Employer shall not unreasonably withhold such consent.

20. Test and Inspection

- 20.1 The Contractor shall at its own expense carry out on the Site all such tests and/or inspections as are specified in the Specifications, and in accordance with the procedures described in the Specifications.
- 20.2 The Employer and the Project Manager or their designated representatives shall be entitled to attend the aforesaid test and/or inspection.
- 20.3 For tests to be carried out on the initiative of the Contractor, whenever the Contractor is ready to carry out any such test and/or inspection, he shall give a reasonable advance notice of such test and/or inspection and of the place and time thereof to the Project Manager. The Contractor shall provide the Project Manager with a signed report of the results of any such test and/or inspection.
- 20.4 If the Employer or Project Manager (or their designated representatives) fails to attend a scheduled test and/or inspection, or if it is agreed between the parties that such persons shall not attend, then the Contractor may proceed with the test and/or inspection in the absence of such persons, and may provide the Project Manager with a signed report of the results thereof.
- 20.5 The Project Manager may require the Contractor to carry out any test and/or inspection not required by the Contract, provided that the Contractor's reasonable costs and expenses incurred in the carrying out of such test and/or inspection shall be added to the Contract Price. Further, if such test and/or inspection impedes the progress of the works and/or the Contractor's performance of its other obligations under the Contract, due allowance will be made in respect of the Time for Completion and the other obligations so affected.
- 20.6 If Rehabilitation Works, Improvement Works or Emergency Works fail to pass any test and/or inspection, the Contractor shall either rectify or replace such works and shall repeat the test and/or inspection upon giving a notice under GC Sub-Clause 20.3.
- 20.7 If any dispute or difference of opinion shall arise between the parties in connection with or arising out of the test and/or inspection of the Works and Services, or part of them, that cannot be settled between the parties within a reasonable period of time, it may be referred to

the DRB (or DRE) for determination in accordance with GC Sub-Clause 6.1.

- 20.8 The Contractor agrees that neither the execution of a test and/or inspection of the Works and Services or any part of them, nor the attendance by the Employer or the Project Manager, nor the issue of any test certificate pursuant to GC Sub-Clause 20.4, shall release the Contractor from any other responsibilities under the Contract.
- 20.9 No part or foundations shall be covered up on the Site without the Contractor carrying out any test and/or inspection required under the Contract. The Contractor shall give a reasonable notice to the Project Manager whenever any such part or foundations are ready or about to be ready for test and/or inspection; such test and/or inspection and notice thereof shall be subject to the requirements of the Contract.
- 20.10 The Contractor shall uncover any part of the Works or foundations, or shall make openings in or through the same as the Project Manager may from time to time require at the Site, and shall reinstate and make good such part or parts.

If any parts of the Works or foundations have been covered up at the Site after compliance with the requirement of GC Sub-Clause 20.9 and are found to be executed in accordance with the Contract, the expenses of uncovering, making openings in or through, reinstating, and making good the same shall be borne by the Employer, and the Time for Completion shall be reasonably adjusted to the extent that the Contractor has thereby been delayed or impeded in the performance of any of its obligations under the Contract.

21. Development Dredging Works

- 21.1 If so indicated in the PC, specific Development Dredging Works shall be carried out explicitly in accordance with the Specifications and as specified in the bidding document and in the Contractor's Bid. Input quantities for Development Dredging Works have been estimated in the Bill of Quantities.

- 22. Improvement Works**
- 22.1 If so indicated in the PC, Improvement Works are required and will consist of a set of interventions that add new characteristics to the roads in response to new traffic and safety or other conditions. Improvement Works quantities were offered at unit prices included in the Bill of Quantities.
- 22.2 The execution of Improvement Works shall be requested by the Project Manager, who will issue a Work Order defining the requested works to be carried out by the Contractor, based on the activities priced in the Bill of Quantities. The Work order shall specify the activities to be carried out and the corresponding price. The Road Manager shall confirm his acceptance by signing the Work Order.
- 23. Maintenance Services**
- 23.1 Maintenance Services are those activities necessary for keeping the Road in compliance with the Performance Standards pursuant to GC Clause 24. Maintenance Services shall include all activities required to achieve and keep the Road Performance Standards and Service Levels. These Services will be remunerated by Lump-Sum amount for the period of the contract paid in fixed monthly payments during the entire Contract period.
- 24. Performance Standards**
- 24.1 The Contractor shall carry out the Maintenance Services to achieve and keep the Road complying with the Service Levels defined in the Specifications. He will carry out all Works in accordance with the performance standards indicated in the Specifications.
- 25. Contractor's Self-Control of Quality and Safety**
- 25.1 The Contractor shall, throughout the execution and completion of the Works and Services, maintain a System which shall ensure that the work methods and procedures are adequate and safe at all times and do not pose any avoidable risks and dangers to the health, safety and property of the workers and agents employed by him or any of his subcontractors, of road users, of persons living in the vicinity of the roads under contract, and any other person who happens to be on or along the roads under contract.
- 25.2 Unless specified otherwise in the PC, the Contractor shall establish, within his own organizational structure, a specific Unit staffed with qualified personnel, whose task is to verify continuously the degree of compliance by the Contractor with the required Service Levels. That Unit will also be responsible for the generation and presentation of the information needed by the contractor for the documentation required as defined in the Specifications. The Unit

will be responsible for maintaining a detailed and complete knowledge of the condition of the Road and to provide to the Road Manager all the information needed in order to efficiently manage and maintain the Road. The Unit shall also carry out, in close collaboration with the Project Manager, the verifications on the Service Levels.

25.3 The Contractor's Self-Control Unit mentioned in GC Sub-Clause 25.2 shall report the level of compliance with the required Service Levels in the standard format presented in the Specifications.

**26. Environmental
and Safety
Requirements**

26.1 The Contractor shall, throughout the design, execution and completion of the Works and Services, and the remedying of any defects therein:

- (a) have full regard for the safety of all persons employed by him and his subcontractors and keep the Site (so far as the same is under his control) in an orderly state appropriate to the avoidance of danger to such persons;
- (b) provide and maintain at his own cost all guardrails, fencing, warning signs and watching, when and where necessary or required by Sub-Clause 18.3 of the Contract or by any duly constituted authority, for the protection of the Works and Services or for the safety and convenience of his workers and road users, the public or others; and
- (c) take all reasonable steps to protect the environment (both on and off the Site) and to limit damage and nuisance to people and property resulting from pollution, noise and other results of his operations.

**27. Work Orders
for
Improvement
Works and
Emergency
Works**

27.1 Improvement Works and Emergency Works shall be executed by the Contractor on the basis of Work Orders issued by the Project Manager.

27.2 Work Orders shall be issued in writing and shall include the date on which the Work Order was issued and the signature of the Project Manager. Two copies of the Work Order shall be transmitted by the Project Manager to the Contractor, who shall immediately countersign one copy, including the date of acceptance, and return it to the Project Manager.

27.3 If the Contractor has any objection to a Work Order, the Road Manager shall notify the Project Manager of his reasons for such objection within ten (10) days of the date of issuing the Work Order. Within five (5) days of the Road Manager's objection, the Project Manager shall cancel, modify or confirm the Work Order in writing.

28. Taking Over Procedures

28.1 When the whole of the Works and Services have been substantially completed and have satisfactorily passed any Tests on Completion prescribed by the Contract, the Contractor may give a notice to that effect to the Project Manager, accompanied by a written undertaking to finish with due expedition any outstanding work during the Defects Liability Period. Such notice and undertaking shall be deemed to be a request by the Contractor for the Project Manager to issue a Taking-Over Certificate in respect of the Works and Services. The Project Manager shall, within twenty-one (21) days of the date of delivery of such notice, either issue to the Contractor a Taking-Over Certificate, stating the date on which the Works and Services were substantially completed in accordance with the Contract, or give instructions in writing to the Contractor specifying all the conditions to be complied with and all the work which is required to be done by the Contractor before the issue of such Certificate. The Project Manager shall also notify the Contractor of any defects in the Works and Services affecting substantial completion that may appear after such instructions and before completion of Taking-Over Certificate within twenty-one (21) days of completion, to the satisfaction of the Project Manager, of the Works and Services so specified and remedying any defects so notified.

28.2 Similarly, in accordance with the procedure set out in Sub-Clause 28.1, the Contractor may request and the Project Manager shall issue a Taking-Over Certificate in respect of:

- (a) any Section in respect of which a separate Time for Completion is provided in the contract,
- (b) any substantial part of the Works and Services which has been both completed to the satisfaction of the Project Manager and, otherwise than as provided for in the Contract, occupied or used by the Employer, or
- (c) any part of the Works and Services which the Employer has elected to occupy or use prior to completion (where such prior

occupation or use is not provided for in the Contract or has not been agreed by the Contractor as a temporary measure).

29. Emergency Works

29.1 The need for execution of Emergency Works is jointly identified by the Employer and the Contractor and the starting of the execution of Emergency Works shall always require a Work Order issued by the Project Manager.

29.2 The execution of Emergency Works shall be requested by the Contractor based on losses or damages occurred as a result of natural phenomena (such as strong storms, flooding or earthquakes) with imponderable consequences, or on the possibility of damages or losses occurring, or the safety of individuals, works, services or equipment being at risk as result of the natural phenomena. In order to characterize the Emergency Works, the Contractor shall forward a Technical Report to the Project Manager requesting the execution of Emergency Works and characterizing the situation. On the basis of the said report, and of his own judgment of the situation, the Project Manager may issue a Work Order to the Contractor.

29.3 The Employer or even Government authorities may declare an Emergency Situation on the basis of local legislation. In those cases, the Project Manager may issue a Work Order for Emergency Works to the Contractor even without a request by the Contractor.

29.4 If the Contractor is unable or unwilling to do such work immediately, the Employer may do or cause such work to be done as the Employer may determine necessary in order to prevent damage to the Road. In such event the Employer shall, as soon as practicable after the occurrence of any such emergency, notify the Contractor in writing of such emergency, the work done and the reasons therefore. If the work done or caused to be done by the Employer is work that the Contractor was liable to do at its own expense under the Contract, the reasonable costs incurred by the Employer in connection therewith shall be paid by the Contractor to the Employer. Otherwise, the cost of such remedial work shall be borne by the Employer.

30. Quality of materials used by Contractor

30.1 The quality of materials used by the Contractor for the execution of the Contract shall be in compliance with the requirements of the Specifications. If the Contractor is of the opinion that materials of higher quality than those stated in the Specifications need to be used in order to ensure compliance with the Contract, he shall use

such better materials, without being entitled to higher prices or remunerations.

30.2 Under no circumstances may the Contractor make any claim based on the insufficient quality of materials used by him, even if the material used was authorized by the Project Manager.

30.3 The Contractor shall carry out at his own cost the laboratory and other tests that he needs to verify if materials to be used comply with the Specifications, and shall keep records of such tests. If requested by the Project Manager, the Contractor shall hand over the results of the tests.

31. Signalling and demarcation of work zones and bypasses

31.1 To ensure the safety of waterways users, the Contractor is responsible to install and maintain at his cost the adequate signalling and demarcation of work sites, which in addition must comply with the applicable legislation.

31.2 If the execution of services and works under the contract is likely to interfere with traffic, the Contractor shall take at his cost the measures necessary to limit such interference to the strict minimum, or any danger to the workers or others. For that purpose, he is entitled to install, within the right-of-way of the waterways, temporary bypass channels, structures or other modifications to be used by vessel traffic during the execution of works and services. The Contractor shall notify the Project Manager of any such temporary installations.

31.3 If the execution of Works and Services by the Contractor makes it necessary to temporarily close a waterway section, and an alternative vessel traffic route has to be implemented, the Contractor shall be responsible for the adequate signalling of the alternative route, under the same conditions as stated in GC Sub-Clause 31.1.

31.4 The Contractor shall inform the local authorities about such activities to be carried out by him which may cause any significant interruptions or changes to the normal traffic patterns. Such information shall be made in writing and at least seven (7) days before the beginning of such activities. Upon request from the Contractor, the Employer shall assist the Contractor in the coordination with the local authorities.

D. ALLOCATION OF RISKS

- | | |
|---|---|
| 32. Employer's Risks | <p>32.1 From the Start Date until the Defects Correction Certificate has been issued, the following are Employer's risks insofar as they directly affect the execution of the Works and Services included in this Contract:</p> <ul style="list-style-type: none">(a) war, hostilities (whether war be declared or not), invasion, act of foreign enemies;(b) rebellion, revolution, insurrection, military or usurped power, or civil war;(c) ionising radiations, contamination by radioactivity from any nuclear fuel, or any nuclear waste from the combustion of nuclear fuel, radioactive toxic explosive or other hazardous properties of any explosive nuclear assembly or nuclear component thereof;(d) riot, commotion or disorder, unless solely restricted to employees of the Contractor or of his Subcontractors and arising from the conduct of the Works and Services;(e) loss or damage due to the use or occupation by the Employer of any unfinished Section or part of the Works, except as may be provided for in the Contract;(f) any operation of the forces of nature against which an experienced contractor could not reasonably have been expected to take precautions. |
| 33. Contractor's Risks | <p>33.1 The Employer carries the risks which this Contract states are Employer's risks, and the remaining risks are the Contractor's risks.</p> |
| 34. Loss of or Damage to Property; Accident or | <p>34.1 Subject to GC Sub-Clause 34.3, the Contractor shall indemnify and hold harmless the Employer and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of whatsoever</p> |

**Injury to
Workers;
Indemnifica-
tion**

nature, including attorney's fees and expenses, in respect of the death or injury of any person or loss of or damage to any property arising in connection with the execution and by reason of the negligence of the Contractor or its Subcontractors, or their employees, officers or agents, except any injury, death or property damage caused by the negligence of the Employer, its contractors, employees, officers or agents.

- 34.2 If any proceedings are brought or any claim is made against the Employer that might subject the Contractor to liability under GC Sub-Clause 34.1, the Employer shall promptly give the Contractor a notice thereof and the Contractor may at its own expense and in the Employer's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim.

If the Contractor fails to notify the Employer within twenty-eight (28) days after receipt of such notice that it intends to conduct any such proceedings or claim, then the Employer shall be free to conduct the same on its own behalf. Unless the Contractor has so failed to notify the Employer within the twenty-eight (28) day period, the Employer shall make no admission that may be prejudicial to the defense of any such proceedings or claim.

The Employer shall, at the Contractor's request, afford all available assistance to the Contractor in conducting such proceedings or claim, and shall be reimbursed by the Contractor for all reasonable expenses incurred in so doing.

- 34.3 The Employer shall indemnify and hold harmless the Contractor and its employees, officers and Subcontractors from any liability for loss of or damage to property of the Employer, other than the Works not yet taken over, that is caused by fire, explosion or any other perils, in excess of the amount recoverable from insurances procured under GC Clause 35, provided that such fire, explosion or other perils were not caused by any act or failure of the Contractor.
- 34.4 The party entitled to the benefit of an indemnity under this GC Clause 34 shall take all reasonable measures to mitigate any loss or damage which has occurred. If the party fails to take such measures, the other party's liabilities shall be correspondingly reduced.

35. Insurance

35.1 To the extent specified in the PC, the Contractor shall at its expense take out and maintain in effect, or cause to be taken out and maintained in effect, during the performance of the Contract, the insurances set forth below in the sums and with the deductibles and other conditions specified in the said PC. The identity of the insurers and the form of the policies shall be subject to the approval of the Employer, who should not unreasonably withhold such approval.

(a) *Loss of or damage to the Plant and Materials*

Covering loss or damage occurring prior to Completion.

(b) *Third Party Liability Insurance*

Covering bodily injury or death suffered by third parties (including the Employer's personnel) and loss of or damage to property occurring in connection with Works and Services.

(c) *Automobile Liability Insurance*

Covering use of all vehicles used by the Contractor or its Subcontractors (whether or not owned by them) in connection with the execution of the Contract.

(d) *Workers' Compensation*

In accordance with the statutory requirements applicable in any country where the Contract or any part thereof is executed.

(e) *Employer's Liability*

In accordance with the statutory requirements applicable in any country where the Contract or any part thereof is executed.

(f) *Other Insurances*

Such other insurances as may be specifically agreed upon by the parties.

- 35.2 The Employer shall be named as co-insured under all insurance policies taken out by the Contractor pursuant to GC Sub-Clause 35.1, except for the Third Party Liability, Workers' Compensation and Employer's Liability Insurances, and the Contractor's Subcontractors shall be named as co-insured under all insurance policies taken out by the Contractor pursuant to GC Sub-Clause 35.1 except for the Cargo Insurance During Transport, Workers' Compensation, Hull and Machinery Insurance for Employers Vessels and Employer's Liability Insurances. All insurer's rights of subrogation against such co-insured for losses or claims arising out of the performance of the Contract shall be waived under such policies.
- 35.3 The Contractor shall deliver to the Employer certificates of insurance (or copies of the insurance policies) as evidence that the required policies are in full force and effect. The certificates shall provide that no less than twenty-one (21) days' notice shall be given to the Employer by insurers prior to cancellation or material modification of a policy.
- 35.4 The Contractor shall ensure that, where applicable, its Subcontractor(s) shall take out and maintain in effect adequate insurance policies for their personnel, vessels, and vehicles and for work executed by them under the Contract, unless such Subcontractors are covered by the policies taken out by the Contractor.
- 35.5 If the Contractor fails to take out and/or maintain in effect the insurances referred to in GC Sub-Clause 35.1, the Employer may take out and maintain in effect any such insurances and may from time to time deduct from any amount due the Contractor under the Contract any premium that the Employer shall have paid to the insurer, or may otherwise recover such amount as a debt due from the Contractor.
- 35.6 Unless otherwise provided in the Contract, the Contractor shall prepare and conduct all and any claims made under the policies effected by it pursuant to this GC Clause 35, and all monies payable by any insurers shall be paid to the Contractor. The Employer shall give to the Contractor all such reasonable assistance as may be required by the Contractor. With respect

to insurance claims in which the Employer's interest is involved, the Contractor shall not give any release or make any compromise with the insurer without the prior written consent of the Employer. With respect to insurance claims in which the Contractor's interest is involved, the Employer shall not give any release or make any compromise with the insurer without the prior written consent of the Contractor.

36. Unforeseen Conditions

36.1 If, during the execution of the Contract, the Contractor shall encounter on the Site any physical conditions (other than climatic conditions) or artificial obstructions that could not have been reasonably foreseen prior to the date of the Contract Agreement by an experienced contractor on the basis of reasonable examination of the data relating to the Waterways (including any data and tests provided by the Employer), and on the basis of information that it could have obtained from a visual inspection of the Site or other data readily available to it relating to the Waterways, and if the Contractor determines that it will in consequence of such conditions or obstructions incur additional cost and expense or require additional time to perform its obligations under the Contract that would not have been required if such physical conditions or artificial obstructions had not been encountered, the Contractor shall promptly, and before performing additional work or using additional Plant and Equipment or Contractor's Equipment, notify the Project Manager in writing of

- (a) the physical conditions or artificial obstructions on the Site that could not have been reasonably foreseen;
- (b) the additional work and/or Plant and Equipment and/or Contractor's Equipment required, including the steps which the Contractor will or proposes to take to overcome such conditions or obstructions;
- (c) the extent of the anticipated delay;
- (d) the impact of delays on Service Levels;

- (e) the additional cost and expense that the Contractor is likely to incur.

On receiving any notice from the Contractor under this GC Sub-Clause 36.1, the Project Manager decide upon the actions to be taken to overcome the physical conditions or artificial obstructions encountered. Following such consultations, the Project Manager shall instruct the Contractor, with a copy to the Employer, of the actions to be taken. This may include a Change in Assignments to the Contractor under GC Clause 63.

36.2 Any reasonable additional cost and expense incurred by the Contractor in following the instructions from the Project Manager to overcome such physical conditions or artificial obstructions referred to in GC Sub-Clause 36.1 shall be paid by the Employer to the Contractor as an addition to the Contract Price.

36.3 If the Contractor is delayed or impeded in the performance of the Contract because of any such physical conditions or artificial obstructions referred to in GC Sub-Clause 36.1, the Time for Completion shall be extended in accordance with GC Clause 64.

37. Change in Laws and Regulations

37.1 If, after the date twenty-eight (28) days prior to the date of Bid submission, in the country where the Site is located, any law, regulation, ordinance, order or by-law having the force of law is enacted, promulgated, abrogated or changed (which shall be deemed to include any change in interpretation or application by the competent authorities) that subsequently affects the costs and expenses of the Contractor and/or the Time for Completion, the Contract Price shall be correspondingly increased or decreased, and/or the Time for Completion shall be reasonably adjusted to the extent that the Contractor has thereby been affected in the performance of any of its obligations under the Contract. Notwithstanding the foregoing, such additional or reduced costs shall not be separately paid or credited if the same has already been accounted for in the price adjustment provisions where applicable, in accordance with the PC.

