

806  
FAP 21/22

**BANK PROTECTION PILOT PROJECT**

**FAP 21**

23

**TEST SITE I  
KAMARJANI**



**CONTRACT DOCUMENTS**

**FOR**

**CONSTRUCTION OF PERMEABLE GROYNES**

**VOLUME I**

**AGREEMENT  
LETTER OF ACCEPTANCE  
APPENDIX  
TENDER  
INSURANCE POLICIES**

(August 1994)



**JAMUNA TEST WORKS CONSULTANTS, JOINT VENTURE  
CONSULTING CONSORTIUM FAP 21/22**

RHEIN-RUHR ING.-GES.MBH, DORTMUND/GERMANY In association with:

COMPAGNIE NATIONALE DU RHONE, LYON/FRANCE  
PROF.DR. LACKNER&PARTNERS, BREMEN/GERMANY  
DELFT HYDRAULICS, DELFT/NETHERLANDS

BANGLADESH ENGINEERING &  
TECHNOLOGICAL SERVICES LTD.(BETS)  
DESH UPODESH LIMITED (DUL)

**BANK PROTECTION PILOT PROJECT  
FAP 21**

**TEST SITE I  
KAMARJANI**



**CONTRACT DOCUMENTS  
FOR  
CONSTRUCTION OF PERMEABLE GROYNES**

**VOLUME I**

**AGREEMENT  
LETTER OF ACCEPTANCE  
APPENDIX  
TENDER  
INSURANCE POLICIES**

BN-659  
A-806

Mfn-2304  
24-02

A-68

(August 1994)



**JAMUNA TEST WORKS CONSULTANTS, JOINT VENTURE  
CONSULTING CONSORTIUM FAP 21/22**

**RHEIN-RUHR ING.-GES.MBH, DORTMUND/GERMANY** In association with:

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**BANGLADESH ENGINEERING &  
TECHNOLOGICAL SERVICES LTD.(BETS)  
DESH UPODESH LIMITED (DUL)**





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## Agreement

This Agreement made the *seventh* day of *September* 1994 between the Jamuna Test Works Consultants, c/o Rhein-Ruhr Ingenieur-Gesellschaft mbH, Dortmund, Germany, and represented by Consulting Consortium FAP 21/22, Dhaka, Bangladesh (hereinafter called "the Employer") on the one part and Consortium: The Engineers Ltd. and Corolla Corporation (BD) Ltd. (hereinafter called "the Contractor") on the other part.

Whereas the Employer is desirous that certain Works should be executed by the Contractor, viz. the Construction of Permeable Groynes at Test Site I - Kamarjani and has accepted a Tender by the Contractor for the execution and completion of such Works and the remedying of any defects therein.

Now this Agreement witnesseth as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents shall be deemed to form and to read and construed as part of this Agreement, viz:
  - (a) The Letter of Acceptance (including its attachments, if any);
  - (b) The said Tender;
  - (c) The Conditions of Contract (Part II - Conditions of Particular Application);
  - (d) The Conditions of Contract (Part I);
  - (e) The Technical Specifications;
  - (f) The Tender Drawings;
  - (g) The Priced Bill of Quantities; and
  - (h) Insurance policies concluded by the Employer.



3. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and to remedy any 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 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.

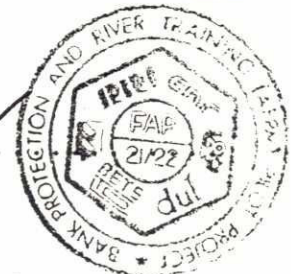
In Witness whereof the parties hereto have caused this Agreement to be executed the day and the year first before written.

Signed, sealed, and Delivered by the  
said Employer and the Contractor  
in the presence of :

- 1) *Sumonwar*
- 2) *Waliuzzaman Khan*



Binding Signature of Employer :: .....



Binding Signature of Contractor :: ..... *Husain* .....





GERMAN-FRENCH COOPERATION WITH BANGLADESH

# JAMUNA TEST WORKS CONSULTANTS

JOINT VENTURE

BANK PROTECTION AND RIVER TRAINING (AFPM) PILOT PROJECT FAP 21/22  
FLOOD PLAN CO-ORDINATION ORGANIZATION (FPCO)

**Head Office :**

c/o Rhein-Ruhr Ingenieur-GmbH  
Burgwall 5, 44135 Dortmund  
Federal Republic of Germany  
Tel : 49-(0)231-5482-0  
Fax : 49-(0)231-575556

**Project Office :**

Consulting Consortium FAP 21/22  
House 4, Road 125, Gulshan-1  
Dhaka-1212, Bangladesh  
Tel : 880-(0)2-600751, 881199  
Fax : 880-(0)2-883990

Consortium: The Engineers Ltd  
Corolla Corporation (BD) Ltd.  
19/1, Kakrail  
Dhaka 1000

Ref.: CC/MISC/L/94-513

August 23, 1994

Subject: Jamuna Test Works Consultants, First Test Site (Kamarjani) Letter of Acceptance

Ref.: Tender for Construction Works

Dear Sirs,

We would like to inform you, that your offer has been accepted.

The basic contract amount after evaluation and correction of your offer stands at:

Tk. 112,770,590/-

(One hundred twelve million seven hundred seventy thousand five hundred ninety Taka only)

Sincerely yours

C. Netzeband  
Project Manager

Copy to: CN, SM, HK, BT, MA, MF, RC, DO, FPCO, KfW, CFD

CN/21



## APPENDIX

	<u>Sub-Clause</u>		
Amount of Performance Security	10.1	10	percent of the Contract Price (for banker's guarantee)
Insurance of Works	21.1(d)(e)		Insurance will be concluded by the Employer
Minimum amount of Third Party Insurance	23.2	Tk.100 million	will be concluded by the Employer
Time for issue of the Notice to Commence	41.1	14	calendar days after the date of the Letter of Acceptance
Time for Completion	43.1	210	calendar days after October 01, 1994, which is the latest Commencement date of construction works at the site
Amount of liquidated damages	47.1	0.3	percent of the Contract Price per calendar day
Limit of liquidated damages	47.1	10	percent of the Final Price of Contract
Defects Liability Period	49.1	364	days
Percentage for Adjustment Provisional Sums	59.4(c)	—	percent
Minimum amount of Interim Payment Certificates	60.2		Tk. 10,000,000
Retention Money	60.4	5	percent of Interim Payment Certificates
Advance Payment	60.6	15	percent of the Contract Price
Start Repayment of Advance Payment	60.6		After certification of 20 percent of the Contract Price less Provisional Sums
Monthly amortization of Advance Payment	60.6	25	percent of the amount of monthly Interim Payment Certificates
Rate of interest upon unpaid sums	60.7	2	percent above the prime lending rate of the Bank of Bangladesh for local currency payment



Section 1

Form of Tender  
Appendix to Tender  
Tender Security

# FORM OF TENDER

## Bank Protection Pilot Project FAP-21

### Construction of Permeable Groynes at Test Site I - (Kamarjani)

To: Jamuna Test Works Consultants  
c/o Consulting Consortium FAP 21/22  
House 4, Road 125, Gulshan-1  
Dhaka-1212, Bangladesh  
Tel: (880-2) 600751, 881199  
Fax: (880-2) 883990

Gentlemen:

1. Having examined the Conditions of Contract, Conditions of Particular Application, Specifications, Tender Drawings, and Bill of Quantities and Addenda Nos..... for the execution of the above named Works we, the undersigned, offer to execute and complete such

Works and remedy any defects therein in conformity with the Conditions of Contract, Conditions of Particular Application, Specifications, Drawings, Bill of Quantities and Addenda for the sum

~~BDT 133,569,378/=~~ (TAKA ONE HUNDRED THIRTY NINE MILLION  
AND FIVE HUNDRED EIGHTY THOUSAND ONLY.)  
(TK: 133,569,378/= (TAKA ONE HUNDRED THIRTY THREE MILLION  
FIVE HUNDRED SIXTY NINE THOUSAND AND  
THREE HUNDRED SEVENTY EIGHT), ONLY.

as specified in the Appendix to Tender or such other sum as may be ascertained in accordance with the said Conditions.

2. We acknowledge that the Appendix to Tender forms part of our Tender.
3. We undertake, if our Tender is accepted, to commence the Works as soon as is reasonably possible after the receipt of the Engineer's notice to commence, and to complete the whole of the Works comprised in the Contract within the time stated in the Appendix to Tender.
4. We agree to abide by this Tender for the period of 154 days from the date fixed for receiving the same, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.