**38. Force
Majeure**

38.1 “Force Majeure” shall mean any event beyond the reasonable control of the Employer or of the Contractor, as the case may be, insofar as they directly affect the execution of the Services and Works included in this Contract and which is unavoidable notwithstanding the reasonable care of the party affected, and shall include, without limitation, the following:

- (a) war, hostilities or warlike operations (whether a state of war be declared or not), invasion, act of foreign enemy and civil war;
- (b) rebellion, revolution, insurrection, mutiny, usurpation of civil or military government, conspiracy, riot, civil commotion and terrorist acts;
- (c) confiscation, nationalization, mobilization, commandeering, requisition by or under the order of any government or de jure or de facto authority or ruler or any other act or failure to act of any local state or national government authority;
- (d) strike, sabotage, lockout, embargo, import restriction, port congestion, lack of usual means of public transportation and communication, industrial dispute, shipwreck, shortage or restriction of power supply, epidemics, quarantine and plague;
- (e) earthquake, landslide, volcanic activity, fire, flood or inundation, tidal wave, typhoon or cyclone, hurricane, storm, lightning, or other inclement weather condition, nuclear and pressure waves or other natural or physical disaster;
- (f) shortage of labor, materials or utilities where caused by circumstances that are themselves Force Majeure.

38.2 If either party is prevented, hindered or delayed from or in performing any of its obligations under the Contract by an event of Force Majeure, then it shall notify the other in writing of the occurrence of such event and the circumstances thereof within fourteen (14) days after the occurrence of such event.

38.3 The party who has given such notice shall be excused from the performance or punctual performance of its obligations under the Contract for so long as the relevant event of Force Majeure continues and to the extent that such party’s performance is prevented, hindered

or delayed. The Time for Completion shall be extended in accordance with GC Clause 64.

38.4 The party or parties affected by the event of Force Majeure shall use reasonable efforts to mitigate the effect thereof upon its or their performance of the Contract and to fulfill its or their obligations under the Contract, but without prejudice to either party's right to terminate the Contract under GC Sub-Clause 38.6.

38.5 No delay or nonperformance by either party hereto caused by the occurrence of any event of Force Majeure shall

- (a) constitute a default or breach of the Contract;
- (b) give rise to any claim for damages or additional cost or expense occasioned thereby;

if and to the extent that such delay or nonperformance is caused by the occurrence of an event of Force Majeure.

38.6 If the performance of the Contract is substantially prevented, hindered or delayed for a single period of more than sixty (60) days or an aggregate period of more than one hundred and twenty (120) days on account of one or more events of Force Majeure during the currency of the Contract, the parties will attempt to develop a mutually satisfactory solution, failing which either party may terminate the Contract by giving a notice to the other, but without prejudice to either party's right to terminate the Contract under GC Clause 59.

38.7 In the event of termination pursuant to GC Sub-Clause 38.6, the rights and obligations of the Employer and the Contractor shall be as specified in GC Sub-Clauses 59.1.2 and 59.1.3.

38.8 Notwithstanding GC Sub-Clause 38.5, Force Majeure shall not apply to any obligation of the Employer to make payments to the Contractor herein.

E. GUARANTEES AND LIABILITIES

39. Completion Time

39.1 The Contractor guarantees that it shall attain specified Service Levels and the Completion of Rehabilitation and Improvement Works (or a part for which a separate time for completion is specified in the PC)

**Guarantee
and Liability**

within the time schedules specified in the PC and the Specifications, pursuant to GC Sub-Clause 10.2, or within such extended time to which the Contractor shall be entitled under GC Clause 64 hereof.

39.2 If the Contractor fails to attain specified Service Levels within the contractually agreed time schedules as given in the Specifications, the contractor shall receive reduced payments for Maintenance Services, for such default and not as a penalty, in accordance with the Specifications.

39.3 If the Contractor fails to attain the Completion of Rehabilitation and Improvement Works (or a part for which a separate time for completion is specified in the PC clause 39.1) within the contractually required time schedules, the contractor shall pay to the Employer liquidated damages for such default and not as a penalty, in accordance with the PC and the Specifications.

39.4 The payment reductions and liquidated damages indicated in GC 39.2 and 39.3 shall be the only monies due from the Contractor for such defaults, and they will be applied for every day of delay, in accordance with the PC and the Specifications. The aggregate amount of such liquidated damages and payment reductions shall in no event exceed the “aggregate liability” in accordance with GC Clause 42. The payment or deduction of such sums shall not relieve the Contractor from his obligation to complete the Works and Services, or from any other of his obligations and liabilities under the Contract.

**40. Performance
Guarantee
and Liability**

40.1 The Contractor guarantees that during the Performance Tests or Inspections for Rehabilitation and Improvement Works, and for Emergency Works, the Road and all parts thereof shall attain the Performance Standards specified in the corresponding Specifications.

40.2 If, for reasons attributable to the Contractor, the minimum level of the Performance Standards specified in the corresponding Specifications are not met either in whole or in part, the Contractor shall at its cost and expense make such changes, modifications and/or additions to the Road or any part thereof as may be necessary to meet at least the minimum level of such Standards. The Contractor shall notify the Employer upon completion of the necessary changes, modifications and/or additions, and shall request the Employer to repeat the Test or Inspection until the minimum level of the Standards has been met. If the Contractor eventually fails to meet the minimum level of

Performance Standard, the Employer may consider termination of the Contract, pursuant to GC Sub-Clause 59.2.2.

40.3 If, for reasons attributable to the Contractor, the Performance Standards relating to Rehabilitation and Improvement Works specified in the corresponding Specifications are not attained either in whole or in part, the Contractor shall, at the Contractor's choice, either

(a) make such changes, modifications and/or additions to the Works and Services or any part thereof that are necessary to attain the Performance Standards at its cost and expense, and shall request the Employer to repeat the Test, or

(b) pay liquidated damages to the Employer in respect of the Works and Services which fail to meet the Performance Standards in accordance with the provisions in the corresponding Specifications.

40.4 The payment of liquidated damages under GC Sub-Clause 40.3, up to the limitation of liability specified in the PC, shall completely satisfy the Contractor's guarantees under GC Sub-Clause 40.1, and the Contractor shall have no further liability whatsoever to the Employer in respect thereof. Upon the payment of such liquidated damages by the Contractor, the Project Manager shall issue the Certificate of Completion for the Works or any part thereof in respect of which the liquidated damages have been so paid.

41. Defect Liability

41.1 The Contractor warrants that the Works and Services or any part thereof shall be free from defects in the design, engineering, materials and workmanship of the Works and Services executed.

41.2 The Defect Liability Period shall be twelve (12) months from the date of Completion of the Contract, or eighteen (18) months from the date of Certificate of Completion of the Works (or any part thereof), whichever occurs first, unless specified otherwise in the PC.

If during the Defect Liability Period any defect should be found in the design, engineering, materials and workmanship of the Works and Services executed by the Contractor, the Contractor shall promptly, in consultation and agreement with the Employer regarding appropriate remedying of the defects, and at its cost, repair, replace or otherwise make good (as the Contractor shall, at its discretion,

determine) such defect as well as any damage to the Road caused by such defect. The Contractor shall not be responsible for the repair, replacement or making good of any defect or of any damage to the Road arising out of or resulting from improper operation or maintenance of the Road by the Employer after taking over.

41.3 The Contractor's obligations under this GC Clause 41 shall not apply to

- (a) any works or materials that have a normal life shorter than the Defect Liability Period stated herein;
- (b) any designs, specifications or other data designed, supplied or specified by or on behalf of the Employer or any matters for which the Contractor has disclaimed responsibility herein;
- (c) any other materials supplied or any other work executed by or on behalf of the Employer, except for the work executed by the Employer under GC Sub-Clause 41.6.

41.4 The Employer shall give the Contractor a notice stating the nature of any such defect together with all available evidence thereof, promptly following the discovery thereof. The Employer shall afford all reasonable opportunity for the Contractor to inspect any such defect.

41.5 The Employer shall afford the Contractor all necessary access to the Site to enable the Contractor to perform its obligations under this GC Clause 41. The Contractor may remove from the Site any Plant and Equipment that are defective if the nature of the defect is such that repairs cannot be expeditiously carried out at the Site.

41.6 If the Contractor fails to commence the work necessary to remedy such defect or any damage to the Road caused by such defect within a reasonable time (which shall in no event be considered to be less than fifteen (15) days), the Employer may, following notice to the Contractor, proceed to do such work, and the reasonable costs incurred by the Employer in connection therewith shall be paid to the Employer by the Contractor or may be deducted by the Employer from any monies due the Contractor or claimed under the Performance Security.

41.7 If the Road or any part thereof cannot be used by reason of such defect and/or making good of such defect, the Defect Liability Period of the

Road or such part, as the case may be, shall be extended by a period equal to the period during which the Road or such part cannot be used because of any of the aforesaid reasons.

41.8 Except as provided in GC Clauses 40 and 41, the Contractor shall be under no liability whatsoever and howsoever arising, and whether under the Contract or at law, in respect of defects in the Road or any part thereof, the Plant and Equipment, design or engineering or work executed that appear after Completion of the Works and Services, except where such defects are the result of the gross negligence, fraud, criminal or willful action of the Contractor.

42. Limitation of Liability

42.1 Except in cases of criminal negligence or willful misconduct,

- (a) the Contractor shall not be liable to the Employer, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Contractor to pay liquidated damages to the Employer and
- (b) the aggregate liability of the Contractor to the Employer, whether under the Contract, in tort or otherwise, shall not exceed the limit specified in the PC.

43. Liability for Damages through Traffic Accidents and Traffic Interruptions

43.1 The Contractor cannot be held liable for losses or damages of any kind arising out of traffic accidents on the roads included in the Contract, unless those traffic accidents have been caused directly by potholes or other major defects of the Road covered by the Contract he failed to repair in a timely manner, criminal acts, willful misconduct or gross negligence of the Contractor.

43.2 Under no circumstances can the Contractor be held liable for losses or damages of any kind and to anyone arising out of interruptions of traffic or traffic delays on the road included in the Contract, including any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs.

F. PAYMENT

44. Contract Price

44.1 The Contract Price shall be as specified in the Form of Contract Agreement to be paid in the currencies indicated in the PC.

44.2 Unless indicated otherwise in the PC, and except in the event of a Change as provided for in the Contract, the Contract Price shall be:

- (a) For Maintenance Dredging Works, the total price stated in the Bill of Quantities for this item;
- (b) For Maintenance Services, a firm lump sum to be paid in monthly installments;
- (c) For Improvement Works, the total price stated in the Bill of Quantities for this item;
- (d) For Emergency Works, the total price stated in the Bill of Quantities for this item;
- (e) For Mobilization/ Demobilization, Set-up and Establishment (including ESHS), the total price stated in the Bill of Quantities for this item.

44.3 The Contractor shall be deemed to have satisfied itself as to the correctness and sufficiency of the Contract Price, which shall, except as otherwise provided for in the Contract, cover all its obligations under the Contract.

45. Advance Payment

45.1 The Employer shall make advance payment to the Contractor of the amounts and by the date stated in the PC, against provision by the Contractor of an Unconditional Bank Guarantee in a form and by a bank acceptable to the Employer in amounts and currencies equal to the advance payment. The Guarantee shall remain effective until the advance payment has been repaid, but the amount of the Guarantee shall be progressively reduced by the amounts repaid by the Contractor. Interest will not be charged on the advance payment.

- 45.2 The Contractor is to use the advance payment only to pay for Equipment, Plant, Materials, and mobilization expenses required specifically for the execution of the Contract. The Contractor shall demonstrate that advance payment has been used in this way by supplying copies of invoices or other documents to the Project Manager.
- 45.3 The advance payment shall be repaid by deducting proportionate amounts from payments otherwise due to the Contractor, following the schedule of completed percentages of the Works and Services on a payment basis as indicated in the PC.

46. Bill of Quantities

- 46.1 The Bill of Quantities shall contain items for Groups of Activities which include the provision of Services (measured by performance standards) and Works (measured by unit of outputs or of products). The Bill of Quantities for Works shall include, where applicable, unit rates for Development Dredging Works, Improvement Works and for Emergency Works.
- 46.2 Maintenance Services shall be measured and billed separately and will be remunerated by lump-sum amount for the period of the contract, and paid in fixed monthly payments during the entire Contract period. The values for remuneration of the Maintenance Services are those stated in the Bill of Quantities.
- 46.3 Maintenance Dredging Works after acceptance by the Employer shall be paid according to the product unit price using the prices included in the Bill of Quantities.
- 46.4 Improvement Works will be remunerated after acceptance by the Employer and shall be paid according to the product unit price using the prices included in the Bill of Quantities.
- 46.5 Mobilization/ Demobilization, Set-up and Establishment (including ESHS) works after acceptance by the Employer and shall be paid according to the product unit price using the prices included in the Bill of Quantities.
- 46.6 Each Emergency Work Order issued by the Project Manager will include a lump-sum price for the works to be performed.

The Lump-Sum price for the Emergency Works will be submitted by the Contractor to the Project Manager in each emergency pursuant to GC Clauses 29 and 61 and will be prepared based on the Specifications and on the unit prices included in the Bill of Quantities for Emergency Works, and will remunerate all Emergency Activities. The prices include compliance with all Performance Indices described in the Specifications. Once approved, Emergency Works will be paid as lump sum in accordance with the schedule of payment proposed by the Contractor for the specific Emergency and approved by the Employer.

- 46.7 The Bill of Quantities is used to calculate the Contract Price. The amounts for Maintenance Services are the Lump-Sum prices offered in the Contractor's Bid. The Mobilization/Demobilization, Set-up and Establishment (including ESHS) works, Development Dredging Works, Improvement Works and Emergency Works amounts included in the Contract are an estimate on the basis of the unit prices included in the Contractor's Bid. The Provisional Sum included in the Contract Price is an estimate for use when authorized by the Employer for Emergency Works and contingencies.

47. Measurement

- 47.1 Maintenance Services will not be measured in volume; however its payment will be affected by compliance with the Performance Standards pursuant to GC Clause 24. Maintenance Services shall be billed in fixed monthly amounts as per the Bill of Quantities Lump-Sum amount for Maintenance Services, beginning from the Start Date of the Maintenance Program. Payments will be made with Reductions if the Performance Standards are not achieved, as defined in the Specifications. The Reductions for non-compliance with the Performance Standards will be applied each month for the period under which the Waterways do not achieve the Performance Standards, in accordance with the methodology specified in the Specifications.
- 47.2 Maintenance Dredging Works will be measured on the basis indicated in the PC, based on the quantity of actual work outputs as defined in the Specifications, concluded by the

Contractor and approved by the Project Manager. The prices shall be those stated in the Bill of Quantities.

47.3 Improvement Works will be measured on the basis indicated in the PC and in accordance with the unit of measurement used for product unit price included in the Bill of Quantities. The prices shall be those stated in the Bill of Quantities.

47.4 Emergency Works shall be billed in accordance with the Schedule of Payments agreed for each specific Emergency Work as approved by the Employer.

47.5 Mobilization/ Demobilization, Set-up and Establishment (including ESHS) works will be measured on the basis indicated in the PC, based on the quantity of actual work outputs as defined in the Specifications, concluded by the Contractor and approved by the Project Manager. The prices shall be those stated in the Bill of Quantities.

48. Price Adjustments

48.1 Prices shall be adjusted for fluctuations in the cost of inputs only if provided for in the PC. If so provided, the amounts certified in each payment certificate, after deducting for Advance Payment, shall be adjusted by applying the respective price adjustment factor to the payment amounts due in each currency. A separate formula of the type indicated below applies to each Contract currency:

$$P_c = A_c + B_c \text{ Imc/Ioc}$$

where:

P_c is the adjustment factor for the portion of the Contract Price payable in a specific currency “c”

A_c and B_c are coefficients³⁰ specified in the PC, representing the nonadjustable and adjustable portions, respectively, of the Contract Price payable in that specific currency “c”, and

³⁰ The sum of the two coefficients A_c and B_c should be 1 (one) in the formula for each currency. Normally, both coefficients will be the same in the formulae for all currencies, since coefficient A, for the nonadjustable portion of the payments, is a very approximate figure (usually 0.15) to take account of fixed cost elements or other nonadjustable components. The sum of the adjustments for each currency is added to the Contract Price.

Imc is the index prevailing at the end of the month being invoiced and
Ioc is the index prevailing twenty-eight (28) days before Bid
opening for inputs payable; both in the specific currency “c”.

48.2 If the value of the index is changed after it has been used in a calculation, the calculation shall be corrected and an adjustment made in the next payment certificate. The index value shall be deemed to take account of all changes in cost due to fluctuations in costs.

**49. Monthly
Statements
and
Payments**

49.1 The Contractor shall submit to the Project Manager monthly statements in the format indicated in the Specifications, of the estimated value of Maintenance Services, Rehabilitation Works, Improvement Works, and Emergency Works in separated items covering the Works and Services for the corresponding month.

49.2 The Project Manager shall check the Contractor’s monthly statement and certify within fourteen (14) days the amount to be paid to the Contractor.

49.3 The value of Services executed shall be certified by the Project Manager taking into account the monthly amount included in the Bill of Quantities for Maintenance Services and the achievement of the Performance Standards for the Maintenance Services adjusted for any payment reductions in accordance with GC Sub-Clause 47.1.

49.4 The value of Works executed shall be certified by the Project Manager taking into account the value of the quantities of products executed and the prices in the Bill of Quantities.

49.5 The Project Manager may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

50. Payments

50.1 Payments shall be adjusted for deductions for advance payments, retention, and reductions for not achieving Performance Standards for Maintenance Services. The Employer shall pay the Contractor the amounts certified by the Project Manager in accordance with GC Clause 49, within twenty-eight (28) days of the date of each certificate. If the Employer makes a late payment, the Contractor shall be paid interest on the late payment in the next payment. Interest shall be calculated from the date by which the payment should have been made up to the date when the late payment is made at the prevailing

rate of interest for commercial borrowing for each of the currencies in which payments are made.

50.2 If an amount certified is increased in a later certificate or as a result of an award by the Adjudicator or an Arbitrator, the Contractor shall be paid interest upon the delayed payment as set out in this clause. Interest shall be calculated from the date upon which the increased amount would have been certified in the absence of dispute. The interest rate shall be determined as per Sub-Clause 50.1.

50.3 Unless otherwise stated, all payments and deductions will be paid or charged in the proportions of currencies comprising the Contract Price.

50.4 Items of the Works for which no rate or price has been entered in the Bill of Quantities will not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract.

51. Retention and Reductions

51.1 The Employer shall retain the percentage indicated in the PC from each payment due to the Contractor for Rehabilitation Works and Improvement Works, except for the types of works specified in the PC. The regular monthly lump-sum payments for performance-based Maintenance Services will not be subject to retentions, unless indicated in the PC.

51.2 On completion of the Rehabilitation and Improvement Works, half the total amount retained shall be repaid to the Contractor and the other half after twelve (12) months have passed and the Project Manager has certified that all Defects notified by the Project Manager to the Contractor have been corrected before the end of this period.

51.3 On completion of the whole Works and Services, the Contractor may substitute retention money with an “on demand” Bank guarantee.

51.4 Reduction of monthly payments for Maintenance Services due to non compliance with the Service Levels will be made as indicated in GC Sub-Clause 47.1. The amount of Reduction for the days in which the Road was not complying with the Performance Standards will not be paid or repaid, even after the Contractor re-establishes the quality levels to the standards required by the contract.

52. Taxes and Duties

52.1 Except as otherwise specifically provided in the Contract, the Contractor shall bear and pay all taxes, duties, levies and charges

assessed on the Contractor, its Subcontractors or their employees by all municipal, state or national government authorities in connection with the Works and Services in and outside of the country where the Site is located.

52.2 If any tax exemptions, reductions, allowances or privileges may be available to the Contractor in the country where the Site is located, the Employer shall use its best endeavors to enable the Contractor to benefit from any such tax savings to the maximum allowable extent.

52.3 For the purpose of the Contract, it is agreed that the Contract Price specified in the Form of Contract Agreement is based on the taxes, duties, levies and charges prevailing at the date twenty-eight (28) days prior to the date of bid submission in the country where the Site is located (hereinafter called "Tax"). If any rates of Tax are increased or decreased, a new Tax is introduced, an existing Tax is abolished, or any change in interpretation or application of any Tax occurs in the course of the performance of the Contract, which was or will be assessed on the Contractor, Subcontractors or their employees in connection with performance of the Contract, an equitable adjustment of the Contract Price shall be made to fully take into account any such change by addition to the Contract Price or deduction therefrom, as the case may be, in accordance with GC Clause 37 hereof.

53. Securities

53.1 Issuance of Securities

The Contractor shall provide the securities specified below in favor of the Employer at the times, and in the amount, manner and form specified below.

53.2 Advance Payment Security

53.2.1 The Contractor shall, within twenty-eight (28) days of the notification of contract award, provide a security in an amount equal to the advance payment calculated in accordance with the corresponding PC to the Contract Agreement, and in the same currency or currencies.

53.2.2 The security shall be in the form provided in the bidding documents or in another form acceptable to the Employer. The amount of the security shall be reduced in proportion to the value of the Works and Services executed by and paid to the Contractor from time to time, and shall automatically become

null and void when the full amount of the advance payment has been recovered by the Employer. The security shall be returned to the Contractor immediately after its expiration.

53.3 Performance Security

53.3.1 The Contractor shall, within twenty-eight (28) days of the notification of contract award, provide a security for the due performance of the Contract in the amount specified in the PC.

53.3.2 The security shall be denominated in the currency or currencies of the Contract, or in a freely convertible currency acceptable to the Employer, and shall be in one of the forms of guarantees provided in the bidding documents, as stipulated by the Employer in the PC, or in another form acceptable to the Employer.

53.3.3 The security shall automatically become null and void, twelve (12) months after Completion of all Works and Services under the Contract, provided however, that if the Defects Liability Period has been extended on any part of the Works pursuant to GC Sub-Clause 41.8 hereof, the Contractor shall issue an additional security in an amount proportionate to the Contract Price of that part. The security shall be returned to the Contractor immediately after its expiration.