5. Unless and until a formal Agreement is prepared and executed this Tender, together with your written acceptance thereof, shall constitute a binding contract between us.

6. We understand that you are not bound to accept the lowest or any tender you may receive.

Dated this 17th day of April 1994.

Signature Musain in the capacity of PARTNER

duly authorized to sign tenders for and on behalf of CONSORTIUM: THE ENGINEERS LTD. COROLLA CORPORATION (BD) LTD.

(in block capitals or typed)

Address 19/1, KAKRAIL, DHAKA-1000

Witness WAHIDUZZAMAN KHAN, [Signature]

Address B-35, CENTURY APARTMENT, BORDMAWAGAR, DHAKA.

Occupation BUSINESS



## APPENDIX OF TENDER



<u>Sub-Clause</u>			
Amount of Performance Security	10.1	10	percent of the Contract Price (for banker's guarantee)
Insurance of Works	21.1(d)(e)		amounts of be covered by Contractor's insurance:
		85	mill. Tk. for permanent material supplied by the Employer
		50	mill. Tk. for construction equipment provided by the Employer.
Minimum amount of Third Party Insurance	23.2	Tk.100 million	per occurrence, with the number of occurrences unlimited
Time for issue of the Notice to Commence	41.1	14	calender days after the date of the Letter of Acceptance
Time for Completion	43.1	210	calender days after October 01, 1994, which is the latest Commencement date of construction works at the site
Amount of liquidated damages	47.1	0.3	percent of the Contract Price per day
Limit of liquidated damages	47.1	10	percent of the Final Price of Contract
Defects Liability Period	49.1	364	days
Percentage for Adjustment Provisional Sums	59.4(c)	—	percent
Minimum amount of Interim Payment Certificates	60.2		Tk. 10,000,000
Retention Money	60.4	10	percent of Interim Payment Certificates
Advance Payment	60.6	15	percent of the Contract Price
Start Repayment of Advance Payment	60.6		After certification of 20 percent of the Contract Price less Provisional Sums
Monthly amortization of Advance Payment	60.6	25	percent of the amount of monthly Interim Payment Certificates
Rate of interest upon unpaid sums	60.7	2	percent above the prime lending rate of the Bank of Bangladesh for local currency payment





## S A M P L E

## FORM OF TENDER SECURITY (BANK GUARANTEE)

WHEREAS, . . . . . [Name of Tenderer] (hereinafter called "the Tenderer") has submitted his tender dated . . . . . [date] for the Construction of Permeable Groynes at Test Site I - Kamarjani (hereinafter called "Tender")

KNOW ALL MEN by these presents that We . . . . . [Name of Bank] of the People's Republic of Bangladesh having our registered office at . . . . . (hereinafter called "the Bank") are bound unto the Jamuna Test Works Consultants, c/o Consulting Consortium FAP 21/22, Dhaka, Bangladesh (hereinafter called "the Employer") in the sum of Tk. 2,500,000 (two and a half million) for which payment well and truly to be made to the said Employer the Bank binds himself, his successors and assigns by these presents.

SEALED with the Common Seal of the said Bank this . . . . . day of . . . . . 1994.

THE CONDITIONS of this obligation are:

- (1) If the Tenderer withdraws his Tender during the period of tender validity specified in the Form of Tender;
- or
- (2) If the Tenderer, having been notified of the acceptance of his Tender by the Employer during the period of tender validity,
- (a) fails or refuses to execute the Form of Agreement in accordance with the Instructions to Tenderers, if required; or
- (b) fails and refuses to furnish the Performance Security, in accordance with the Instruction to Tenderers,

we undertake to pay to the Employer up to the above amount upon receipt of his first written demand, without the Employer having to substantiate his demand, provided that in his demand the Employer will note that the amount claimed by him is due to him owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This Guarantee will remain in force up to and including the date 182 days after the deadline for submission of tenders as such deadline is stated in the Instructions to Tenderers or as it may be extended by the Employer, notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this Guarantee should reach the Bank not later than the above date.

DATE . . . . . SIGNATURE OF BANK . . . . .  
WITNESS . . . . . SEAL . . . . .  
.....  
(Signature, Name, and Address)



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## Section 2

### Instructions to Tenderers

## Section 2. Instructions to Tenderers

### A. General

- |                       |   |
|-----------------------|---|
| 1. Scope of Tender    | <p>1.1 The Jamuna Test Works Consultants, c/o Consulting Consortium FAP 21/22, Dhaka, Bangladesh, hereinafter "the Employer" wishes to receive tenders for the construction and completion of Permeable Groynes at Test Site I - Kamarjani, comprising of civil engineering construction works, as defined in these Tender Documents, hereinafter referred to as "the Works".</p> <p>1.2 The successful Tenderer will be expected to complete the Works within 7 months (210 days) from the date of commencement of the Works at the site, which commencement date is October 01, 1994.</p> <p>1.3 Throughout these Tender Documents, the terms "bid" and "tender" and their derivatives (bidder/tenderer, bid/tendered, bidding/tendering, etc.) are synonymous, and "day" means calendar day.</p> |
| 2. Source of Funds    | <p>2.1 The Governments of Germany and France have provided a fund through Kreditanstalt für Wiederaufbau (KfW) and Caisse Française de Développement (CFD), towards the cost of Project FAP 21/22. The Employer intends to apply part of the proceeds of the fund to eligible payments under the contract (hereinafter referred to as "the Contract") for which this invitation to bid is issued.</p> <p>Payment by the Employer will be made to the Contractor only at request and upon approval of Contractors' payment applications, in accordance with the Contract, and will be subject in all respects to the terms and conditions of that Contract.</p>  |
| 3. Eligible Tenderers | <p>3.1 This invitation to tender is open to any preselected tenderer meeting both of the following requirements:</p> <p>(a) a tenderer shall be from the People's Republic of Bangladesh. If the tenderer is a joint venture, the partner-in-charge shall be from the People's Republic of Bangladesh, but 1 (one) foreign partner will be permitted.</p> <p>(b) a tenderer (including all members of the joint venture and all subcontractors of a tenderer) shall not be affiliated with a firm or entity</p>   |



- (i) which has provided consulting services during the preparatory stages of the Works or of the project of which the Works form a part, or
- (ii) which has been hired (or is proposed to be hired) as Engineer for the Contract.

3.2 Tenderers shall provide such evidence of their eligibility satisfactory to the Employer as the Employer shall reasonably request.

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

(Not applicable)

**5. Qualification  
of the  
Tenderer**

5.1 To be qualified for award of Contract, tenderers shall:

- (a) submit a written power of attorney authorizing the signatory of the bid to commit the Tenderer; and
- (b) submit proposals of work methods and schedules in sufficient detail to demonstrate the adequacy of the Tenderer's proposals to meet the Technical Specifications and the completion time referred to in Sub-Clause 1.2 above.

5.2 Tenders submitted by a joint venture of two or more firms as partners shall comply with following requirements:

- (a) the Tender shall include all the information listed in the Sub-Clause 5.1 (a) and (b) above;
- (b) the Tender, and in case of a successful bid, the Form of Agreement, shall be signed so as to be legally binding on all partners;
- (c) one of the partners shall be nominated as being in charge; and this authorization shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the partners;
- (d) the partner in charge 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 partner in charge;





- (e) all partners of the joint venture shall be liable jointly and severally for the execution of the Contract in accordance with the Contract terms, and a statement to this effect shall be included in the authorization mentioned under (c) above as well as in the Form of Tender and in the Form of Agreement (in case of successful bid); and
- (f) a copy of the agreement entered into by the joint venture partners shall be submitted with the Tender.

**6. One Bid per Tenderer**

- 6.1 Each tenderer shall submit only one bid either by himself, or as a partner in a joint venture. A tenderer who submits or participates in more than one bid will be disqualified.

**7. Cost of Tendering**

- 7.1 The Tenderer shall bear all costs associated with the preparation and submission of his bid and the Employer will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the tendering process.

**8. Site Visit**

- 8.1 The Tenderer is advised to visit and examine the Site of Works and its surroundings and obtain for himself on his 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 Tenderer's own expenses.
- 8.2 The Tenderer and any of his personnel or agents may enter the proposed site areas and lands for the purpose of such inspection, but only upon the express condition that the Tenderer, his personnel and agents, will release and indemnify the Employer and his personnel and agents, from and against all liability in respect thereof and will be responsible for death or personnel injury, loss of or damage to property and any other loss, damage, costs and expenses incurred as a result of the inspection.
- 8.3 The Employer may conduct a Site visit concurrently with the pre-Bid Meeting referred to in Clause 19.