54. Certificate of Completion

54.1 The Contractor shall request the Project Manager to issue a Certificate of Completion of the Rehabilitation Works, Improvement Works and Emergency Works, or parts thereof, as applicable, and the Project Manager will do so upon deciding that the work is completed.

55. Final Statement

55.1 The Contractor shall supply the Project Manager with a detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Project Manager shall issue a Defects Liability Certificate and certify any final payment that is due to the Contractor within fifty-six (56) days of receiving the Contractor's account if it is correct and complete. If it is not, the Project Manager shall issue within fifty-six (56) days a schedule that states the scope of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Project Manager shall

decide on the amount payable to the Contractor and issue a payment certificate.

56. Discharge

56.1 Upon submission of the Final Statement, the Contractor shall give to the Project Manager, a written discharge confirming that the total of the Final Statement represents full and final settlement of all monies due to the Contractor arising out of or in respect of the Contract. Provided that such discharge shall become effective only after payment due under the Final Payment Certificate issued pursuant to Sub-Clause 55 has been made and the performance security referred to in Sub-Clause 53.3, if any, has been returned to the Contractor.

57. As Built Drawings and Manuals

57.1 If “as built” Drawings and/or manuals are required, the Contractor shall supply them by the dates stated in the PC.

57.2 If the Contractor does not supply the Drawings and/or manuals by the dates stated in the PC, or they do not receive the Project Manager’s approval, the Project Manager shall withhold the amount stated in the PC from payments due to the Contractor.

G. REMEDIES

58. Suspension

58.1 The Employer may request the Project Manager, by notice to the Contractor, to order the Contractor to suspend performance of any or all of its obligations under the Contract. Such notice shall specify the obligation of which performance is to be suspended, the effective date of the suspension and the reasons therefore. The Contractor shall thereupon suspend performance of such obligation (except those obligations necessary for the care or preservation of the Site and Works) until ordered in writing to resume such performance by the Project Manager.

If, by virtue of a suspension order given by the Project Manager, other than by reason of the Contractor’s default or breach of the Contract, the Contractor’s performance of any of its obligations is suspended for an aggregate period of more than ninety (90) days, then at any time thereafter and provided that at that time such performance is still suspended, the Contractor may give a notice to the Project Manager requiring that the Employer shall, within twenty-eight (28) days of receipt of the notice, order the resumption of such performance or request and subsequently order a change in accordance with GC Sub-

Clause 63.1, excluding the performance of the suspended obligations from the Contract.

If the Employer fails to do so within such period, the Contractor may, by a further notice to the Project Manager, elect to treat the suspension as termination of the Contract under GC Sub-Clause 59.1.

58.2 If

- (a) the Employer has failed to pay the Contractor any sum due under the Contract within the specified period, has failed to approve any invoice or supporting documents without just cause pursuant to the Contract, or commits a substantial breach of the Contract, the Contractor may give a notice to the Employer that requires payment of such sum, with interest thereon as stipulated in GC Sub-Clause 50.1, requires approval of such invoice or supporting documents, or specifies the breach and requires the Employer to remedy the same, as the case may be. If the Employer fails to pay such sum together with such interest, fails to approve such invoice or supporting documents or give its reasons for withholding such approval, or fails to remedy the breach or take steps to remedy the breach within fourteen (14) days after receipt of the Contractor's notice; or
- (b) the Contractor is unable to carry out any of its obligations under the Contract for any reason attributable to the Employer, including but not limited to the Employer's failure to provide possession of or access to the Site, or failure to obtain any governmental permit under the Employer's responsibility and necessary for the execution and/or completion of the Works and Services,

then the Contractor may by fourteen (14) days' notice to the Employer suspend performance of all or any of its obligations under the Contract, or reduce the rate of progress.

- 58.3 If the Contractor's performance of its obligations is suspended or the rate of progress is reduced pursuant to this GC Clause 58, then the Time for Completion shall be extended in accordance with GC Sub-Clause 64, and any and all additional costs or expenses incurred by the Contractor as a result of such suspension or reduction shall be paid by the Employer to the Contractor in addition to the Contract Price, except in the case of suspension order or reduction in the rate of

progress by reason of the Contractor's default or breach of the Contract.

58.4 During the period of suspension, the Contractor shall not remove from the Site any Plant and Equipment or any Contractor's Equipment, without the prior written consent of the Employer.

59. Termination

59.1 Termination for Employer's Convenience

59.1.1 The Employer may at any time terminate the Contract for any reason by giving the Contractor a notice of termination that refers to this GC Sub-Clause 59.1.

59.1.2 Upon receipt of the notice of termination under GC Sub-Clause 59.1.1, the Contractor shall either immediately or upon the date specified in the notice of termination

- (a) cease all further work, except for such work as the Employer may specify in the notice of termination for the sole purpose of protecting that part of the Works and Services already executed, or any work required to leave the Site in a clean and safe condition,
- (b) terminate all subcontracts, except those to be assigned to the Employer pursuant to paragraph (d) (ii) below,
- (c) remove all Contractor's Equipment from the Site, repatriate the Contractor's and its Subcontractors' personnel from the Site, remove from the Site any wreckage, rubbish and debris of any kind, and leave the whole of the Site in a clean and safe condition.
- (d) In addition, the Contractor, subject to the payment specified in GC Sub-Clause 59.1.3, shall
 - (i) deliver to the Employer the parts of the Works executed by the Contractor up to the date of termination,
 - (ii) to the extent legally possible, assign to the Employer all right, title and benefit of the Contractor to the Works and Services and to the Plant and Equipment as of the date of termination, and, as may be required by the Employer, in any subcontracts

concluded between the Contractor and its Subcontractors

- (iii) deliver to the Employer all non-proprietary drawings, specifications and other documents prepared by the Contractor or its Subcontractors as at the date of termination in connection with the Works.

59.1.3 In the event of termination of the Contract under GC Sub-Clause 59.1.1, the Employer shall pay to the Contractor the following amounts:

- (a) the Contract Price, properly attributable to the parts of the works and services executed by the Contractor as of the date of termination,
- (b) the costs reasonably incurred by the Contractor in the removal of the Contractor's Equipment from the Site and in the repatriation of the Contractor's and its Subcontractors' personnel,
- (c) any amounts to be paid by the Contractor to its Subcontractors in connection with the termination of any subcontracts, including any cancellation charges,
- (d) the costs incurred by the Contractor in protecting and leaving the Site in a clean and safe condition pursuant to paragraph (a) of GC Sub-Clause 59.1.2,
- (e) the cost of satisfying all other obligations, commitments and claims that the Contractor may in good faith have undertaken with third parties in connection with the Contract and that are not covered by paragraphs (a) through (d) above.

59.2 Termination for Contractor's Default

59.2.1 The Employer, without prejudice to any other rights or remedies it may possess, may terminate the Contract forthwith in the following circumstances by giving a notice of termination and its reasons therefor to the Contractor, referring to this GC Sub-Clause 59.2:

- (a) if the Contractor becomes bankrupt or insolvent, has a receiving order issued against it, compounds with its

creditors, or, if the Contractor is a corporation, a resolution is passed or order is made for its winding up (other than a voluntary liquidation for the purposes of amalgamation or reconstruction), a receiver is appointed over any part of its undertaking or assets, or if the Contractor takes or suffers any other analogous action in consequence of debt;

- (b) if the Contractor assigns or transfers the Contract or any right or interest therein in violation of the provision of GC Clause 13;
- (c) if the Contractor, in the judgment of the Employer has engaged in corrupt, fraudulent, collusive or coercive practices in competing for or in executing the Contract.

For the purpose of this Sub-Clause:

- (i) “corrupt practice”³¹ is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
- (ii) “fraudulent practice”³² is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
- (iii) “collusive practice”³³ is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
- (iv) “coercive practice”³⁴ is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
- (v) “obstructive practice” is
- (aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or

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- ³¹ “Another party” refers to a public official acting in relation to the procurement process or contract execution]. In this context, “public official” includes World Bank staff and employees of other organizations taking or reviewing procurement decisions.
- ³² A “party” refers to a public official; the terms “benefit” and “obligation” relate to the procurement process or contract execution; and the “act or omission” is intended to influence the procurement process or contract execution.
- ³³ “Parties” refers to participants in the procurement process (including public officials) attempting to establish bid prices at artificial, non competitive levels.
- ³⁴ A “party” refers to a participant in the procurement process or contract execution.

- (bb) acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under Sub-Clause 1.15 [Inspections and Audits by the Bank].

59.2.2 If the Contractor

- (a) has abandoned or repudiated the Contract(b) has without valid reason failed to commence work on the Road promptly or has suspended (other than pursuant to GC Sub-Clause 58.2) the progress of Contract performance for more than twenty-eight (28) days after receiving a written instruction from the Employer to proceed,
- (c) persistently fails to execute the Contract in accordance with the Contract, such failure being defined in the PC, or persistently neglects otherwise to carry out its obligations under the Contract without just cause,
- (d) refuses or is unable to provide sufficient materials, services or labor to execute and complete the Works and Services in the manner specified in the program furnished under GC Clause 17 at rates of progress that give reasonable assurance to the Employer that the Contractor can attain completion of the works and services by the Time for Completion as extended,

then the Employer may, without prejudice to any other rights it may possess under the Contract, give a notice to the Contractor stating the nature of the default and requiring the Contractor to remedy the same. If the Contractor fails to remedy or to take steps to remedy the same within fourteen (14) days of its receipt of such notice, then the Employer may terminate the Contract forthwith by giving a notice of termination to the Contractor that refers to this GC Sub-Clause 59.2.

59.2.3 Upon receipt of the notice of termination under GC Sub-Clauses 59.2.1 or 59.2.2, the Contractor shall, either immediately or upon such date as is specified in the notice of termination,

- (a) cease all further work, except for such work as the Employer may specify in the notice of termination for the sole purpose of protecting that part of the Works and Services already executed, or any work required to leave the Site in a clean and safe condition
- (b) terminate all subcontracts, except those to be assigned to the Employer based on the Employer's written request,
- (c) deliver to the Employer all drawings, specifications and other documents prepared by the Contractor or its Subcontractors as of the date of termination in connection with the Works and Services.

59.2.4 The Contractor shall be entitled to be paid the Contract Price attributable to the Works and Services executed as of the date of termination, and the costs, if any, incurred in protecting and in leaving the Site in a clean and safe condition pursuant to paragraph (a) of GC Sub-Clause 59.2.3. Any sums due the Employer from the Contractor accruing prior to the date of termination shall be deducted from the amount to be paid to the Contractor under this Contract.

59.3 Termination by Contractor

59.3.1 If

- (a) the Employer has failed to pay the Contractor any sum due under the Contract within the specified period, has failed to approve any invoice or supporting documents without just cause pursuant to GC Clause 50, or commits a substantial breach of the Contract, the Contractor may give a notice to the Employer that requires payment of such sum, with interest thereon as stipulated in GC Sub-Clause 50.2, requires approval of such invoice or supporting documents, or specifies the breach and requires the Employer to remedy the same, as the case may be. If the Employer fails to pay such sum together with such interest, fails to approve such invoice or supporting documents or give its reasons for withholding such approval, fails to remedy the breach or take steps to

remedy the breach within fourteen (14) days after receipt of the Contractor's notice, or

- (b) the Contractor is unable to carry out any of its obligations under the Contract for any reason attributable to the Employer, including but not limited to the Employer's failure to provide possession of or access to the Site or other areas or failure to obtain any governmental permit under the Employer's responsibility and necessary for the execution and/or completion of the Works and Services,

then the Contractor may give a notice to the Employer thereof, and if the Employer has failed to pay the outstanding sum, to approve the invoice or supporting documents, to give its reasons for withholding such approval, or to remedy the breach within twenty-eight (28) days of such notice, or if the Contractor is still unable to carry out any of its obligations under the Contract for any reason attributable to the Employer within twenty-eight (28) days of the said notice, the Contractor may by a further notice to the Employer referring to this GC Sub-Clause 59.3.1, forthwith terminate the Contract.

59.3.2 The Contractor may terminate the Contract forthwith by giving a notice to the Employer to that effect, referring to this GC Sub-Clause 59.3.2, if the Employer becomes bankrupt or insolvent, has a receiving order issued against it, compounds with its creditors, or, being a corporation, if a resolution is passed or order is made for its winding up (other than a voluntary liquidation for the purposes of amalgamation or reconstruction), a receiver is appointed over any part of its undertaking or assets, or if the Employer takes or suffers any other analogous action in consequence of debt.

59.3.3 If the Contract is terminated under GC Sub-Clauses 59.3.1 or 59.3.2, then the Contractor shall immediately

- (a) cease all further work, except for such work as may be necessary for the purpose of protecting that part of the Road already executed, or any work required to leave the Site in a clean and safe condition,

- (b) terminate all subcontracts, except those to be assigned to the Employer pursuant to paragraph (d) (ii),
- (c) remove all Contractor's Equipment from the Site and repatriate the Contractor's and its Subcontractors' personnel from the Site.
- (d) In addition, the Contractor, subject to the payment specified in GC Sub-Clause 59.3.4, shall
 - (i) deliver to the Employer the parts of the Road executed by the Contractor up to the date of termination,
 - (ii) to the extent legally possible, assign to the Employer all right, title and benefit of the Contractor to the Road and to the Plant and Equipment as of the date of termination, and, as may be required by the Employer, in any subcontracts concluded between the Contractor and its Subcontractors,
 - (iii) deliver to the Employer all drawings, specifications and other documents prepared by the Contractor or its Subcontractors as of the date of termination in connection with the Works and Services.

59.3.4 If the Contract is terminated under GC Sub-Clauses 59.3.1 or 59.3.2, the Employer shall pay to the Contractor all payments specified in GC Sub-Clause 59.1.3, and reasonable compensation for all loss, except for loss of profit, or damage sustained by the Contractor arising out of, in connection with or in consequence of such termination.

59.3.5 Termination by the Contractor pursuant to this GC Sub-Clause 59.3 is without prejudice to any other rights or remedies of the Contractor that may be exercised in lieu of or in addition to rights conferred by GC Sub-Clause 59.3.

59.4 In this GC Clause 59, in calculating any monies due from the Employer to the Contractor, account shall be taken of any sum previously paid by the Employer to the Contractor under the Contract, including any advance payment paid pursuant to the Contract.

H. PROVISIONAL SUM

60. Provisional Sum

60.1 “Provisional Sum” means a sum included in the Contract for use when authorized by the Employer for Emergency Works and for contingencies, which sum may be used, in whole or in part, or not at all, on the instructions of the Employer. The Contractor shall be entitled to only such amounts in respect of the work, supply or contingencies to which such Provisional Sums relate as the Project Manager shall determine in accordance with this Clause.

61. Use of Provisional Sum for Emergency Works

61.1 After detecting a situation which in the opinion of the Contractor justifies the execution of Emergency Works or otherwise as defined in GC Clause 29, the Contractor shall submit a Technical Report to the Project Manager characterizing the situation, and state estimated works quantities to correct the emergency situation, and a Lump Sum price quotation for the Emergency Works to be carried out. The price quotation should be based on the Specifications stated in Section VI using the unit prices included in the Bill of Quantities.

61.2 If the execution of the Emergency Works require any activity not priced in the Bill of Quantities, the Contractor will use the price breakdowns included in the Contractor’s Bid in order to form the unit prices of the unpriced items to be included in the Price Quotation of the Emergency Works, all in accordance with agreed methodology for approving new prices.

61.3 Upon receiving the request for Emergency Works including a Price Quotation, the Project Manager may issue a Work Order in accordance with GC Sub-Clause 29.2 for execution of the Emergency Works for a Lump-Sum amount with a payment Schedule agreed with the Contractor. The cost of these Works will be covered by the amounts included in the Provisional Sum.

62. Use of Provisional Sum for Contingencies

62.1 The use of the Provisional Sum to cover for Contingencies will be done under the control and initiative of the Project Manager in accordance with the conditions of the Contract.

I. CHANGE IN CONTRACT ELEMENTS

**63. Change in
Assignments
to Contractor****63.1 Introducing a Change**

63.1.1 If so indicated in the PC, the Employer shall have the right to propose, and subsequently require, that the Project Manager order the Contractor from time to time during the performance of the Contract to make any change, modification, addition or deletion to, in or from the Assignments to the Contractor (hereinafter called "Change"), provided that such Change falls within the general scope of the Assignment and does not constitute unrelated work and that it is technically practicable, taking into account both the state of advancement of the Works and Services and the technical compatibility of the Change envisaged with the nature of the Works and Services as specified in the Contract.

63.1.2 If so indicated in the PC, the Contractor may from time to time during its performance of the Contract propose to the Employer (with a copy to the Project Manager) any Change that the Contractor considers necessary or desirable to improve the quality, efficiency or safety of the Works and Services. The Employer may at its discretion approve or reject any Change proposed by the Contractor.

63.1.3 Notwithstanding GC Sub-Clauses 63.1.1 and 63.1.2, no change made necessary because of any default of the Contractor in the performance of its obligations under the Contract shall be deemed to be a Change, and such change shall not result in any adjustment of the Contract Price or the Time for Completion.

63.1.4 The procedure on how to proceed with and execute Changes is specified in GC Sub-Clauses 63.2 and 63.3, further details and sample forms are provided in the Sample Forms and Procedures section in the bidding documents.

63.2 Changes Originating from Employer

63.2.1 If the Employer proposes a Change pursuant to GC Sub-Clause 63.1.1, it shall send to the Contractor a "Request for Change Proposal," requiring the Contractor to prepare and furnish to the Project Manager, as soon as reasonably practicable, a "Change Proposal," which shall include the following:

- (a) brief description of the Change
- (b) effect on the Time for Completion
- (c) estimated cost of the Change
- (d) effect on Functional Guarantees (if any)
- (e) effect on any other provisions of the Contract

63.2.2 Prior to preparing and submitting the “Change Proposal,” the Contractor shall submit to the Project Manager an “Estimate for Change Proposal,” which shall be an estimate of the cost of preparing and submitting the Change Proposal.

Upon receipt of the Contractor’s Estimate for Change Proposal, the Employer shall do one of the following:

- (a) accept the Contractor’s estimate with instructions to the Contractor to proceed with the preparation of the Change Proposal,
- (b) advise the Contractor of any part of its Estimate for Change Proposal that is unacceptable and request the Contractor to review its estimate,
- (c) advise the Contractor that the Employer does not intend to proceed with the Change.

63.2.3 Upon receipt of the Employer’s instruction to proceed under GC Sub-Clause 63.2.2 (a), the Contractor shall, with proper expedition, proceed with the preparation of the Change Proposal, in accordance with GC Sub-Clause 63.2.1.

63.2.4 The pricing of any Change shall, as far as practicable, be calculated in accordance with the rates and prices included in the Contract. If such rates and prices are inequitable, the parties thereto shall agree on specific rates for the valuation of the Change.

63.2.5 If before or during the preparation of the Change Proposal it becomes apparent that the aggregate effect of compliance therewith, and with all other Change Orders that have already become binding upon the Contractor under this GC Clause 63, would be to increase or decrease the Contract Price as

originally set forth in the Contract Agreement by more than fifteen percent (15%), the Contractor may give a written notice of objection thereto prior to furnishing the Change Proposal as aforesaid. If the Employer accepts the Contractor's objection, the Employer shall withdraw the proposed Change and shall notify the Contractor in writing thereof.

The Contractor's failure to so object shall neither affect its right to object to any subsequent requested Changes or Change Orders herein, nor affect its right to take into account, when making such subsequent objection, the percentage increase or decrease in the Contract Price that any Change not objected to by the Contractor represents.

63.2.6 Upon receipt of the Change Proposal, the Employer and the Contractor shall mutually agree upon all matters therein contained. Within fourteen (14) days after such agreement, the Employer shall, if it intends to proceed with the Change, issue the Contractor with a Change Order.

If the Employer is unable to reach a decision within fourteen (14) days, it shall notify the Contractor with details of when the Contractor can expect a decision.

If the Employer decides not to proceed with the Change for whatever reason, it shall, within the said period of fourteen (14) days, notify the Contractor accordingly. Under such circumstances, the Contractor shall be entitled to reimbursement of all costs reasonably incurred by it in the preparation of the Change Proposal, provided that these do not exceed the amount given by the Contractor in its Estimate for Change Proposal submitted in accordance with GC Sub-Clause 63.2.2.

63.2.7 If the Employer and the Contractor cannot reach agreement on the price for the Change, an equitable adjustment to the Time for Completion, or any other matters identified in the Change Proposal, the Employer may nevertheless instruct the Contractor to proceed with the Change by issue of a "Pending Agreement Change Order."

Upon receipt of a Pending Agreement Change Order, the Contractor shall immediately proceed with effecting the

Changes covered by such Order. The parties shall thereafter attempt to reach agreement on the outstanding issues under the Change Proposal.

If the parties cannot reach agreement within sixty (60) days from the date of issue of the Pending Agreement Change Order, then the matter may be referred to the Adjudicator in accordance with the provisions of GC Sub-Clause 6.1.

63.3 Changes Originating from Contractor

63.3.1 If the Contractor proposes a Change pursuant to GC Sub-Clause 63.1.2, the Contractor shall submit to the Project Manager a written "Application for Change Proposal," giving reasons for the proposed Change and including the information specified in GC Sub-Clause 63.2.1.