## B. Tender Documents

### 9. Content of Tender Documents

9.1 The Tender Documents are those stated below, and should be read in conjunction with any Addenda issued in accordance with Clause 11:

#### INVITATION FOR TENDERS

VOLUME I: - Form of Tender, Appendix to Tender and Tender Security

- Instructions to Tenderers
- Sample Form of Agreement
- Forms of Performance Security and of Bank Guarantee for Advance Mobilization Payment
- Bill of Quantities
- Schedules

VOLUME II: - General Conditions of Contract  
- Conditions of Particular Application

VOLUME III: - Technical Specifications

VOLUME IV: - Tender Drawings

9.2 The Tenderer is supplied with one complete set of Tender Documents (Volume I to Volume IV) plus one reproducible copy of Volume I.

Volume I shall be completed by the Tenderer, reproduced to three copies and returned with the bid, in consideration of Clauses 13 and 20 of these Instructions to Tenderers.

9.3 The Tenderer is expected to examine carefully the contents of all the above documents. Failure to comply with the requirements of bid submission will be at the Tenderer's own risk. Pursuant to Clause 28, tenders which are not substantially responsive to the requirements of the Tender Documents will be rejected.

### 10. Clarification of Tender Documents

10.1 A prospective tenderer requiring any clarification of the Tender Documents may notify the Employer in writing or by cable (hereinafter, the term "cable" is deemed to include telex and facsimile) at the Employer's address indicated in the Invitation for Tender. The Employer will respond to any request for clarification which he receives earlier than 28 days prior to the deadline for submission of tenders. Copies of the Employer's response will be forwarded to all purchasers of the Tender Documents, including a description of the enquiry but without identifying its source.



- 11. Amendment of Tender Documents**
- 11.1 At any time prior to the deadline for submission of tenders, the Employer may, for any reason, whether at his own initiative or in response to a clarification requested by a prospective tenderer, modify the Tenderer Documents by issuing Addenda.
- 11.2 Any Addendum thus issued shall be part of the Tender Documents pursuant to Sub-Clause 9.1, and shall be communicated in writing or by cable to all purchasers of the Tender Documents. Prospective tenderers shall acknowledge receipt of each Addendum by cable to the Employer.
- 11.3 To afford prospective tenderers reasonable time in which to take an Addendum into account in preparing their bids, the Employer shall extend as necessary the deadline for submission of tenders, in accordance with Clause 22.

### C. Preparation of Tenders

- 12. Language of Tender**
- 12.1 The Tender and all correspondence and documents related to the Tender exchanged by the Tenderer and the Employer shall be written in the English language. Supporting documents and printed literature furnished by the Tenderer may be in another language provided they are accompanied by an accurate translation of the relevant passages in the above stated language, in which case, for purposes of interpretation of the bid, the English translation shall prevail.
- 13. Documents Comprising the Tender**
- 13.1 The Tender submitted by the Tenderer shall comprise the following:
- Tender Form and Appendix to Tender
  - Tender Security
  - Priced Bill of Quantities
  - General Construction Time Schedule for the Overall Completion of the Works
  - Equipment Employment Schedule
  - Procurement Schedule for Permanent Materials
  - Any other materials required to be completed and submitted by tenderers in accordance with these Instructions to Tenderers
  - Any descriptions, programs, schedules, drawings, materials or equipment specifications required to be submitted by the Tenderer in accordance with the Technical Specifications, inter alia:





Volume/Section/Subsection	Description
I / 5 / Schedules	- Major items of Constructional Plant - Key Personnel - Project Organization Chart - Construction and Equipment Schedule
III / 600 / 601	Surveying method and equipment
800 / 830 (2)	Dredging method and equipment
900 / 932	Filling and compaction works
1000 / 1003	Embankment revetment, bed protection and falling aprons
1200 / 1210 (1)	Bored concrete pile installation
1500 / 1510 (3)	Installation of piles and sheet piling

The document listed as Volume I under Sub-Clause 9.1 shall be filled-in without exception, subject to extensions thereof in the same format and to the provisions of Sub-Clause 17.2 regarding the alternative forms of Bid Security.