Upon receipt of the Application for Change Proposal, the parties shall follow the procedures outlined in GC Sub-Clauses 63.2.6 and 63.2.7. However, should the Employer choose not to proceed, the Contractor shall not be entitled to recover the costs of preparing the Application for Change Proposal.

64. Extension Time for Completion

64.1 The Time(s) for Completion specified in the PC shall be extended if the Contractor is delayed or impeded in the performance of any of its obligations under the Contract by reason of any of the following:

- (a) any Change in the Works and Services as provided in GC Clause 63,
- (b) any occurrence of Force Majeure as provided in GC Clause 38 and unforeseen conditions as provided in GC Clause 36,
- (c) any suspension order given by the Employer under GC Clause 58,
- (d) any changes in laws and regulations as provided in GC Clause 37, or
- (e) any default or breach of the Contract by the Employer, or any activity, act or omission of any other contractors employed by the Employer, or
- (f) any other matter specifically mentioned in the Contract

by such period as shall be fair and reasonable in all the circumstances and as shall fairly reflect the delay or impediment sustained by the Contractor.

64.2 Except where otherwise specifically provided in the Contract, the Contractor shall submit to the Project Manager a notice of a claim for an extension of the Time for Completion, together with particulars of the event or circumstance justifying such extension as soon as reasonably practicable after the commencement of such event or circumstance. As soon as reasonably practicable after receipt of such notice and supporting particulars of the claim, the Employer and the Contractor shall agree upon the period of such extension. In the event that the Contractor does not accept the Employer's estimate of a fair and reasonable time extension, the Contractor shall be entitled to refer the matter to an Adjudicator, pursuant to GC Sub-Clause 6.1.

64.3 The Contractor shall at all times use its reasonable efforts to minimize any delay in the performance of its obligations under the Contract.

**65. Release from
Performance**

65.1 If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the Employer or the Contractor, the Project Manager shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which a commitment was made.

APPENDIX A

Environmental, Social, Health and Safety (ESHS)

Metrics for Progress Reports

[Note to Employer: the following metrics may be amended to reflect the Employer's environmental, social, health and safety policies and/or the ESHS requirements of the project. The metrics that are required should be determined by the ESHS risks of the Works and not necessarily by the scale of the Works]

Metrics for regular reporting:

- a. *environmental incidents or non-compliances with contract requirements, including contamination, pollution or damage to ground or water supplies;*
- b. *health and safety incidents, accidents, injuries and all fatalities that require treatment;*
- c. *interactions with regulators: identify agency, dates, subjects, outcomes (report the negative if none);*
- d. *status of all permits and agreements:*
 - iii. *work permits: number required, number received, actions taken for those not received;*
 - iv. *status of permits and consents:*
 - *list areas/facilities with permits required (quarries, asphalt & batch plants), dates of application, dates issued (actions to follow up if not issued), dates submitted to resident engineer (or equivalent), status of area (waiting for permits, working, abandoned without reclamation, decommissioning plan being implemented, etc.);*
 - *list areas with landowner agreements required (borrow and spoil areas, camp sites), dates of agreements, dates submitted to resident engineer (or equivalent);*
 - *identify major activities undertaken in each area in the reporting period and highlights of environmental and social protection (land clearing, boundary marking, topsoil salvage, traffic management, decommissioning planning, decommissioning implementation);*
 - *for quarries: status of relocation and compensation (completed, or details of activities and current status in the reporting period).*
- e. *health and safety supervision:*
 - v. *safety officer: number days worked, number of full inspections & partial inspections, reports to construction/project management;*

- vi. number of workers, work hours, metric of PPE use (percentage of workers with full personal protection equipment (PPE), partial, etc.), worker violations observed (by type of violation, PPE or otherwise), warnings given, repeat warnings given, follow-up actions taken (if any);
- f. *worker accommodations:*
 - i. number of expats housed in accommodations, number of locals;
 - ii. date of last inspection, and highlights of inspection including status of accommodations' compliance with national and local law and good practice, including sanitation, space, etc.;
 - iii. actions taken to recommend/require improved conditions, or to improve conditions.
- g. *HIV/AIDS: provider of health services, information and/or training, location of clinic, number of non-safety disease or illness treatments and diagnoses (no names to be provided);*
- h. *gender (for expats and locals separately): number of female workers, percentage of workforce, gender issues raised and dealt with (cross-reference grievances or other sections as needed);*
- i. *training:*
 - i. number of new workers, number receiving induction training, dates of induction training;
 - ii. number and dates of toolbox talks, number of workers receiving Occupational Health and Safety (OHS), environmental and social training;
 - iii. number and dates of HIV/AIDS sensitization and/or training, no. workers receiving training (in the reporting period and in the past); same questions for gender sensitization, flag person training.
 - iv. number and date of GBV /SEA sensitization and/or training, number of workers receiving training on code of conduct (in the reporting period and in the past), etc.
- j. *environmental and social supervision:*
 - i. environmentalist: days worked, areas inspected and numbers of inspections of each (road section, work camp, accommodations, quarries, borrow areas, spoil areas, swamps, forest crossings, etc.), highlights of activities/findings (including violations of environmental and/or social best practices, actions taken), reports to environmental and/or social specialist/construction/site management;
 - ii. sociologist: days worked, number of partial and full site inspections (by area: road section, work camp, accommodations, quarries, borrow areas, spoil areas, clinic, HIV/AIDS center, community centers, etc.), highlights of activities (including violations of environmental and/or social requirements observed, actions taken), reports to environmental and/or social specialist/construction/site management; and

- iii. community liaison person(s): days worked (hours community center open), number of people met, highlights of activities (issues raised, etc.), reports to environmental and/or social specialist /construction/site management.
- k. *Grievances: list new grievances (e.g. allegations of GBV / SEA) received in the reporting period and unresolved past grievances by date received, complainant, how received, to whom referred to for action, resolution and date (if completed), data resolution reported to complainant, any required follow-up (Cross-reference other sections as needed):*
 - i. Worker grievances;
 - ii. Community grievances
- l. *Traffic and vehicles/equipment:*
 - i. traffic accidents involving project vehicles & equipment: provide date, location, damage, cause, follow-up;
 - ii. accidents involving non-project vehicles or property (also reported under immediate metrics): provide date, location, damage, cause, follow-up;
 - iii. overall condition of vehicles/equipment (subjective judgment by environmentalist); non-routine repairs and maintenance needed to improve safety and/or environmental performance (to control smoke, etc.).
- m. *Environmental mitigations and issues (what has been done):*
 - i. dust: number of working bowsers, number of waterings/day, number of complaints, warnings given by environmentalist, actions taken to resolve; highlights of quarry dust control (covers, sprays, operational status); % of rock/ spoil lorries with covers, actions taken for uncovered vehicles;
 - ii. erosion control: controls implemented by location, status of water crossings, environmentalist inspections and results, actions taken to resolve issues, emergency repairs needed to control erosion/sedimentation;
 - iii. quarries, borrow areas, spoil areas, asphalt plants, batch plants: identify major activities undertaken *in the reporting period* at each, and highlights of environmental and social protection: land clearing, boundary marking, topsoil salvage, traffic management, decommissioning planning, decommissioning implementation;
 - iv. blasting: number of blasts (and locations), status of implementation of blasting plan (including notices, evacuations, etc.), incidents of off-site damage or complaints (cross-reference other sections as needed);
 - v. spill cleanups, if any: material spilled, location, amount, actions taken, material disposal (report all spills that result in water or soil contamination);
 - vi. waste management: types and quantities generated and managed, including amount taken offsite (and by whom) or reused/recycled/disposed on-site;

vii. details of tree plantings and other mitigations required undertaken *in the reporting period*;

viii. details of water and swamp protection mitigations required undertaken *in the reporting period*.

n. compliance:

- i. compliance status for conditions of all relevant consents/permits, for the Work, including quarries, etc.): statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance;
- ii. compliance status of C-ESMP/ESIP requirements: statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance
- iii. compliance status of GBV/SEA prevention and response action plan: statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance
- iv. compliance status of Health and Safety Management Plan re: statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance
- v. other unresolved issues from previous reporting periods related to environmental and social: continued violations, continued failure of equipment, continued lack of vehicle covers, spills not dealt with, continued compensation or blasting issues, etc. Cross-reference other sections as needed.

APPENDIX B

A General Conditions of Dispute Review Board Agreement

1. Definitions

Each “Dispute Review Board Agreement” is a tripartite agreement by and between:

- (a) the “Employer”;
- (b) the “Contractor”; and
- (c) the “Member” who is defined in the Dispute Review Board Agreement as being:
 - (i) the sole member of the "DRB" and, where this is the case, all references to the “Other Members” do not apply, or
 - (ii) one of the three persons who are jointly called the “DRB” (or “Dispute Review Board”) and, where this is the case, the other two persons are called the “Other Members”.

The Employer and the Contractor have entered (or intend to enter) into a contract, which is called the "Contract" and is defined in the Dispute Review Board Agreement, which incorporates this Appendix. In the Dispute Review Board Agreement, words and expressions which are not otherwise defined shall have the meanings assigned to them in the Contract.

2. General Provisions

Unless otherwise stated in the Dispute Review Board Agreement, it shall take effect on the latest of the following dates:

- (a) the Commencement Date defined in the Contract,
- (b) when the Employer, the Contractor and the Member have each signed the Dispute Review Board Agreement, or
- (c) when the Employer, the Contractor and each of the Other Members (if any) have respectively each signed a dispute review board agreement.

This employment of the Member is a personal appointment. At any time, the Member may give not less than 70 days’ notice of resignation to the Employer and to the Contractor, and the Dispute Review Board Agreement shall terminate upon the expiry of this period.

3. Warranties

The Member warrants and agrees that he/she is and shall be impartial and independent of the Employer, the Contractor and the Project Manager. The Member shall promptly disclose, to each of them and

to the Other Members (if any), any fact or circumstance which might appear inconsistent with his/her warranty and agreement of impartiality and independence.

When appointing the Member, the Employer and the Contractor relied upon the Member's representations that he/she is:

- (a) experienced in the work which the Contractor is to carry out under the Contract,
- (b) experienced in the interpretation of contract documentation, and
- (c) fluent in the language for communications defined in the Contract.

4. General Obligations of the Member

The Member shall:

- (a) have no interest financial or otherwise in the Employer, the Contractor or Project Manager, nor any financial interest in the Contract except for payment under the Dispute Review Board Agreement;
- (b) not previously have been employed as a consultant or otherwise by the Employer, the Contractor or the Project Manager, except in such circumstances as were disclosed in writing to the Employer and the Contractor before they signed the Dispute Review Board Agreement;
- (c) have disclosed in writing to the Employer, the Contractor and the Other Members (if any), before entering into the Dispute Review Board Agreement and to his/her best knowledge and recollection, any professional or personal relationships with any director, officer or employee of the Employer, the Contractor or the Project Manager, and any previous involvement in the overall project of which the Contract forms part;
- (d) not, for the duration of the Dispute Review Board Agreement, be employed as a consultant or otherwise by the Employer, the Contractor or the Project Manager, except as may be agreed in writing by the Employer, the Contractor and the Other Members (if any);
- (e) comply with the annexed procedural rules and with Sub-Clause 6.1 of the Conditions of Contract;
- (f) not give advice to the Employer, the Contractor, the Employer's Personnel or the Contractor's Personnel concerning the conduct

of the Contract, other than in accordance with the annexed procedural rules;

- (g) not while a Member enter into discussions or make any agreement with the Employer, the Contractor or the Project Manager regarding employment by any of them, whether as a consultant or otherwise, after ceasing to act under the Dispute Review Board Agreement;
- (h) ensure his/her availability for all site visits and hearings as are necessary;
- (i) become conversant with the Contract and with the progress of the Works (and of any other parts of the project of which the Contract forms part) by studying all documents received which shall be maintained in a current working file;
- (j) treat the details of the Contract and all the DRB's activities and hearings as private and confidential, and not publish or disclose them without the prior written consent of the Employer, the Contractor and the Other Members (if any); and
- (k) be available to give advice and opinions, on any matter relevant to the Contract when requested by both the Employer and the Contractor, subject to the agreement of the Other Members (if any).

5. General Obligations of the Employer and the Contractor

The Employer, the Contractor, the Employer's Personnel and the Contractor's Personnel shall not request advice from or consultation with the Member regarding the Contract, otherwise than in the normal course of the DRB's activities under the Contract and the Dispute Review Board Agreement. The Employer and the Contractor shall be responsible for compliance with this provision, by the Employer's Personnel and the Contractor's Personnel respectively.

The Employer and the Contractor undertake to each other and to the Member that the Member shall not, except as otherwise agreed in writing by the Employer, the Contractor, the Member and the Other Members (if any):

- (a) be appointed as an arbitrator in any arbitration under the Contract;
- (b) be called as a witness to give evidence concerning any dispute before arbitrator(s) appointed for any arbitration under the Contract; or

- (c) be liable for any claims for anything done or omitted in the discharge or purported discharge of the Member's functions, unless the act or omission is shown to have been in bad faith.

The Employer and the Contractor hereby jointly and severally indemnify and hold the Member harmless against and from claims from which he is relieved from liability under the preceding paragraph.

Whenever the Employer or the Contractor refers a dispute to the DRB under Sub-Clause 6.1 of the Conditions of Contract, which will require the Member to make a site visit and attend a hearing, the Employer or the Contractor shall provide appropriate security for a sum equivalent to the reasonable expenses to be incurred by the Member. No account shall be taken of any other payments due or paid to the Member.

6. Payment

The Member shall be paid as follows, in the currency named in the Dispute Review Board Agreement:

- (a) a retainer fee per calendar month, which shall be considered as payment in full for:
 - (i) being available on 28 days' notice for all site visits and hearings;
 - (ii) becoming and remaining conversant with all project developments and maintaining relevant files;
 - (iii) all office and overhead expenses including secretarial services, photocopying and office supplies incurred in connection with his duties; and
 - (iv) all services performed hereunder except those referred to in sub-paragraphs (b) and (c) of this Clause.

The retainer fee shall be paid with effect from the last day of the calendar month in which the Dispute Review Board Agreement becomes effective; until the last day of the calendar month in which the Taking-over-Certificate is issued for the whole of the Works.

With effect from the first day of the calendar month following the month in which the Taking-over-Certificate is issued for the whole of the Works, the retainer fee shall be reduced by one third. This reduced fee shall be paid until the first day of the calendar month in which the Member resigns or the Dispute Review Board Agreement is otherwise terminated.

(b) a daily fee which shall be considered as payment in full for:

(i) each day or part of a day up to a maximum of two days' travel time in each direction for the journey between the Member's home and the Site, or another location of a meeting with the Other Members (if any);

(ii) each working day on Site visits, hearings or preparing decisions; and

(iii) each day spent reading submissions in preparation for a hearing.

(c) all reasonable expenses including necessary travel expenses (air fare in less than first class, hotel and subsistence and other direct travel expenses) incurred in connection with the Member's duties, as well as the cost of telephone calls, courier charges, faxes and telexes: a receipt shall be required for each item in excess of five percent of the daily fee referred to in sub-paragraph (b) of this Clause;

(d) any taxes properly levied in the Country on payments made to the Member (unless a national or permanent resident of the Country) under this Clause 6.

The retainer and daily fees shall be as specified in the Dispute Review Board Agreement. Unless it specifies otherwise, these fees shall remain fixed for the first 24 calendar months, and shall thereafter be adjusted by agreement between the Employer, the Contractor and the Member, at each anniversary of the date on which the Dispute Review Board Agreement became effective.

If the parties fail to agree on the retainer fee or the daily fee, the appointing entity or official named in the PC shall determine the amount of the fees to be used.

The Member shall submit invoices for payment of the monthly retainer and air fares quarterly in advance. Invoices for other expenses and for daily fees shall be submitted following the conclusion of a Site visit or hearing. All invoices shall be accompanied by a brief description of activities performed during the relevant period and shall be addressed to the Contractor.

The Contractor shall pay each of the Member's invoices in full within 56 calendar days after receiving each invoice and shall apply to the Employer (in the Statements under the Contract) for reimbursement

of one-half of the amounts of these invoices. The Employer shall then pay the Contractor in accordance with the Contract.

If the Contractor fails to pay to the Member the amount to which he/she is entitled under the Dispute Review Board Agreement, the Employer shall pay the amount due to the Member and any other amount which may be required to maintain the operation of the DRB; and without prejudice to the Employer's rights or remedies. In addition to all other rights arising from this default, the Employer shall be entitled to reimbursement of all sums paid in excess of one-half of these payments, plus all costs of recovering these sums and financing charges calculated at the rate specified in Sub-Clause 50.2 of the Conditions of Contract.

If the Member does not receive payment of the amount due within 70 days after submitting a valid invoice, the Member may (i) suspend his/her services (without notice) until the payment is received, and/or (ii) resign his/her appointment by giving notice under Clause 7.

7. Termination

At any time: (i) the Employer and the Contractor may jointly terminate the Dispute Review Board Agreement by giving 42 days' notice to the Member; or (ii) the Member may resign as provided for in Clause 2.

If the Member fails to comply with the Dispute Review Board Agreement, the Employer and the Contractor may, without prejudice to their other rights, terminate it by notice to the Member. The notice shall take effect when received by the Member.

If the Employer or the Contractor fails to comply with the Dispute Review Board Agreement, the Member may, without prejudice to his other rights, terminate it by notice to the Employer and the Contractor. The notice shall take effect when received by them both.

Any such notice, resignation and termination shall be final and binding on the Employer, the Contractor and the Member. However, a notice by the Employer or the Contractor, but not by both, shall be of no effect.

8. Default of the Member

If the Member fails to comply with any of his obligations under Clause 4 (a) - (d) above, he shall not be entitled to any fees or expenses hereunder and shall, without prejudice to their other rights, reimburse each of the Employer and the Contractor for any fees and expenses received by the Member and the Other Members (if any), for proceedings or decisions (if any) of the DRB which are rendered void or ineffective by the said failure to comply.

If the Member fails to comply with any of his obligations under Clause 4 (e) - (k) above, he shall not be entitled to any fees or expenses hereunder from the date and to the extent of the non-compliance and shall, without prejudice to their other rights, reimburse each of the Employer and the Contractor for any fees and expenses already received by the Member, for proceedings or decisions (if any) of the DRB which are rendered void or ineffective by the said failure to comply.

9. Disputes

Any dispute or claim arising out of or in connection with this Dispute Review Board Agreement, or the breach, termination or invalidity thereof, shall be finally settled by institutional arbitration. If no other arbitration institute is agreed, the arbitration shall be conducted under the Rules of Arbitration of the International Chamber of Commerce by one arbitrator appointed in accordance with these Rules of Arbitration.

PROCEDURAL RULES

Unless otherwise agreed by the Employer and the Contractor, the DRB shall visit the Site at intervals of not more than 140 days, including times of critical construction events, at the request of either the Employer or the Contractor. Unless otherwise agreed by the Employer, the Contractor and the DRB, the period between consecutive visits shall not be less than 70 days, except as required to convene a hearing as described below.

The timing of and agenda for each Site visit shall be as agreed jointly by the DRB, the Employer and the Contractor, or in the absence of agreement, shall be decided by the DRB. The purpose of Site visits is to enable the DRB to become and remain acquainted with the progress of the Works and of any actual or potential problems or claims, and, as far as reasonable, to endeavour to prevent potential problems or claims from becoming disputes.

Site visits shall be attended by the Employer, the Contractor and the Project Manager and shall be co-ordinated by the Employer in co-operation with the Contractor. The Employer shall ensure the provision of appropriate conference facilities and secretarial and copying services. At the conclusion of each Site visit and before leaving the site, the DRB shall prepare a report on its activities during the visit and shall send copies to the Employer and the Contractor.

The Employer and the Contractor shall furnish to the DRB one copy of all documents which the DRB may request, including Contract documents, progress reports, variation instructions, certificates and other documents pertinent to the performance of the Contract. All communications between the DRB and the Employer or the Contractor shall be copied to the other Party. If the DRB comprises three persons, the Employer and the Contractor shall send copies of these requested documents and these communications to each of these persons.

If any dispute is referred to the DRB in accordance with Sub-Clause 6 of the Conditions of Contract, the DRB shall proceed in accordance with Sub-Clause 6 and these Rules. Subject to the time allowed to give notice of a decision and other relevant factors, the DRB shall:

- (a) act fairly and impartially as between the Employer and the Contractor, giving each of them a reasonable opportunity of putting his case and responding to the other's case, and
- (b) adopt procedures suitable to the dispute, avoiding unnecessary delay or expense.

The DRB may conduct a hearing on the dispute, in which event it will decide on the date and place for the hearing and may request that written documentation and arguments from the Employer and the Contractor be presented to it prior to or at the hearing.

Except as otherwise agreed in writing by the Employer and the Contractor, the DRB shall have power to adopt an inquisitorial procedure, to refuse admission to hearings or audience at hearings to any persons other than representatives of the Employer, the Contractor and the Project Manager, and to proceed in the absence of any party who the DRB is satisfied received notice of the hearing; but shall have discretion to decide whether and to what extent this power may be exercised.

The Employer and the Contractor empower the DRB, among other things, to:

- (a) establish the procedure to be applied in deciding a dispute,
- (b) decide upon the DRB's own jurisdiction, and as to the scope of any dispute referred to it,
- (c) conduct any hearing as it thinks fit, not being bound by any rules or procedures other than those contained in the Contract and these Rules,
- (d) take the initiative in ascertaining the facts and matters required for a decision,
- (e) make use of its own specialist knowledge, if any,
- (f) decide upon the payment of financing charges in accordance with the Contract,
- (g) decide upon any provisional relief such as interim or conservatory measures, and
- (h) open up, review and revise any certificate, decision, determination, instruction, opinion or valuation of the Project Manager, relevant to the dispute.

The DRB shall not express any opinions during any hearing concerning the merits of any arguments advanced by the Parties. Thereafter, the DRB shall make and give its decision in accordance with Sub-Clause 20.4, or as otherwise agreed by the Employer and the Contractor in writing. If the DRB comprises three persons:

- (a) it shall convene in private after a hearing, in order to have discussions and prepare its decision;
- (b) it shall endeavour to reach a unanimous decision: if this proves impossible the applicable decision shall be made by a majority of the Members, who may require the minority Member to prepare a written report for submission to the Employer and the Contractor; and
- (c) if a Member fails to attend a meeting or hearing, or to fulfil any required function, the other two Members may nevertheless proceed to make a decision, unless:
 - (i) either the Employer or the Contractor does not agree that they do so, or
 - (ii) the absent Member is the chairman and he/she instructs the other Members not to make a decision.

Section VIII. Particular Conditions (PC)

The following Particular Conditions shall supplement the GC, as well as E-Procurement Annexure to GC. They are to be completed by the Employer and presented as part of the Bidding Documents. Whenever there is a conflict, the provisions herein shall prevail over those in the GC, as well as E-Procurement Annexure to GC.

Reference to GC clauses

1.	<p>The site is the area Mahendrapur-Barh Stretch of National Waterway-1</p> <p>The name of the Project Manager is <i>[insert the name of the person appointed by the Employer as Project Manager]</i>.</p>
3.	<p>The following documents also form part of the Contract: <i>[list the following and any other relevant documents]</i></p> <ul style="list-style-type: none"> (i) the Dredging/Bandalling Methodology (ii) the ESHS Management Strategies and Implementation Plans and EMP (Environment Management Plan); (iii) Labor Influx and Worker's Camp Management Plan including the process for mitigating construction related impacts on local community; (iv) Code of Conduct (ESHS); and (v) JV Agreement (wherever applicable).
4.	<p>The language of the Contract is English.</p> <p>The laws governing the Contract are laws of Union of India</p>
5.	<p>The address of the Employer is: <i>A-13, Sector-1, Noida, GautamBuddha Nagar, UP – 201301</i></p> <p><i>T: +91 120 2424544</i></p> <p><i>E: vc.iwai@nic.in</i></p> <p>The address of the Contractor is: <i>[insert exact street address, including telephone and fax numbers, and E-Mail address]</i></p>

5.3	In GC 5.3 and GC 5.4 replace the words 'Road' with 'Waterways' at all places.
5.4	In GC 5.4 replace the words 'the purposes of this contract' with 'the purposes of this contract'.
6.	Dispute Resolution Method used: DRB
6.1.2	The Appointing Authority is: <i>Chairman, Inland Waterways Authority of India</i>
6.1.3	<p>Replace GC 6.1.3 with the following:</p> <p>"In the event of death, disability, or resignation of the DRE, the latter shall be replaced by agreement between the Employer and the Contractor. Any replacement made by the parties shall be completed within 28 days after the event giving rise to the need for a replacement, failing which the replacement shall be made by the same appointing authority as above."</p>
6.1.9	<p>If DRB is selected under GC 6, add a new sub clause 6.1.9 as under:</p> <p>"The agreement between the Parties and either the sole member or each of the three members shall incorporate by reference the General Conditions of Dispute Review Board Agreement contained in the Appendix B to these General Conditions, with such amendments as are agreed between them.</p> <p>The Fee & other expenses payable to the Dispute Review Board Members shall be as per Annexure-I; the Proceedings to be issued to the Dispute Review Board Members is as shown in the Annexure- I (A); and the Recommendation of the Dispute Review Board shall be in the format shown in the Annexure – I (B)."</p>
6.2.3	<p>" 1. The procedure for adhoc arbitration will be as under:</p> <p>Any dispute in respect of which the Recommendation(s), if any, of the Board has not become final and binding shall be finally settled by arbitration as set forth below. The arbitral tribunal shall have full power to open-up, review and revise any decision, opinion, instruction, determination, certificate or valuation of the Engineer (or equivalent) and any Recommendation(s) of the Board related to the dispute.</p> <p>(i) (a) A dispute with an Indian Contractor shall be finally settled by arbitration in accordance with the Arbitration & Conciliation Act, 1996, or any statutory amendment thereof. The arbitral tribunal shall consist of 3 arbitrators, one each to be appointed by the Employer and the Contractor. The third Arbitrator shall be chosen by the two Arbitrators so appointed by the Parties and shall act as Presiding arbitrator. In case of failure of the two arbitrators, appointed by the parties to reach upon a</p>

	<p>consensus within a period of 30 days from the appointment of the arbitrator appointed subsequently, the Presiding arbitrator shall be appointed by the * Indian Council of Arbitration. For the purposes of this Sub-Clause, the term “Indian Contractor” means a contractor who is registered in India and is a juridic person created under Indian law as well as a joint venture between such a contractor and a Foreign Contractor.</p> <p>(b) In the case of a dispute with a foreign Contractor, the dispute shall be finally settled in accordance with the provisions of UNCITRAL Arbitration Rules. The arbitral tribunal shall consist of three Arbitrators one each to be appointed by the Employer and the Contractor. The third Arbitrator shall be chosen by the two Arbitrators so appointed by the Parties, and shall act as presiding arbitrator. In case of failure of the two arbitrators appointed by the parties to reach upon a consensus within a period of 30 days from the appointment of the arbitrator appointed subsequently, the Presiding Arbitrator shall be appointed by the * Indian Council of Arbitration. For the purposes of this Clause, the term “Foreign Contractor” means a contractor who is not registered in India and is not a juridical person created under Indian Law.</p> <p>The venue of arbitration with a foreign bidder shall be a neutral venue or as mutually agreed venue at the time of signing of the contract agreement.</p>
	<p>ii) Neither party shall be limited in the proceedings before such tribunal to the evidence or arguments before the Board for the purpose of obtaining its Recommendation(s). No Recommendation shall disqualify any Board Member from being called as a witness and giving evidence before the arbitrator(s) on any matter whatsoever relevant to the dispute.</p> <p>(iii) Arbitration may be commenced prior to or after completion of the Works, provided that the obligations of the Employer, the Engineer (or equivalent), the Contractor and the Board shall not be altered by reason of the arbitration being conducted during the progress of the Works.</p> <p>(iv) If one of the parties fail to appoint its arbitrator in pursuance of sub-clause (i) and (ii) above, within 30 days after receipt of the notice of the appointment of its arbitrator by the other party, then the * Indian Council of Arbitration, both in cases of foreign contractors as well as Indian Contractors, shall appoint the arbitrator. A certified copy of the order of the * Indian Council of Arbitration making such an appointment shall be furnished to each of the parties.</p> <p>(v) Arbitration proceedings shall be held at New Delhi, India, for arbitration with domestic contractor and at a neutral venue or as mutually agreed venue for arbitration with foreign contractor. The language of the arbitration proceedings and that of all documents and communications between the parties shall be English.</p>

	<p>(vi) The decision of the majority of arbitrators shall be final and binding upon both parties. The cost and expenses of Arbitration proceedings will be paid as determined by the arbitral tribunal. However, the expenses incurred by each party in connection with the preparation, presentation, etc., of its proceedings as also the fees and expenses paid to the arbitrator appointed by such party or on its behalf shall be borne by each party itself.</p> <p>(vii) The Arbitrator should give final award within 180 days of starting of the proceedings.</p> <p>(viii) Performance under the contract shall continue during the arbitration proceedings and payments due to the contractor by the Employer shall not be withheld, unless they are the subject matter of the arbitration proceedings.</p> <p>2. The Fee & other expenses payable to the Arbitrators shall be as per Annexure-II.</p> <hr/> <p><i>* Insert any other appropriate authority if considered necessary.</i></p> <p><i>Alternatively</i></p> <p><i>[Note: this may be used only in cases of contract awards to Indian contractors]</i></p> <p><i>[Apart from the adhoc arbitration services obtained through mutually agreed Arbitrator(s) as above, Institutional arbitration services are also available in India. Institutional arbitration (and mediation) dispute resolution mechanisms can be gainfully used, preferably for relatively larger contracts. Following clause may be included, if it is decided to use Institutional Services for arbitration for resolution of disputes, and in such a case other clauses related to Arbitration/ Arbitrator would be deleted. In the sample clause below, substitute the reference to 'Rules of Domestic Commercial Arbitration of the Indian Council of Arbitration' by the specific institution that is sought to be engaged e.g. The International Centre for Alternative Dispute Resolution (ICADR), The Indian Institute of Arbitration and Mediation (IIAM), Indian Chamber's Council of Arbitration, Delhi International Arbitration Centre (DAC), Construction Industry Arbitration Council (CIAC), Council For National and International Commercial Arbitration, London Court of International Arbitration (India Centre) or the like.]</i></p> <p>"Any dispute or difference whatsoever arising between the parties out of or relating to the construction, meaning, scope, operation or effect of this contract or the validity or the breach thereof shall be settled by arbitration in accordance with the Rules of Domestic Commercial Arbitration of the Indian Council of</p>
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	<p>Arbitration and the award made in pursuance thereof shall be binding on the parties.</p> <p>The arbitral tribunal shall consist of 3 Arbitrators, arbitration proceedings shall be held at _____, India and the language of the arbitration proceedings and that of all documents and communications between the parties shall be English”. <i>[ICA rules provide for arbitration tribunal of 3 arbitrators if the value of claim is over Rs 1 crore unless the parties have agreed otherwise for a sole arbitrator].</i></p>
7.1	In GC 7.1 replace the word ‘Road’ with ‘Waterways’.
8.4.1	<p>The Contractor is obliged to prepare and to furnish to the Project Manager for Approval the following documents: <i>[list documents]</i></p> <p><i>[Note: The documents to be furnished and needing approval by the Project Manager will normally be related to Improvement Works and in some cases to Development Dredging Works, for example Survey Outputs, Reports, Records and Drawings associated with Development Dredging Works, Improvement Works, Emergency Works, and Maintenance Services.]</i></p>
10.1	The Start Date shall be not later than 45 days after the issuance of the Letter of Acceptance by the Employer.
10.1	<p>ESHS Management Strategies and Implementation Plans</p> <p>The following is inserted at the end of 10.1:</p> <p>“ Notwithstanding the Start Date as specified in this Sub-Clause, the Contractor shall not carry out any Works, including mobilization and/or pre-construction activities, unless the Project Manager is satisfied that appropriate measures are in place to address environmental, social, health and safety risks and impacts. At a minimum, the Contractor shall apply the Management Strategies and Implementation Plans and Code of Conduct, submitted as part of the Bid and agreed as part of the Contract. The Contractor shall submit, on a continuing basis, for the Project Manager’s prior approval, such supplementary Management Strategies and Implementation Plans as are necessary to manage the ESHS risks and impacts of ongoing works. These Management Strategies and Implementation Plans collectively comprise the Contractor’s Environmental and Social Management Plan (C-ESMP). The C-ESMP shall be approved prior to the commencement of construction/ dredging activities. The approved C-ESMP shall be reviewed, periodically (but not less than every six (6) months), and updated in a timely manner, as required, by the Contractor to</p>

	ensure that it contains measures appropriate to the Works activities to be undertaken. The updated C-ESMP shall be subject to prior approval by the Project Manager.”
10.2	<p>In GC 10.2 is revised to read as under:</p> <ul style="list-style-type: none"> (i) Within 28 days from the date of signing of the Contract, the Employer shall issue a Notice to the Contractor for commencing operations to meet the requirements of Works and Services stipulated in Part A to the Contract. (ii) The Contractor shall commence its activities immediately on receipt of the said Notice and notify the Employer within a period not exceeding 30 days from the date of receipt of said Notice that the Assured Least Available depth (LAD) of 2.5 m and channel bottom width of minimum 35 m have been fully complied along with other related activities including provision of navigational aids. (iii) The date on which the Engineer-in-charge or his representative, after receiving notification of readiness of Navigation Channel from the Contractor and after joint inspection of the channel with the Contractor, confirms that the entire stretch of the channel Mahendrapur-Barh satisfies the requirement of LAD of 2.5m and channel bottom width of 35m shall be referred to as the “Date of Commencement of Services (iv) Engineer-in-charge shall inspect jointly with Contractor within a week of the said notification to confirm that the entire stretch of the channel Mahendrapur-Barh satisfies the requirement of LAD of 2.5 m and Channel bottom width of 35 m. (v) If the outcome of joint inspection is not satisfactory, Contractor will commence the required further activities immediately on receipt of Engineer-in-charge’s intimation to this effect to meet the specified requirements. Within a period not exceeding 30 days from the date of receipt of said intimation from the Engineer-in-charge, or 60 days from the date of Employer’s Notice to the Contractor for commencing operations, whichever is later, The Contractor shall complete the required activities for making the Navigation Channel ready as specified. The Contractor shall then issue a revised Notification of readiness of Navigation Channel with LAD of 2.5 m and Channel bottom width of 35 m to the Engineer-in-charge. (vi) The date of revised Notification referred to above will count as the “Date of Commencement of Services” (in supersession of the date arrived at earlier) provided joint inspection by the Engineer-in-charge with the Service Provider confirms that the entire stretch of the channel

	<p>Mahendrapur-Barh satisfies the requirement of LAD of 2.5 m and Channel bottom width of 35 m.</p> <p>(vii) Contractor's failure to achieve LAD of 2.5 m and Channel bottom width of 35 m within the time limit prescribed in the paragraph (v) above shall be treated as breach of the contract, requiring re-determining of the Date of Commencement of Services based on the third round of Joint Survey.</p> <p>(viii) In such an event, the Contractor shall submit a proposal to the Employer with justification seeking additional time for carrying out further activities to achieve the specified LAD of 2.5 m and Channel bottom width of 35 m. Based on Engineer-in-charge's recommendation, the Employer will consider the proposal and if extension of time is considered justified.</p> <p>(ix) The Employer may allow Contractor further time as may be considered reasonable under the circumstances, provided, however, that no further extension shall be considered. If the Joint Survey done on Contractor's Notification of readiness of the Navigation Channel, establishes that the entire stretch of the channel Mahendrapur-Barh satisfies the requirement of LAD of 2.5 m and Channel bottom width of 35 m, the date of Notification referred to herein shall be counted as the Date of Commencement of Services.</p> <p>(x) If the Joint Survey referred to in (vii) above reveals that the service provider has failed to achieve the specified LAD of 2.5m and channel bottom width of 35m then in such case, the employer may consider LAD of 2.2m depth and width has been of 35m and the day when such LAD and width has been achieved shall be considered as "Date of commencement of services".</p> <p>(xi) It is clarified that LAD of 2.2m may be considered only after 3rd joint survey for the purpose of defining "date of commencement of services", the overall LAD to be maintained by the service provider as per contract still remains 2.5m for first two years and 3m for subsequent 3rd, 4th and 5th year</p>
11.2	In GC 11.2 replace the word 'Road' with 'Waterways'.
11.4	<p>Add the following at the end of Sub-clause 11.4:</p> <p>"Salient features of the major labour and other laws that are applicable to construction industry in India are given in Appendix 1 to the General Conditions of Contract."</p>
12.1	<p>Add the following at the end of Sub-clause 12.1:</p> <p>"The Project Manager should satisfy whether (a) the circumstances brought out warrant such sub-contracting; and (b) the sub-contractors so proposed for the</p>

	Work possess the necessary experience, qualifications and equipment for the job proposed to be entrusted to them in proportion to the quantum of work to be sub-contracted.”
12.1	The Contractor is specifically allowed to subcontract the following activities: <i>[list specific major activities or works required under the contract e.g. (a) 20% of all dredging work; (b) supply, installation and commissioning of Aids to Navigation; (c) environmental and social monitoring.]</i>
12.2	<p>The Contractor may subcontract under his own responsibility and without prior approval of the Employer the following Works and Services provided they do not represent more than 10 percentage of the contract value: <i>a. Bandalling</i></p> <p style="padding-left: 40px;"><i>b. Erection of Aids to Navigation</i></p> <p><i>[Note: Under normal circumstances, the Contractor should be allowed to subcontract without prior approval of the Employer all the small works related to normal and recurrent maintenance services. However, the Contractor should normally not be allowed to subcontract the management and self-control activities; and (ii) vertical splitting of the works for sub-contracting is not acceptable.]</i></p>
14.2	The Employer shall give full possession of and access to the Site on <i>[insert date here]</i>
14.5	In GC 14.5 replace the words ‘Road’ with ‘Waterways’ at all places.
15.2	In GC 15.2 replace the word ‘Road’ with ‘Waterways’.
16	In GC 16 replace the words ‘Road’ with ‘Waterways’ at all places.
16.1	<p>In GC 16.1 substitute the last paragraph with the following:</p> <p>‘The Project Manager may delegate any of his duties and responsibilities to other suitably qualified and experienced personnel, after notifying the Contractor, and may cancel any delegation after notifying the Contractor’.</p>
17.2	The contractor’s progress of performance shall also include detailed time program including Environmental Management Plan (to comply with the applicable Laws/ Rules/ Regulations for protection of environment, public health and safety, and the applicable parts of the Environment Management Plan of the project); and a brief Labor Influx and Worker’s Camp Management Plan including the process for mitigating construction related impacts on local community.
17.3	ESHS Reporting

	<p>Inserted at the end of GCC 17.3:</p> <p>“In addition to the progress report the Contractor shall also provide a report on the Environmental, Social, Health and Safety (ESHS) metrics set out in Appendix A. In addition to Appendix A reports, the Contractor shall also provide immediate notification to the Project Manager of incidents in the following categories. Full details of such incidents shall be provided to the Project Manager within the timeframe agreed with the Project Manager.</p> <ul style="list-style-type: none"> (a) confirmed or likely violation of any law or international agreement; (b) any fatality or serious (lost time) injury; (c) significant adverse effects or damage to private property (e.g. vehicle accident, damage from fly rock, working beyond the boundary) (d) major pollution of drinking water aquifer or damage or destruction of rare or endangered habitat (including protected areas) or species; or (e) any allegation of gender based violence (GBV), sexual exploitation or abuse, sexual harassment or sexual misbehavior, rape, sexual assault, child abuse, or defilement, or other violations involving children.
18.1.2	In GC 18.1.2 replace the word ‘Road’ with ‘Waterways’.
18.3	<p>Site regulations shall include rules for emergency response, environment management, workers’ code of conduct.</p> <p><i>[insert suitably e.g. rules for emergency response, environmental management, workers’ code of conduct, labour camp management, medical care etc.]</i></p>
18.5.2	In GC 18.5.2 replace the word ‘Road’ with ‘Waterways’.
19.1	<p>Add the following at the end of Sub-clause 19.1:</p> <p>“If the Contractor intends to replace a Key Personnel, the Contractor shall, not less than 30 days before the intended date of replacement, give notice to the Project Manager, the name, address, academic qualifications and relevant experience of the intended replacement Key Personnel. The Contractor shall not, without the prior consent of the Project Manager, revoke the appointment of the Key Personnel or appoint a replacement.”</p>
19.1	<p>Key Personnel</p> <p>The term “key personnel” in Sub-Clause 19.1 is replaced by “Key Personnel”. Key Personnel are defined as the Contractor’s personnel named in the Particular Conditions of Contract.</p>

	[insert the name/s of each Key Personnel agreed by the Employer prior to Contract signature.
19.2 (f), (g), (h) and (i)	The Social Clauses are to be complied with by the Contractor as per laws of the Union of India and costs of compliance should be part of his overheads included in the rates for various items. Government of India has a public program for control of HIV/AIDS, Public Distribution System etc. and contractor will only need to create a support basis, cost of which should be included in his overheads. No separate payment will be made to the Contractor in this regard under this contract.
19.3	<p>Code of Conduct (ESHS)</p> <p>The following is inserted at the end of GCC 19.3:</p> <p>“The reasons to remove a person include behavior which breaches the Code of Conduct (ESHS) (e.g. spreading communicable diseases, sexual harassment, gender based violence, (GBV), sexual exploitation or abuse illicit activity or crime).”</p>
20.6	In GC 20.6 replace the word ‘Rehabilitation’ with ‘Development Dredging’.
21.	<p>The Contractor shall carry out the following Dredging /Bandalling Works, which are detailed in the Specifications – Section VI Part A:</p> <ol style="list-style-type: none"> To Provide and maintain assured LAD of 2.5 m and Channel bottom width of 35 m with naturally side slopes during the first two years from the date of commencement of services. To Provide and maintain assured LAD of 3.0 m and Channel bottom width of 45 with naturally side slopes during the subsequent three years. To install and maintain the Day Channel Marking (Navigational Aids) throughout the Contract Period. Assistance to Normal barge and vessels / crafts movement in the channel during dredging operation.
22	<p>Replace the GC 22.1 with the following: 22.1 “If so indicated in the PC, Dredging / Bandalling Works are required and will consist of a set of interventions that add new characteristics to the Waterways in response to safety or other conditions.”</p> <p>In GC 22.2 replace the words ‘Road’ and ‘Roads’ with ‘Waterways’ at all places.</p>

23	In GC 23.1 replace the words ‘Road’ with ‘Waterways’ at all places.
24	In GC 24.1 replace the word ‘Road’ with ‘Waterways’.
25	In GC 25.1 and 25.2 replace the words ‘Road’ and ‘Roads’ with ‘Waterways’ at all places.
25.2	<p>The Contractor shall establish a Self Control Unit</p> <p><i>[Note: The Self-control Unit should always be required, except for very small contracts.]</i></p>
26.1 (b)	<p>Replace the existing GC Sub-clause 26.1(b) with the following:</p> <p>“(b) provide and maintain at his own cost all, warning signals, signs and watch keeping, when and where necessary or required by Sub-Clause 18.3 of the Contract or by any duly constituted authority, for the protection of the Works and Services or for the safety and convenience of his workers and Waterways users, the public or others; and”</p>
26.1 (c)	<p>Add the following at the end of Sub-clause 26.1 (c):</p> <p>“Salient features of the major laws in force in India for protection of Environment are given in Appendix 1 to the General Conditions of Contract.”</p>
27	<p>Replace the existing GC Sub-clause 27.1 with the following:</p> <p>“27.1 Dredging / Bandalling Works, shall be executed by the Contractor on the basis of Work Orders issued by the Project Manager”.</p> <p>In GC 27.3 replace the words ‘Road’ with ‘Waterways’ at all places.</p>
29	The corresponding clause in GC stands deleted.
30.3	<p>Replace the existing GC Sub-clause 30.3 with the following:</p> <p>“The Contractor shall carry out at his own cost the laboratory and other tests that he needs to verify if materials to be used comply with the Specifications, and to also verify baseline water and sediment quality and potential degree of contamination, to ensure appropriate mitigation measures and management of contaminated dredged material in accordance with the EMP. The contractor shall keep records of such tests. If requested by the Project Manager, the Contractor shall hand over the results of the tests.”</p>

32.1	In GC 32.1 replace the words ‘Defects Correction Certificate’ with ‘Defects Liability Certificate’.																		
35.1	<p>The Contractor shall take out and maintain in effect the following insurances in the sums and deductibles shown below:</p> <p>(i) Third Party motor vehicle: <u>INR 4,000,000/-</u></p> <p>(ii) Third Party liability: <u>as per vessel Inland Act.</u></p> <p><u>(iii) Group Insurance Cover for the persons on Vessel / Board.</u></p> <p>(iii) Employer’s liability and workers’ compensation: <u>Nil</u></p> <p>(iv) Professional liability: <u>Twice the value of contract for the entire period of the contract</u></p> <p>(v) Loss or damage to equipment and property: <u>Minimum INR 10,000,000/- for each accident for the currency of the contract</u></p>																		
39.1 and 39.3	In GC 39.1 and GC 39.3 replace the words ‘Rehabilitation’ with ‘Dredging / Bandalling Works’																		
39.1	<p>The Time for Completion of contract: <i>5 years</i></p> <p>GC 39.1 is revised to read as under:</p> <p>If in any stretch of the channel, available depth or bottom width of channel is found to be less than that specified in Section VI, Part A – Description of Works and Services, as determined during the course of weekly joint surveys conducted in accordance with GC 47, deduction shall be made from the Contractor’s monthly bills as follows.</p> <p>Decision of the Engineer-in-charge for determining the deductions based on the results of the Joint Survey shall be final and binding.</p> <table border="1"> <thead> <tr> <th>SN</th><th>During first 2 years of services from the Date of Commencement of Service LAD → 2.5 M</th><th>During 3rd, 4th & 5th years of services from the Date of Commencement of Service LAD → 3.00 M</th><th>Deduction to be applied as percentage of monthly bill for each non-compliance found in a joint weekly survey during the month</th></tr> </thead> <tbody> <tr> <td>1</td><td>On achieving the assured depth of 2.5m & width of 35 m</td><td>On achieving the assured depth of 3.0 m & width of 45 m</td><td>Nil</td></tr> <tr> <td>2</td><td>On achieving the assured depth of 2.4m & width of 35 m</td><td>On achieving the assured depth of 2.9 m & width of 45 m</td><td>20% for each weekly default</td></tr> <tr> <td>3</td><td>On achieving the assured depth of 2.3 m & width of 35 m</td><td>On achieving the assured depth of 2.8m & width of 45 m</td><td>30% for each weekly default</td></tr> </tbody> </table>			SN	During first 2 years of services from the Date of Commencement of Service LAD → 2.5 M	During 3 rd , 4 th & 5 th years of services from the Date of Commencement of Service LAD → 3.00 M	Deduction to be applied as percentage of monthly bill for each non-compliance found in a joint weekly survey during the month	1	On achieving the assured depth of 2.5m & width of 35 m	On achieving the assured depth of 3.0 m & width of 45 m	Nil	2	On achieving the assured depth of 2.4m & width of 35 m	On achieving the assured depth of 2.9 m & width of 45 m	20% for each weekly default	3	On achieving the assured depth of 2.3 m & width of 35 m	On achieving the assured depth of 2.8m & width of 45 m	30% for each weekly default
SN	During first 2 years of services from the Date of Commencement of Service LAD → 2.5 M	During 3 rd , 4 th & 5 th years of services from the Date of Commencement of Service LAD → 3.00 M	Deduction to be applied as percentage of monthly bill for each non-compliance found in a joint weekly survey during the month																
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3	On achieving the assured depth of 2.3 m & width of 35 m	On achieving the assured depth of 2.8m & width of 45 m	30% for each weekly default																

4	On achieving the assured depth of 2.2 m & width of 35 m	On achieving the assured depth of 2.7 m & width of 45 m	50% for each weekly default
5	On achieving assured depth of less than 2.2 m & width of 35 m	For a depth less than 2.7 m & width of 45 m	100% for each weekly default

If a weekly joint survey establishes that the Service Provider failed to maintain the navigational marks according to stipulations in Section VII, Part A Description of Services to the Contract, deductions shall also be made from the respective monthly bill @ 1% of the verified payable amount for each such weekly default.

As an Example:- The Operation of the Table shall be as under

Monthly payment (Mp) = %age of contract Price

Weekly Default Deductions (Wd)_{1,2,3,4} =

= $[Mp/4] * \%age$ where %age of default as per Cl. 39.1 of PC

Formulae:

1) Monthly amount payable (MAp) =

$$MAp = Mp - [Wd1 + Wd2 + Wd3 + Wd4]$$

2) Monthly Due = Md = MAp (In case of No default)

$$= [MAp - 1\% \text{ of } MAp] \text{ (In case of default)}$$

Example:

Suppose

- Contract price for full year is ₹100 Cr and
- For Operating Month of November with 10%

Therefore, in case of

A) No Default Condition

Amount Payable for month of June = Mp = ₹10 Cr

B) Default with following LAD:

(as per Cl 39.1 of PC)

Week1 = 2.5 m → 0% deduction

Week2 = 2.4 m → 20% deduction

Week3 = 2.5 m → 0% deduction

Week4 = 2.2 m → 50% deduction

Using Formulae-1

MAp for November = $Mp - [0 + (Mp/4 * 20\%) + 0 + (Mp/4) * 50\%]$

= ₹10 Cr - $[0 + 20\% \text{ of } ₹(10/4) \text{ Cr} + 0 + 50\% \text{ of } ₹(10/4) \text{ Cr}]$

= ₹10 Cr - ₹1.75 Cr = ₹8.25 Cr

Using Formulae-2

Monthly Due to Contractor

(Md) = $[MAp - 1\% \text{ of } MAp]$ as per Cl 39.1

So, Payment due to the Contractor for the month of November in default condition will be:

Md for November = $[MAp \text{ for November} - 1\% \text{ of } MAp \text{ for November}]$

	<p>= ₹8.25 Cr - 1% of ₹8.25 Cr = ₹ 8.1675 Cr</p>
39.3	Deleted
40.1	In GC 40.1 replace the words ‘Rehabilitation and’ with ‘Dredging / Bandalling Works,’; and replace the word ‘Road’ with ‘Waterways’
40.2	In GC 40.2 replace the word ‘Road’ with ‘Waterways’
40.3	In GC 40.3 replace the word ‘Rehabilitation’ with ‘Development Dredging Works’.
40.4	Deleted
41	In GC 41 replace the words ‘Road’ with ‘Waterways’ at all places.
41.3(a)	Replace the existing GC Sub-clause 41.3(a) with the following: Deleted
42.1(b)	Deleted
43	In GC 43 replace the words ‘Road’ and ‘Roads’ with ‘Waterways’ at all places.
44.1	The payment of the Contract Price will be made in the following currencies: <i>[insert currencies and the percentage of each currency]</i>
45.1	<p>The amount of the Advance Payment is <i>ten (10) percent of Contract Price</i></p> <p>The Advance payment will be made by <i>[insert date or event]</i></p> <p><i>[Note: Advance payment will be made available to the Contractor after signing of the Contract and upon submission of Advance Payment Guarantee as specified in the Contract. It may also be made available in instalments linked to quantifiable milestones e.g. say 5% in the first instalment and remaining 5% upon completion of Mobilization, Set-up and Establishment, and completion of 10% of Development Dredging Works etc.]</i></p>
45.3	<p>The repayment of the advance payment shall commence with the first Interim (Monthly) Payment Certificate which follows the Advance Payment.</p> <p>The proportionate amount of the deduction shall equal 15% <i>[insert appropriate % if the advance payment is other than 10%]</i> of each interim payment certificate amount until the advance payment is fully repaid; provided that the advance</p>

	<p>payment shall be completely repaid prior to the time when 90 percent (90%) of the Accepted Contract Amount less Provisional Sums has been certified for payment. If the advance payment has not been repaid prior to the issue of the Taking-Over Certificate for the Works or prior to termination of the Contract, the whole of the balance then outstanding shall immediately become due and payable by the Contractor to the Employer.</p>
47.2	<p>GC 47.2 to be revised as</p> <p>Measurements</p> <p>The measurement of depth in the navigation channel shall be carried out by conducting bathymetric survey every week jointly as detailed above & its chart should be plotted by the Contractor in presence of Employer's representative.</p> <p>In case shortcomings in maintaining the specified LAD and width of channel are observed by the Employer's representative, the cross-sectional survey shall be carried out and the cross-sectional interval shall be 10 m apart and soundings shall be taken continuously and plotted at 4 m interval on the cross section. The cross-section shall be extended, if necessary, up to 20 m beyond the limits of the channel on each side with a view to determining the remedial measures to be taken by the Contractor.</p> <p>Sounding vessel/ boat, equipment, personal & other logistics required for conducting surveys/ inspection shall be arranged by the Contractor at his cost. Generally, recording type multi-beam echo-sounder with digital output shall be used in all survey work. However, keeping in view the site conditions and practicability/prevaling weather conditions, the Engineer-in-Charge shall after consulting the Contractor decide and advise the Contractor as to the method of measurement to be adopted.</p> <p>Joint surveys shall be conducted in Automatic Hydrographic Survey System (HYPACK) and recorded data in soft copy shall be submitted to the Employer.</p> <p>The scale of surveys should be 1:5000 for first three weekly surveys in a month. The 4th or the final survey of the month should be in the scale of 1:20000. Contractor will prepare the survey charts and submit to Employer for approval along with Soft copy, Echo roll, Measurement Book etc. related to the measurement. Employer will issue the approved charts to the Contractor.</p> <p>Works & Services provided by the Contractor shall be checked every week through a Joint Survey by Engineer-in-Charge / Employer's Representative, Technical Support Services Consultant – III and Contractor in the manner tabulated below:</p>

	SN	Inspection schedule	Employer's representative and TSSC-III	Contractor's Representative												
	1	1 st Week of every month	JHS / TA / SUPERVISOR	One Hydrographic Surveyor & one supervisor / Engineer												
	2	2 nd Week of every month	AD / AHS / TA / JHS	One Hydrographic Surveyor & One Engineer												
	3	3 rd Week of every month	JHS / TA / SUPERVISOR / FA	One Hydrographic Surveyor & One supervisor / Engineer												
	4	4 th Week of every month	DD / AHS / AD / JHS / One Officer from HQ	One Hydrographic Surveyor & One senior level officer by the Engineer-in-charge												
	TA - Technical Assistant, JHS - Junior Hydrographic Surveyor, FA - Field Assistant, DD - Deputy Director, AHS - Assistant Hydrographic Surveyor, AD - Assistant Director															
48.	<p>Replace the existing GC Sub-clause 48.1 with the following:</p> <p>The amounts certified in each Running Account Bill/payment certificate, after deducting for Advance Payment, shall be adjusted by applying the respective price adjustment factor to the amounts due to the Operator.</p> <p>The Price adjustment factor for the Works & Services rendered in a month shall be determined using the coefficients/weightings of relevant Indices as under:</p> <table><tr><th>Index code</th><th>Index description</th><th>Source of index</th><th>Weighting *</th></tr><tr><td>L</td><td>Labour – All India Consumer Price Index (CPI) for industrial workers</td><td>Labour Bureau, Ministry of Labour & Employment, Government of India</td><td>0.23</td></tr><tr><td>F</td><td>High Speed Diesel – All India Wholesale Price Index (WPI)</td><td>Office of the Economic Advisor to the Govt. of India, Ministry of Commerce and Industry</td><td>0.12</td></tr></table> <p>Price Adjustment Factor $P_c = 0.65 + 0.23 \times L_m/L_0 + 0.12 \times F_m/F_0$</p> <p>Price Adjustment for Works & Services rendered in a month = $R \times (P_c - 1)$</p> <p>where</p> <p>L_m = CPI for the month in which the Works & Services have been provided</p> <p>L_0 = CPI for the month preceding the deadline for bid submission</p> <p>F_m = WPI for the month in which the Works & Services have been provided</p> <p>F_0 = WPI for the month preceding the deadline for bid submission</p>				Index code	Index description	Source of index	Weighting *	L	Labour – All India Consumer Price Index (CPI) for industrial workers	Labour Bureau, Ministry of Labour & Employment, Government of India	0.23	F	High Speed Diesel – All India Wholesale Price Index (WPI)	Office of the Economic Advisor to the Govt. of India, Ministry of Commerce and Industry	0.12
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	R = Running Account Bill amount for Works & Services rendered in a month after making deductions (a) as stipulated in PC 39.1 for failure to achieve LAD and Channel Bottom Width, and (b) towards repayment of Advance Payment.																																										
49.1	<p>Replace the existing GC Sub-clause 49.1 with the following:</p> <p>The Contractor shall submit monthly Bills for performing the works & services, from the Date of Commencement of Works determined in accordance with PC 10.2, which will be verified by the Engineer-in-charge subject to deduction as applicable in terms of PC 39.1, and recovery towards repayment of Mobilization Advance & other recoveries, if any. Verified bills would be forwarded by the Engineer-in-Charge to the Employer for making payment of the amount certified by him.</p> <p>The Contractor shall be eligible to claim payments for services rendered by him as a percentage of the contract price for the respective month of the year of operation in accordance with the details tabulated below.</p> <table><tr><th>Sl N.</th><th>Month</th><th>% age of Contract Price applicable for the relevant year of service</th></tr><tr><td>1</td><td>January</td><td>10</td></tr><tr><td>2</td><td>February</td><td>10</td></tr><tr><td>3</td><td>March</td><td>10</td></tr><tr><td>4</td><td>April</td><td>10</td></tr><tr><td>5</td><td>May</td><td>10</td></tr><tr><td>6</td><td>June</td><td>7.5</td></tr><tr><td>7</td><td>July</td><td>5</td></tr><tr><td>8</td><td>August</td><td>5</td></tr><tr><td>9</td><td>September</td><td>5</td></tr><tr><td>10</td><td>October</td><td>7.5</td></tr><tr><td>11</td><td>November</td><td>10</td></tr><tr><td>12</td><td>December</td><td>10</td></tr><tr><td colspan="2">Total</td><td>100</td></tr></table>	Sl N.	Month	% age of Contract Price applicable for the relevant year of service	1	January	10	2	February	10	3	March	10	4	April	10	5	May	10	6	June	7.5	7	July	5	8	August	5	9	September	5	10	October	7.5	11	November	10	12	December	10	Total		100
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Total		100																																									
49.5 (add new 49.6)	<p>Add new GCC 49.6:</p> <p>“49.6 if the Contractor was, or is, failing to perform any ESHS obligations or work under the Contract, the value of this work or obligation, as determined by the Project Manager, may be withheld until the work or obligation has been performed, and/or the cost of rectification or replacement, as determined by the Project Manager, may be withheld until rectification or replacement has been completed. Failure to perform includes, but is not limited to the following:</p> <p>(i) failure to comply with any ESHS obligations or work described in the Works’ and Services’ Requirements which may include: working outside site boundaries, excessive dust, failure to keep public roads in a safe usable condition, damage</p>																																										

	<p>to offsite vegetation, pollution of water courses from oils or sedimentation, contamination of land e.g. from oils, human waste, damage to archeology or cultural heritage features, air pollution as a result of unauthorized and/or inefficient combustion;</p> <p>(ii) failure to regularly review C-ESMP and/or update it in a timely manner to address emerging ESHS issues, or anticipated risks or impacts;</p> <p>(iii) failure to implement the C-ESMP e.g. failure to provide required training or sensitization;</p> <p>(iv) failing to have appropriate consents/permits prior to undertaking Works or related activities;</p> <p>(v) failure to submit ESHS report/s (as described in Appendix A), or failure to submit such reports in a timely manner;</p> <p>(vi) failure to implement remediation as instructed by the Project Manager within the specified timeframe (e.g. remediation addressing non-compliance/s).</p> <p>(vii) Failure to implement ESHS obligations or works described in the Works and Services requirements – the Employer may implement the ESHS obligations itself while recovering the cost from the Contractor’s payment(s) along with forfeiting the Performance Bank Guarantees.</p>
50.1	<p>The rate of “commercial borrowing” is as defined below:</p> <p>For local currency: 8% per annum</p> <p>For Foreign currency: LIBOR + 2% per annum, as applicable on the date of payment.</p>
50.2	In GC 50.2 replace the words ‘the Adjudicator or an Arbitrator’ with ‘the DRB or an Arbitrator’.
51	Replace the Clause in GC as Deleted
53.2.1	The amount of the Advance payment security is the same as the advance payment amount.

53.2.2	<p>“GC 53.2.2 is replaced with the following</p> <p>The advance payment security (demand guarantee) shall be issued by a reputable bank or financial institution selected by the Contractor, and shall be in the Advance Payment Security Form included in Section IX, Annex to the Particular Conditions - Contract Forms, or in another form approved by the Employer. A foreign institution providing the Advance Payment Security shall have a correspondent financial institution located in the Employer’s Country. The Contractor shall ensure that the guarantee is valid and enforceable until the advance payment has been repaid.</p> <p>The amount of the security shall be reduced in proportion to the value of the Works and Services executed by and paid to the Contractor from time to time, and shall automatically become null and void when the full amount of the advance payment has been recovered by the Employer. If the terms of the guarantee specify its expiry date, and the advance payment has not been repaid by the date 28 days prior to the expiry date, the Contractor shall extend the validity of the guarantee until the advance payment has been repaid. The security shall be returned to the Contractor immediately after its expiration.”</p>
53.3.1 and 53.3.2	<p>The Contractor shall, within twenty-eight (28) days of the notification of contract award, provide a Performance Security and an Environmental, Social, Safety and Health (ESHS) Performance Security for the due performance of the Contract.</p> <p>The Performance Security will be in the form of a ‘<i>demand guarantee</i>’ in the amount of 8.5% of the contract amount <i>in the types and proportions of the currencies in which the Contract Price is payable, or in a freely convertible currency acceptable to the Employer</i>]</p> <p>The ESHS Performance Security will be in the form of a “<i>demand guarantee</i>” in the amount(s) of 1.5% of the Accepted Contract Amount and in the same currency(ies) of the Accepted Contract Amount.</p> <p>The Performance Security shall be issued by a reputable bank or financial institution selected by the Contractor, and shall be in the Performance Security Form included in Section IX, Annex to the Particular Conditions - Contract Forms, or in another form approved by the Employer. The ESHS Performance Security shall be issued by a reputable bank selected by the Contractor, and shall be in the ESHS Performance Security Form included in Section IX, Annex to the Particular Conditions - Contract Forms, or in another form approved by the Employer. A foreign institution providing a Performance Security or ESHS Performance Security shall have a correspondent financial institution located in the Employer’s Country. The performance security and the ESHS performance security, of a Joint Venture</p>

	<p>shall be in the name of the Joint Venture specifying the names of all members.</p> <p>The Contractor shall ensure that the Performance Security and the ESHS Performance Security are valid and enforceable until the Contractor has executed and completed the Works and Services and other obligations (including defect liability and satisfactory performance of the ESHS obligations) under the Contract. If the terms of the Performance Security and ESHS Performance Security specify expiry dates, and the Contractor has not yet executed and completed the Works and Services and other obligations under the Contract, by the date 28 days prior to the expiry date, the Contractor shall extend the validity of the Performance Security and the ESHS Performance Security until the Works and Services and all other obligations under the Contract have been completed.</p> <p>The term 'performance security', unless the context clearly indicates otherwise or unless the ESHS performance security is not required to be submitted, means and includes both 'the performance security and the ESHS performance security' submitted by the successful bidder.</p>
54.1	In GC 54.1 replace the word 'Rehabilitation' with 'Development Dredging'
57.1	Deleted
57.2	Deleted
59	In GC 59 replace the words 'Road' with 'Waterways' at all places.
59.2.2(c)	The condition of persistent failure to execute the contract is given if and when the total amount of payment reductions and liquidated damages applied under the contract reaches ten (10) percent of the total contract amount.
62.1 (add new 62.2 to 62.5)	Deleted
63.1.1	The Employer has the right to propose a change in the contract: Yes
63.1.2	Contractor's right to propose a change in the contract: Yes
63.2.1	<p>Sub-Clause 63.2.1(e) is replaced with the following, and the original 63.2.1(e) is renumbered as 63.2.1(f):</p> <p>"sufficient ESHS information to enable an evaluation of ESHS risks and impacts of the Change."</p>

63.2.7	In GC 63.2.7 replace the word 'Adjudicator' with 'DRB'.
64.2	In GC 64.2 replace the words 'an Adjudicator' with 'DRB'.

ANNEXURE-1

Fee & other expenses payable to the Dispute Review Board Members including Chairman³⁵ (the figures are indicative-Amend as appropriate for each case)

S. No.	Particulars of fee & other charges	Amount Payable
1	Retainership fee, Secretarial assistance and incidental charges (Telephone, Fax, Postage etc.) during construction and maintenance services period	Rs. 10,000/- per month for one package and maximum of Rs. 20,000/- per month for 2 or more packages.
2	Daily fee during site visit	Rs. 5,000/-
3	Travelling Expenses	Economy Class by Air, A.C. First Class by train and A.C. Taxi by road
4	Lodging	(i) Upto Rs. 10,000/- per day (Metro cities) (ii) Upto Rs. 5,000/- per day (Other cities) (iii) Rs. 2000/- per day (Own arrangement)
5	Extra charges for days other than hearing/meeting days (travel upto a maximum of 2 days on each occasion)	Rs. 2,000/- per day
6	Escalation	The retainership fee shall remain fixed for the term of each Board Member.
7	Retainership fee, Secretarial assistance and incidental charges (Telephone, Fax, Postage etc.) during Defects Notification Period (DNP)	With effect from the first day of the calendar month following in which the Taking-over-Certificate, referred to in Cl. 28 of GC and Specific Provisions of the contract, is issued for the whole of the works, the Board Members shall receive only one-third (1/3 rd) of the monthly retainership fee mentioned at S.No.1 above.

Note: 1. Lodging, boarding and travelling expenses shall be allowed only for those members who are residing 100 kms away from place of meeting.

³⁵ If DRB Members have been nominated by or have been identified from the list provided by an Institution, the fee and other expenses payable to the members shall be as per the rules of the Institution. The entries in the Annexure should be accordingly modified in such cases.

Delhi, Mumbai, Chennai, Kolkata, Bangalore and Hyderabad shall be considered as Metro cities.

ANNEXURE – 1 (A)
Draft Letter of Appointment of Dispute Review Board Members

GOVERNMENT OF
.....Department

Date:

To

- 1. Sri Chairman of the Dispute Review Board.**
- 2. Sri Member of the Dispute Review Board.**
- 3. Sri Member of the Dispute Review Board.**

Sir,

Sub: - Widening and Strengthening of..... for contract package

- 1.** We, hereby confirm your appointment for the Dispute Review Board for the above contract to carry out the assignment specified in this Letter of Appointment.
- 2.** For Administrative purposes Project Director,, has been assigned to administer the assignment, to carry out the assignment on behalf of both the Employer and the Contractor. The services will be required during the period of contract for the work of
- 3.** The conditions of services for functioning of the Board Members and the rules and procedures to be followed by Dispute Review Board in resolution of Disputes are given in detail in the contract agreement vide Clause 6 of General Conditions of Contract read alongwith Appendix B (General Conditions of DRB agreement and Procedural Rules).
- 4.** The appointment will become effective, upon confirmation of this letter by you. The appointment shall be liable for termination under a 30 (Thirty) days written notice from the date of issue of the notice, if both Employer and the Contractor so desire. The appointment of any member may be terminated by mutual agreement of both parties, but not by the Employer or the Contractor acting alone. Unless otherwise agreed by both parties, the appointment of the DRB (including each member) shall expire when the discharge referred to in GC clause 56 (Discharge) shall have become effective.
- 5.** The payments for your services shall be made as per Annexure-I enclosed alongwith this letter:

- a) **Escalation.** The retainership fees shall remain fixed for the period of each Board Member's term.
 - b) With effect from the first day of the calendar month following in which the Taking Over Certificate referred to in Clause 28 of GC and Specific Provisions is issued for the whole of the works, the Board Members shall receive only one-third of the monthly retainer fee. Beginning with the next month after the Defects Notification Period expires; the Board Members shall no longer receive any monthly retainer fee.
 - c) The members shall submit invoices for payment of the monthly retainer fee and air fares quarterly in advance. Invoices for other expenses and for daily fees shall be submitted following the conclusion of a site visit or hearing. All invoices shall be accompanied by a brief description of the activities performed during the relevant period and shall be addressed to the Contractor. The Contractor (or the Employer as may be mutually agreed between contractor and Employer) shall pay each of the Members' invoices in full within 56 calendar days after receiving each invoice and shall apply to the Employer (in the statements under the contract) for reimbursement of one-half of the amounts of these invoices. The Employer shall then pay the Contractor in accordance with the Contract.
 - d) Failure of either the Employer or the Contractor to make payment in accordance with this Agreement shall constitute an event of default under the contract, entitling the non-defaulting party to take the measures set forth, respectively, in Clause 6 of the Appendix B.
 - e) Notwithstanding such event of default, and without waiver of rights there from, in the event that either the Employer or the Contractor fails to make payment in accordance with these Rules and Procedures, the other party may pay whatever amount may be required to finance the operation of the Board. The party making such payments, in addition to all other rights arising from such default shall be entitled to reimbursement of all sums paid in excess of one-half of the amount required to maintain operation of the Board, plus all costs of obtaining such sums.
6. In accepting this assignment, you should understand and agree that you are responsible for any liabilities and costs arising out of risks associated with travel to and from the place of assignment. This includes (but is not limited to) risks such as accident (death and injury), illness, emergency repatriation, loss or damage to personal/ professional effects and property. You are advised to effect personal, insurance cover in respect of such risks, if you do not already have such cover in place. In this regard, you shall maintain appropriate medical, travel, accident and third-party liability insurance. The obligation under this paragraph will survive till termination of this appointment.

7. You will carry out the assignment in accordance with the highest standard of professional and ethical competence and integrity, having due regard to the nature and purpose of the assignment, and will conduct yourself in a manner consistent herewith. The format for submission of recommendations is given in Annexure-1(B).
8. You agree that all knowledge and information not within the public domain, which may be acquired while carrying out this service shall be, for all time and for all purpose, regarded as strictly confidential and held in confidence, and shall not be directly or indirectly disclosed to any party whatsoever, except with the permission of the Employer and the Contractor.
9. You agree that any manufacturing or construction firm, with which you are associated with, will not be eligible to participate in bidding for any goods or works resulting from or associated with the project of which this consulting assignment forms a part.
10. Kindly sign two copies of this letter and return one copy each of the both to Employer and to the Contractor.

**Read and Agreed
Review Board**

Name of the Member of Dispute

Place:

Signature

Date:

Name of Employer

Name of the Contractor

**Signature of authorized
Representative of Employer.**

**Signature of authorized
Representative of
Contractor**

ANNEXURE – 1 (B)**[Project Name]****Recommendation of Dispute Review Board**

Dispute No. (NAME OF DISPUTE).

Hearing Date....., 20.....

Dispute

Description of dispute. A one or two sentence summation of the dispute.

Contractor's Position

A Short summation of the Contractor's position as understood by the board.

Owner's Position

A Short summation of the Contractor's position as understood by the board.

Recommendation

The board's specific recommendation for settlement of the dispute. (The recommended course is consistent with the explanation).

Explanation

This section could also be called Considerations, Rationale, Findings, Discussion, and so on

The Board's description of how each recommendation was reached.

Respectfully submitted,

Date: _____

Date: _____

Date: _____

ANNEXURE-2**Fee & other expenses payable to the Arbitrators³⁶(Figures are indicative-
To be changed as appropriate for each case)**

S.No.	Particulars of fee and other charges	Amount payable per arbitrator/per case
1	Arbitrator fee	Rs 10,000/- per day subject to a maximum of Rs 2 lakhs per case; or Rs 1.5 lakhs (lump sum) subject to publishing the award within 12 months. 12 months will be reckoned from the date of first meeting.
2	Reading charges	Rs 10,000/-
3	Secretarial Assistance and Incidental charges (telephone, fax, postage etc.)	Rs 15,000/-
4	Charges for publishing / declaration of the award.	Maximum of Rs 15,000/-
5	Other Expenses (As per actuals against bills subject to maximum of the prescribed ceiling given below)	
	Traveling expenses	Economy class by air, first class AC by train, AC car by road.
	Lodging and Boarding	(i) Upto Rs. 10,000/- per day (Metro cities) (ii) Upto Rs. 5,000/- per day (Other cities) (iii) Rs. 2000/- per day (Own arrangement)
6	Local travel	Rs 1000/- per day
7	Extra charges for days other than hearing/ meeting days (maximum for 2 days)	Rs. 2,500/- per day

Note: 1. Lodging, boarding and travelling expenses shall be allowed only for those members who are residing 100 kms away from place of meeting.

1. Delhi, Mumbai, Chennai, Kolkata, Bangalore and Hyderabad shall be considered as Metro cities.

³⁶ In cases of Institutional Arbitration, the fee and other expenses payable to the arbitrators shall be as per the rules of the Institution, and the Annexure should be modified accordingly.

Appendix 1

Salient Features of Labour & Environment Protection Laws³⁷

SALIENT FEATURES OF SOME MAJOR LABOUR LAWS APPLICABLE TO ESTABLISHMENTS ENGAGED IN BUILDING AND OTHER CONSTRUCTION WORK

[Reference GC 11.4]

- (a) Employees Compensation Act 1923: The Act provides for compensation in case of injury, disease or death arising out of and during the course of employment.
- (b) Payment of Gratuity Act 1972: gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed 5 years' service or more or on death at the rate of 15 days wages for every completed year of service. The Act is applicable to all establishments employing 10 or more employees.
- (c) Employees P.F. and Miscellaneous Provision Act 1952 (since amended): The Act provides for monthly contribution by the employer plus workers @ 10% or 8.33%. The benefits payable under the Act are:
 - (i) Pension or family pension on retirement or death, as the case may be.
 - (ii) Deposit linked insurance on the death in harness of the worker.
 - (iii) Payment of P.F. accumulation on retirement/death etc.
- (d) Maternity Benefit Act 1961: The Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.
- (e) Sexual Harassment of Women at the Workplace (Prevention, Prohibition and Redressal) Act, 2013: This Act defines sexual harassment in the workplace, provides for an enquiry procedure in case of complaints and mandates the setting up of an Internal Complaints Committee or a Local Complaints Committee
- (f) Contract Labour (Regulation & Abolition) Act 1970: The Act provides for certain welfare measures to be provided by the Contractor to contract labour and in case the Contractor fails to provide, the same are required to be provided, by the Principal Employer by law. The Principal Employer is required to take Certificate of Registration and the Contractor is required to take license from the designated

³⁷ This list is only illustrative and not exhaustive. Bidders and Contractors are responsible for checking the correctness and completeness of the list. The law as current on the date of bid opening will apply.

Officer. The Act is applicable to the establishments or Contractor of Principal Employer if they employ 20 or more contract labour.

- (g) Minimum Wages Act 1948: The Employer is supposed to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the Act if the employment is a scheduled employment. Construction of Buildings, Roads, Runways are scheduled employments.
- (h) Payment of Wages Act 1936: It lays down the mode, manner and by what date the wages are to be paid, what deductions can be made from the wages of the workers.
- (i) Equal Remuneration Act 1976: The Act provides for payment of equal wages for work of equal nature to male and female workers and for not making discrimination against Female employees in the matters of transfers, training and promotions etc.
- (j) Payment of Bonus Act 1965: The Act is applicable to all establishments employing 20 or more employees. Some of the State Governments have reduced this requirement from 20 to 10. The Act provides for payments of annual bonus subject to a minimum of 8.33% of the wages drawn in the relevant year. It applies to skilled or unskilled manual, supervisory, managerial, administrative, technical or clerical work for hire or reward to employees who draw a salary of Rs. 10,000/- per month or less. To be eligible for bonus, the employee should have worked in the establishment for not less than 30 working days in the relevant year. The Act does not apply to certain establishments.
- (k) Industrial Disputes Act 1947: the Act lays down the machinery and procedure for resolution of Industrial disputes, in what situations, a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.
- (l) Trade Unions Act 1926: The Act lays down the procedure for registration of trade unions of workmen and employers. The Trade Unions registered under the Act have been given certain immunities from civil and criminal liabilities.
- (m) Child Labour (Prohibition & Regulation) Act 1986: The Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulation of employment of children in all other occupations and processes. Employment of Child Labour is prohibited in the Building and Construction Industry.
- (n) Inter-State Migrant workmen's (Regulation of Employment & Conditions of Service) Act 1979: The Act is applicable to an establishment which employs 5 or more inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another state). The Inter-State migrant workmen, in an establishment to which this Act

becomes applicable, are required to be provided certain facilities such as housing, medical aid, traveling expenses from home upto the establishment and back, etc.

- (o) The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act 1996 and the Building and Other Construction Workers Welfare Cess Act, 1996 (BOCWW Cess Act): All the establishments who carry on any building or other construction work and employ 10 or more workers are covered under these Acts. All such establishments are required to pay cess at the rate not exceeding 2% of the cost of construction as may be notified by the Government. The Employer of the establishment is required to provide safety measures at the building or construction work and other welfare measures, such as Canteens, First – Aid facilities, Ambulance, Housing accommodations for workers near the work place etc. The Employer to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Government.
- (p) Factories Act 1948: the Act lays down the procedure for approval of plans before setting up a factory engaged in manufacturing processes, health and safety provisions, welfare provisions, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrences to designated authorities. It is applicable to premises employing 10 persons or more with aid of power or 20 or more persons without the aid of power.
- (q) Weekly Holidays Act -1942
- (r) Bonded Labour System (Abolition) Act, 1976: The Act provides for the abolition of bonded labour system with a view to preventing the economic and physical exploitation of weaker sections of society. Bonded labour covers all forms of forced labour, including that arising out of a loan, debt or advance.
- (s) Employer's Liability Act, 1938: This Act protects workmen who bring suits for damages against employers in case of injuries endured in the course of employment. Such injuries could be on account of negligence on the part of the employer or persons employed by them in maintenance of all machinery, equipment etc. in healthy and sound condition.
- (t) Employees State Insurance Act 1948: The Act provides for certain benefits to insured employees and their families in case of sickness, maternity and disablement arising out of an employment injury. The Act applies to all employees in factories (as defined) or establishments which may be so notified by the appropriate Government. The Act provides for the setting up of an Employees' State Insurance Fund, which is to be administered by the Employees State Insurance Corporation. Contributions to the Fund are paid by the employer and the employee at rates as prescribed by the Central Government. The Act also provides for benefits to dependents of insured persons in case of death as a result of an employment injury.

- (u) The Personal Injuries (Compensation Insurance) Act, 1963: This Act provides for the employer's liability and responsibility to pay compensation to employees where workmen sustain personal injuries in the course of employment.
- (v) Industrial Employment (Standing Order) Act 1946: It is applicable to all establishments employing 100 or more workmen (employment size reduced by some of the States and Central Government to 50). The Act provides for laying down rules governing the conditions of employment by the Employer on matters provided in the Act and get the same certified by the designated Authority.

SALIENT FEATURES OF SOME OF THE MAJOR LAWS THAT ARE APPLICABLE FOR PROTECTION OF ENVIRONMENT.

[Reference GC 26.1 (c)]

1. The Environment (Protection) Act, 1986 and as amended: This provides for the protection and improvement of environment and for matters connected therewith, and the prevention of hazards to human beings, other living creatures, plants and property. 'Environment' includes water, air and land and the inter-relationship which exists among and between water, air and land, and human beings, other living creatures, plants, micro-organism and property.
2. The Forest Conservation Act, 1980, as amended, and Forest (Conservation) Rules, 1981 as amended: These provides for protection of forests by restricting conversion of forested areas into non- forested areas and prevention of deforestation, and stipulates the procedures for cutting any trees that might be required by the applicable rules. Permissions under the Act also stipulates the norms and compliance requirements of the employer and any contractor on behalf of the employer.
3. State Tree Preservation Acts as may be in force: These provide for protection of trees of important species. Contractors will be required to obtain prior permission for full or partial cutting, uprooting, or pruning of any such trees.
4. The Wildlife (Protection) Act, 1972, and as amended: This provides for protection of wildlife through notifying National Parks and Sanctuaries and buffer areas around these zones; and to protect individuals of nationally important species listed in the Annex of the Act.
5. The Biological Diversity Act, 2002: This provides for conservation of biological diversity, sustainable use of components of biological diversity, and fair and equitable sharing of the benefits arising out of the use of biological resources, knowledge and for matters connected therewith or incidental thereto.
6. The Public Liability Insurance Act, 1991 as amended and The Public Liability Insurance Rules, 1991 as amended: These provide for public liability insurance for the purpose of providing immediate relief to the persons affected by accident occurring while handling hazardous substances and for matters connected herewith or incidental thereto. Hazardous substance means any substance or preparation which is defined as hazardous substance under the Environment (Protection) Act 1986, and exceeding such quantity as may be specified by notification by the Central Government.
7. The Ancient Monuments and Archaeological Sites and Remains Act, 1958 and the Ancient Monuments and Archaeological Sites and Remains (Amendment and Validation) Act, 2010, the Ancient Monuments and Archaeological Sites and Remains Rules, 1959 amended 2011, the National Monuments Authority Rules, 2011 and the similar State Acts: These provide for conservation of cultural and historical remains found in India. Accordingly, area within the radii of 100m and 300m from the "protected property" are designated as "protected area" and "controlled area" respectively. No development activity (including building, mining, excavating, blasting) is permitted in the "protected area" and development activities likely to

damage the protected property is not permitted in the “controlled area” without prior permission of the Archaeological Survey of India (ASI) or the State Departments of Art and Culture or Archaeology as applicable.

8. The Environmental Impact Assessment Notification, 2006 and as amended: This provides for prior environmental clearance for new, modernization and expansion projects listed in Schedule 1 of the Notification. Contractors will be required to ensure that no work starts until applicable clearances under the Notification is not available. Contractors will be responsible for implementation of any environmental management plan stipulated as per the permission under this Notification; and will be required to prepare and submit to the employer and compliance report stipulated in the permission under the Notification.
9. The Water (Prevention and Control of Pollution) Act, 1974 as amended, and the Water (Prevention and Control of Pollution) Rules, 1975 as amended: These provide for the prevention and control of water pollution and the maintaining and restoring of wholesomeness of water. ‘Pollution’ means such contamination of water or such alteration of the physical, chemical or biological properties of water or such discharge of any sewage or trade effluent or of any other liquid, gaseous or solid substance into water (whether directly or indirectly) as may, or is likely to, create a nuisance or render such water harmful or injurious to public health or safety, or to domestic, commercial, industrial, agricultural or other legitimate uses, or to the life and health of animals or plants or of aquatic organisms. Contractors will need to obtain consent for establishment and consent for operation of any item of work or installation of equipment that generates waste water, and observe the required standards of establishment and operation of these items of work or installations; as well as install and operate all required waste water treatment facilities.
10. The Water (Prevention and Control of Pollution) Cess Act, 1977 and The Water (Prevention and Control of Pollution) Cess Rules, 1978: These provide for the levy and collection of a cess on water consumed by persons carrying on certain industries and by local authorities, with a view to augment the resources of the Central Board and the State Boards for the prevention and control of water pollution under the Water (Prevention and Control of Pollution) Act, 1974.
11. The Air (Prevention and Control of Pollution) Act, 1981 as amended, and the Air (Prevention and Control of Pollution) Rules, 1982: These provides for prevention, control and abatement of air pollution. ‘Air Pollution’ means the presence in the atmosphere of any ‘air pollutant’, which means any solid, liquid or gaseous substance (including noise) present in the atmosphere in such concentration as may be or tend to be injurious to human beings or other living creatures or plants or property or environment. Contractors will need to obtain consent for establishment and consent for operation of any item of work or installation of equipment that generates air pollution such as batching plants, hot mix plants, power generators, backup power generation, material handling processes, and observe the required standards of establishment and operation of these items of work or installations.
12. Noise Pollution (Control and Regulation) Rules, 2000, and as amended: This provides for standards for noise for day and night for various land uses and specifies special standards in

and around sensitive receptors of noise such as schools and hospitals. Contractors will need to ensure compliance to the applicable standards, and install and operate all required noise control devices as may be required for all plants and work processes.

13. Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996: This provides for Requirement of preparation of on-site and off-site Disaster Management Plans for accident-prone areas.
14. The Explosives Act 1884 and the Explosives Rules, 2008: These provide for safe manufacture, possession, sale, use, transportation and import of explosive materials such as diesel, Oil and lubricants etc.; and also for regulating the use of any explosives used in blasting and/or demolition. All applicable provisions will need compliance by the contractors.
15. The Petroleum Rules, 2002: This provides for safe use and storage of petroleum products, and will need to be complied by the contractors.
16. The Gas Cylinder Rules 2004 and amendments: This provides for regulations related to storage of gas, and possession of gas cylinder more than the exempted quantity. Contractors should comply with all the requirements of this Rule.
17. Manufacture, Storage and Import of Hazardous Chemical Rules of 1989 and as amended: These provide for use and storage of hazardous material such as highly inflammable liquids like HSD/LPG. Contractors will need to ensure compliance to the Rules; and in the event where the storage quantity exceeds the regulated threshold limit, the contractors will be responsible for regular safety audits and other reporting requirements as prescribed in the Rules.
18. Hazardous & Other Wastes (Management and Transboundary Movement) Rules, 2016: These provide for protection of general public from improper handling storage and disposal of hazardous waste. The rules prescribe the management requirement of hazardous wastes from its generation to final disposal. Contractors will need to obtain permission from the State Pollution Control Boards and other designated authorities for storage and handling of any hazardous material; and will to ensure full compliance to these rules and any conditions imposed in the permit.
19. The Bio Medical Waste Management Rules, 2016: This provides for control, storage, transportation and disposal of bio-medical wastes. As and where the contractor has any first aid facility and dispensaries, established in either temporary or permanent manner, compliance to these Rules are mandatory.
20. Construction and Demolition Waste Management Rules, 2016: This provides for management of construction and demolition waste (such as building materials possible to be reused, rubble and debris or the like); and applies to all those waste resulting from construction, re-modelling, repair or demolition of any civil structure. Contractor will need to prepare a waste disposal plan and obtain required approval from local authorities, if waste generation is more than 20

tons in any day or 300 tons in any month during the contract period; and ensure full compliance to these rules and any conditions imposed in the regulatory approval.

21. The E-Waste (Management) Rules, 2016: This provides for management of E-wastes (but not covering lead acid batteries and radio-active wastes) aiming to enable the recovery and/or reuse of useful material from e-waste, thereby reducing the hazardous wastes destined for disposal and to ensure the environmentally sound management of all types of waste of electrical and electronic equipment. This Rule applies to every manufacturer, producer, consumer, bulk consumer, collection centers, dealers, e-retailer, refurbisher, dismantler and recycler involved in manufacture, sale, transfer, purchase, collection, storage and processing of e-waste or electrical and electronic equipment listed in Schedule I, including their components, consumables, parts and spares which make the product operational.
22. Plastic waste Management Rules, 2016: This provides for control and management of the plastic waste generated from any activity. Contractors will ensure compliance to this Rule.
23. The Batteries (Management and Handling) Rules 2001: This provides for ensuring safe disposal and recycling of discarded lead acid batteries likely to be used in any equipment during construction and operation stage. Rules require proper control and record keeping on the sale or import of lead acid batteries and recollection of the used batteries by registered recyclers to ensure environmentally sound recycling of used batteries. Contractors will ensure compliance to this Rule.
24. The Ozone Depleting Substances (Regulation and Control) Rules, 2000 and as amended: This provides for regulation of production and consumption of ozone depleting substances in the country, and specifically prohibits export to or import from countries not specified in the Rules, and prohibits unless specifically permitted, any use of ozone depleting substance.
25. The Coastal Regulation Zone Notifications, 1991 and as amended: This provides for regulation of development activities within the 500m of high tide line in coastal zone and 100m of stretches of rivers and estuaries influenced by tides. Contractors will be required to ensure that no work starts until applicable clearances under the Notification is not available. Contractors will be responsible for implementation of any plan stipulated as per the permission under this Notification; and will be required to prepare and submit to the employer and compliance report stipulated in the permission under the Notification.
26. The Motor Vehicle Act 1988 as amended (and State Motor Vehicle Acts as may be in force) and the Motor Vehicle Rules, 1989, and as amended (and State Motor Vehicle Rules as may be in force): To minimize the road accidents, penalizing the guilty, provision of compensation to victim and family and check vehicular air and noise pollution. Contractors will be required to ensure full compliance to these rules.
27. Easement Act, 1882: This provides for the rights of landowners on groundwater. Contractors will need to ensure that other landowners' rights under the Act is not affected by any groundwater abstraction by the contractors.

28. State Groundwater Acts and Rules as may be in force and the Guidelines for Groundwater Abstraction for drinking and domestic purposes in Notified Areas and Industry/Infrastructure project proposals in Non-Notified areas, 2012: These provide for regulating extraction of ground water for construction/industrial and drinking and domestic purposes. Contractors will need to obtain permission from Central/State Groundwater Boards prior to groundwater abstraction through digging any bore well or through any other means; and will to ensure full compliance to these rules and any conditions imposed in the permit.
29. The Mines Act, 1952 as amended; the Minor Mineral and concession Rules as amended; and the State Mineral (Rights and Taxation) Acts as may be in force: These provide for for safe and sound mining activity. The contractors will procure aggregates and other building materials from quarries and borrow areas approved under such Acts. In the event the contractors open any new quarry and/or borrow areas, appropriate prior permission from the State Departments of Minerals and Geology will need to be obtained. Contractors will also need to ensure full compliance to these rules and any conditions imposed in the permit.
30. The Insecticides Act, 1968 and Insecticides Rules, 1971 and as amended: These provide for regulates the manufacture, sale, transport, distribution, export, import and use of pesticides to prevent risk to human beings or animals, and for matters connected therewith. No one should import or manufacture; sell, stock or exhibit foe sale; distribute, transport, use: (i) any misbranded insecticides, (ii) any insecticide the sale, distribution or use of which is for the time being prohibited under the Act; and (iii) any insecticide except in accordance with the condition on which it was registered under the Act.
31. National Building Codes of India, 2005 and as amended: This provides guidelines for regulating the building construction activities in India. The code mainly contains administrative regulations, development control rules and general building requirements; stipulations regarding materials, structural design and construction; and building and plumbing services. Contractors will be required to comply with all Bureau of Indian Standards Codes dealing with: (i) use and disposal of asbestos containing materials in construction; (ii) paints containing lead; (iii) permanent and temporary ventilations in workplace; (iv) safety, and hygiene at the workplace; (v) prevention of fire; (vi) prevention of accidents from faulty electrical gadgets, equipment and accessories; and all other such codes incidental to the Contract.

Section IX. Annex to the Particular Conditions - Contract Forms

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Notification of Award

LETTER OF ACCEPTANCE

[letterhead paper of the Employer]

[The Letter of Acceptance shall be the basis for formation of the Contract as described in ITB Clause 42. This Standard Form of Letter of Acceptance shall be filled in and sent to the successful Bidder prior to expiration of Bid Validity Period]

[date]

To: *[name and address of the Contractor]*

1. This is to notify you that your Bid dated *[date]* for execution of the *[name of the Contract and identification number]* for the Accepted Contract Amount of the equivalent of *[amount in numbers and words] [name of currency]*, as corrected and modified in accordance with the Instructions to Bidders, is hereby accepted by our Agency.

2. You are requested to furnish the Performance Security plus additional security for unbalanced bids in terms of ITB clause 35.5, and an Environmental, Social, Health and Safety Performance Security ***[Delete ESHS Performance Security if it is not required under the contract]*** within 28 days in accordance with the Conditions of Contract, using for that purpose one of the Performance Security and the ESHS Performance Security Form, ***[Delete reference to the ESHS Performance Security Form if it is not required under the contract]*** included in Section IX, Annex to the Particular Conditions - Contract Forms, of the Bidding Document. The securities shall be valid up to 45 days from the date of completion i.e. up to*[date]*.

3³⁸. Employer proposes the name of Mr..... as one member of the Dispute Review Board in terms of GC Clause 6. Please indicate the name of second Dispute Review Board Member within 28 days of issue of this letter.

OR

³⁸ Select one of the two options for paragraph 3. This should be in conformity with the dispute resolution method selected in GC/PC 6.

3. Employer proposes the name of Mr..... as the Dispute Review Expert in terms of GC Clause 6. Please confirm your acceptance within 28 days of issue of this letter.

Authorized Signature: _____

Name and Title of Signatory: _____

Name of Agency: _____

Attachment: Contract Agreement

Contract Agreement

THIS AGREEMENT made the _____ day of _____, _____, between _____ of _____ (hereinafter “the Employer”), of the one part, and _____ of _____ (hereinafter “the Contractor”), of the other part:

WHEREAS the Employer desires that the Works and Services known as _____ should be executed by the Contractor, and has accepted a Bid by the Contractor for the execution and completion of these Works and the remedying of any defects therein,

The Employer and the Contractor agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.

2. The following documents shall be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other Contract documents.

- (a) the Letter of Acceptance;
- (b) the Letter of Bid;
- (c) the addenda Nos _____ (if any)
- (d) the Particular Conditions;
- (e) the General Conditions;
- (f) the Specification;
- (g) the Drawings;
- (h) the Bill of Quantities;
- (i) the completed Schedules; and
- (j) any other document **listed in the PCC** as forming part of the Contract;

3. In consideration of the payments to be made by the Employer to the Contractor as indicated in this Agreement, the Contractor hereby covenants with the Employer to execute the Works and Services, and to remedy defects therein in conformity in all respects with the provisions of the Contract.

4. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and Services, and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of _____ on the day, month and year indicated above.

Signed by _____ (for the Employer)

Signed by _____ (for the Contractor)

[Note: In the case of a Joint Venture add another clause as under

*“5. The Joint Venture consisting of
M/s.....*

*.....
covenants that they shall be liable jointly and severally for the execution in conformity in all respects with the provisions of the Contract.”*

Performance Security

(Demand Guarantee)

[including Additional Performance Security for unbalanced bids]

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: _____ *[insert Name and Address of Employer]*

Date: _____ *[insert Date of issue]*

PERFORMANCE GUARANTEE No.: _____ *[Insert guarantee reference number]*

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

We have been informed that _____ *[name of Contractor³⁹]* (hereinafter called "the Contractor") has entered into Contract No. _____ *[reference number of the contract]* dated _____ with you, for the execution of _____ *[name of contract and brief description of Works and Services]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

At the request of the Contractor, we _____ *[name of Bank]* as guarantor, hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of _____ *[amount in figures]* (_____) *[amount in words]*,¹ such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of your complying demand supported by a written statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Contractor is in breach of its obligation(s) under the Contract, without your needing to prove or to show grounds for your demand or the sum specified therein.

³⁹ In the case of a JV, insert the name of the Joint Venture

¹ The Guarantor shall insert an amount representing the percentage of the Contract Price specified in the Contract and denominated either in the currency(cies) of the Contract or a freely convertible currency acceptable to the Employer.

This guarantee shall expire, no later than the Day of, 2...², and any demand for payment under it must be received by us at this office indicated above on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

[signature(s)]

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

² Insert the date forty-five days after the expected completion date. The Employer should note that in the event of an extension of the time for completion of the Contract, the Employer would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Employer might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months][one year], in response to the Employer's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

Environmental, Social, Health and Safety (ESHS) Performance Security ESHS Demand Guarantee

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: *[Insert name and Address of Employer]*

Date: *_ [Insert date of issue]*

ESHS PERFORMANCE GUARANTEE No.: *[Insert guarantee reference number]*

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

We have been informed that _____ (hereinafter called "the Applicant"⁴⁰) has entered into Contract No. _____ dated _____ with the Beneficiary, for the execution of _____ (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

At the request of the Applicant, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _____ (_____),¹ such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Applicant is in breach of its Environmental, Social, Health and/or Safety (ESHS) obligation(s) under the Contract, without the Beneficiary needing to prove or to show grounds for your demand or the sum specified therein.

⁴⁰ *In the case of a JV, insert the name of the Joint Venture*

¹ *The Guarantor shall insert an amount representing the percentage of the Accepted Contract Amount specified in the Letter of Acceptance, less provisional sums, if any, and denominated either in the currency (cies) of the Contract or a freely convertible currency acceptable to the Beneficiary.*

This guarantee shall expire, no later than the Day of, 2...², and any demand for payment under it must be received by us at this office indicated above on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

[signature(s)]

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

² Insert the date forty-five days after the expected completion date. The Employer should note that in the event of an extension of this date for completion of the Contract, the Employer would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Employer might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months] [one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

Advance Payment Security

Demand Guarantee

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: _____ *[insert Name and Address of Employer]*

Date: _____ *[insert Date of issue]*

ADVANCE PAYMENT GUARANTEE No.: _____ *[Insert guarantee reference number]*

Guarantor: _____ *[Insert name and address of place of issue, unless indicated in the letterhead]*

We have been informed that _____ *[name of Contractor⁴¹]* (hereinafter called “the Contractor”) has entered into Contract No. _____ *[reference number of the contract]* dated _____ with you, for the execution of _____ *[name of contract and brief description of Works and Services]* (hereinafter called “the Contract”).

Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum _____ *[amount in figures]* (_____) *[amount in words]* is to be made against an advance payment guarantee.

At the request of the Contractor, we _____ *[name of Bank]* as Guarantor, hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of _____ *[amount in figures]* (_____) *[amount in words]*¹ upon receipt by us of your complying demand supported by a written statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating either that the Contractor:

(a) has used the advance payment for purposes other than the costs of mobilization in respect of the Works; or

(b) has failed to repay the advance payment in accordance with the Contract conditions, specifying the amount which the Contractor has failed to repay.

⁴¹ In the case of a JV, insert the name of the Joint Venture

¹ The Guarantor shall insert an amount representing the amount of the advance payment and denominated either in the currency(ies) of the advance payment as specified in the Contract, or in a freely convertible currency acceptable to the Employer.

It is a condition for any claim and payment under this guarantee to be made that the advance payment referred to above must have been received by the Contractor on its account number _____ at _____ *[name and address of Bank]*.

The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Contractor as specified in copies of interim statements or payment certificates which shall be presented to us. This guarantee shall expire no later than ____ day of _____, 2____,². Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

[signature(s)]

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

² Insert the expected expiration date of the Time for Completion. The Employer should note that in the event of an extension of the time for completion of the Contract, the Employer would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Employer might consider adding the following text to the form, at the end of the penultimate paragraph: “The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months][one year], in response to the Employer’s written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee.”

Retention Money Security

Demand Guarantee

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: _____ *[Insert Name and Address of Employer]*

Date: _____ *[Insert date of issue]*

RETENTION MONEY GUARANTEE No.: _____ *[Insert guarantee reference number]*

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

We have been informed that _____ *[name of Contractor⁴²]* (hereinafter called "the Contractor") has entered into Contract No. _____ *[reference number of the contract]* dated _____ with you, for the execution of _____ *[name of contract and brief description of Works and Services]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, the Employer retains moneys up to the limit set forth in the Contract ("the Retention Money"), and that when the Taking-Over Certificate has been issued under the Contract and the first half of the Retention Money has been certified for payment, payment of *[insert the second half of the Retention Money or if the amount guaranteed under the Performance Guarantee when the Taking-Over Certificate is issued is less than half of the Retention Money]*, the difference between half of the Retention Money and the amount guaranteed under the Performance Security and, if required, the ESHS Performance Security] is to be made against a Retention Money guarantee.

At the request of the Contractor, we _____ *[name of Bank]* as Guarantor, hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of _____ *[amount in figures]* (_____) *[amount in words]*¹ upon receipt by us of your complying demand supported by a written statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Contractor is in breach of its obligation(s) under the Contract, without your needing to prove or show grounds for your demand or the sum specified therein.

⁴² In the case of a JV, insert the name of the Joint Venture

¹ The Guarantor shall insert an amount representing the amount of the second half of the Retention Money or or if the amount guaranteed under the Performance Guarantee when the Taking-Over Certificate is issued is less than half of the Retention Money, the difference between half of the Retention Money and the amount guaranteed under the Performance Security and denominated either in the currency(ies) of the second half of the Retention Money as specified in the Contract, or in a freely convertible currency acceptable to the Employer.

It is a condition for any claim and payment under this guarantee to be made that the payment of the second half of the Retention Money referred to above must have been received by the Contractor on its account number _____ at _____ *[name and address of Bank]*.

This guarantee shall expire no later than the day of, 2...², and any demand for payment under this guarantee must be received by us at this office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

[signature(s)]

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

² Insert the same expiry date as set forth in the Performance Security, representing the date forty-five days after the completion date. The Employer should note that in the event of an extension of this date for completion of the Contract, the Employer would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Employer might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months][one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

Attachment: Form of Invitation for Bid

SPECIFIC PROCUREMENT NOTICE
Invitation for Bids: Dredging Works
Output and Performance-Based Contracts

E-Procurement Notice
(Two-Envelope e-Procurement Bidding Process without Prequalification)

INDIA

CAPACITY AUGMENTATION OF NATIONAL WATERWAY – 1

Procurement for providing Assured Least Available Depth of 2.5 / 3.0 m by performance based dredging & bandalling in Mahendrapur – Barh stretch of National Waterway - 1

Loan No.: 8752-IN

Employer: Inland Waterways Authority of India, Ministry of Shipping, Government of India

Contract/Bid No.: IN-IWAI-68539-CW-RFP

1. The Government of India *has received* a loan from the *International Bank for Reconstruction and Development (IBRD)* toward the cost of the Capacity Augmentation of National Waterway – 1, and it intends to apply part of the proceeds of this *loan* to payments under the contract for IN-IWAI-68539-CW-RFP . The Inland Waterways Authority of India, Ministry of Shipping, Government of India now invites online bids from eligible bidders for Procurement for providing Assured Least Available Depth of 2.5 / 3.0 m by performance based dredging & bandalling in Mahendrapur – Barh stretch of National Waterway - 1, as detailed below.

2. Bidding will be conducted through the international competitive bidding procedures specified in the World Bank's *Guidelines: Procurement of Goods, Work, and Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers, January 2011, Revised July 2014*, and is open to bidders from all countries as defined in the guidelines. Bidders from India should, however, be registered with the Government of India, or State/ Central Government Undertakings.

3. The Bidding document in English is available online <https://eprocure.gov.in/eprocure/app> (website) from 25th July, 2018 to 06th September, 2018 (dates) for a non-refundable fee as indicated in the table below. The method of payment will be Demand Draft / Banker's Cheque. Payment documents are to be submitted subsequently as per the procedure described in paragraph 7 below. Bidders will be required to register in the website, which is free of cost. The bidders would be responsible for ensuring that any addenda available on the website is also downloaded and incorporated.

4. For submission of the bids, the bidder is required to have Digital Signature Certificate (DSC) from one of the authorized Certifying Authorities, authorized by Government of India for issuing DSC. Bidders can see the list of licensed CA's from the link (www.cca.gov.in). Aspiring bidders who have not obtained the user ID and password for participating in e-procurement in this Project, may obtain the same from the website: <https://eprocure.gov.in/cppp/downloaddisp>. A non-refundable fee of Rs. 5000/- (inclusive of tax) or USD 100, is required to be paid. The method of payment will be Demand Draft / Banker's Cheque. Payment documents are to be submitted subsequently as per the procedure described in paragraph 7 below.
5. Bids must be submitted online <https://eprocure.gov.in/eprocure/app> (website) by 06th September, 2018 and 1500 hrs. IST. Any bid or modifications to bid (including discount) received outside e-procurement system will not be considered. The electronic bidding system would not allow any late submission of bids. The "TECHNICAL PART" of the Bids will be publicly opened in the presence of bidders' representatives and anyone who choose to attend at the address below at 06th September, 2018 and 1530 hrs. IST. The "Financial Part" of the Bids shall remain unopened in the e-procurement system until the second public Bid opening for the financial part.
6. All bids must be accompanied by a bid security of the amount indicated in the table below or an equivalent amount in a freely convertible currency. The Bid Security documents are to be submitted subsequently as per the procedure described in paragraph 7 below.
7. The bidders are required to submit (a) original payment documents towards the cost of bid document and registration on e-procurement website (if not previously registered); (b) original bid security in approved form; and (c) original affidavit regarding correctness of information furnished with bid document with Vice Chairman and Project Director, A-13, Sector-1, NOIDA, Gautam Buddha Nagar – 201301, UP before the deadline for submission of Bids given above, either by registered post/speed post/ courier or by hand, failing which such bids will be declared non-responsive and will not be opened.
8. A pre-bid meeting will be held on at 1500 hours IST at the office of Inland Waterways Authority of India to clarify the issues and to answer questions on any matter that may be raised at that stage as stated in ITB Clause 7.4 of 'Instructions to Bidders' of the bidding document. Bidders are advised to download the bidding document prior to the pre-bid meeting in order for bidders to have a good understanding of the scope of work under this contract for discussion and clarification at the pre-bid meeting.
9. Other details can be seen in the bidding document. The Employer shall not be held liable for any delays due to system failure beyond its control. Even though the system will attempt to notify the bidders of any bid updates, the Employer shall not be liable for any information not received by the bidder. It is the bidders' responsibility to verify the website for the latest information related to this bid.
10. The address (es) referred to above is (are):

Inland Waterways Authority of India

Shri Pravir Pandey, Vice Chairman and Project Director, Jal Marg Vikas Project

A-13, Sector-1, Noida, Gautam Buddha Nagar, UP - 201301

+91 120 2424544

E: vc.iwai@nic.in

www.iwai.nic.in

TABLE

Package No	Name of Work	Bid Security * Rs. (or equivalent amount in a freely convertible currency)	Cost of Document Rs. (or equivalent amount in a freely convertible currency)	Period of Completion
1	2	3	4	5
Stretch Mahendrapur – Barh	<i>Providing Assured Least Available Depth of 2.5 /3.0 m by Performance Based Dredging & Bandalling in Mahendrapur – Barh (71 Km) of National Waterway -1 (River Ganga)</i>	INR 2.35 Cr. Or USD 361,000.00	INR 5000 or USD 100	5 years

Seal of office
Address