#### 14. Tender Prices

- 14.1 Unless stated otherwise in the Tenderer Documents, the Contract shall be for the whole Works as described in Sub-Clause 1.1, based on the schedule of unit rates and prices submitted by the Tenderer.
- 14.2 The Tenderer shall fill in the rates and prices for all items of the Works described in the Bill of Quantities. Items against which no rate or price is entered by the Tenderer will not be paid for by the Employer when executed and shall be deemed covered by the other rates and prices in the Bill of Quantities.
- 14.3 All duties, taxes and other levies payable by the Contractor under the Contract, or for any other cause, except customs duties, import duties and Value Added Tax, as of the date 28 days prior to the deadline for submission of tenders, shall be included in the rates and prices and the total Tender Price submitted by the Tenderer and the evaluation and comparison of tenders by the Employer shall be made accordingly.



The rates and the prices quoted by the Tenderer are fixed for the entire duration of the Contract.



15. **Currencies of Tender and Payment**
- 15.1 The unit rates and prices shall be quoted by the Tenderer entirely in Bangladesh Currency Taka (Tk.) and will be paid by the Employer in Bangladesh into a convertible Taka account to be established by the Contractor.
16. **Tender Validity**
- 16.1 Tenders shall remain valid for a period of 154 days after the date of tender opening specified in Clause 25.
- 16.2 In exceptional circumstances, prior to expiry of the original tender validity period, the Employer may request that the tenderers extend the period of validity for a specified additional period. The request and the responses thereto shall be made in writing or by cable. A tenderer may refuse without forfeiting his Tender Security. A tenderer agreeing to the request will not be required or permitted to modify his bid, but will be required to extend the validity of his Tender Security for the period of the extension, and in compliance with Clause 17 in all respects.
17. **Tender Security**
- 17.1 The Tenderer shall furnish, as part of his bid, a Tender Security in the amount of Tk. 2,500,000 (two and a half million).
- 17.2 The Tender Security shall, at the Tenderer's option, be in the form of a certified check, bank draft, standby letter of credit or guarantee from a bank located in the People's Republic of Bangladesh and which has been determined by the Tenderer to be acceptable to the Employer, or a bond issued by a surety located in the People's Republic of Bangladesh and determined by the Tenderer to be acceptable to the Employer. The format of the bank guarantee or bond shall be in accordance with one of the sample forms of Tender Security included in Section I; other formats may be permitted, subject to the prior approval of the Employer. Letters of credit, bank guarantees and bonds issued as surety for the bid shall be valid for 28 days beyond the validity of the Tender.
- 17.3 Any tender not accompanied by an acceptable Tender Security shall be rejected by the Employer as non-responsive.
- 17.4 The tender securities of unsuccessful tenderers will be returned as promptly as possible, but not later than 28 days after the expiration of the period of tender validity.
- 17.5 The Tender Security of the successful Tenderer will be returned when the Tenderer has signed the Agreement and furnished the required Performance Security.



- 17.6 The Tender Security may be forfeited
- (a) if the Tenderer withdraws his bid during the period of tender validity;
  - (b) if the Tenderer does not accept the correction of his Tender Price, pursuant to Sub-Clause 29.2; or
  - (c) in the case of a successful tenderer, if he fails within the specified time limit to
    - (i) sign the Agreement, or
    - (ii) furnish the required Performance Security.

18. **Alternative Proposals by Tenderers** (Not applicable)

19. **Pre-Bid Meeting**
- 19.1 The Tenderer or his official representative is invited to attend a pre-bid meeting which will take place at the date, time and place stated in the Invitation for Tenders.
  - 19.2 The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.
  - 19.3 The Tenderer is requested to submit any questions in writing or by cable, to reach the Employer and the Engineer not later than one week before the meeting.
  - 19.4 Minutes of meeting, including the text of the questions raised and the responses given, will be transmitted without delay to all purchasers of the Tender Documents. Any modification of the Tender Documents listed in Sub-Clause 9.1 which may become necessary as a result of the pre-bid meeting shall be made by the Employer exclusively through the issue of an Addendum pursuant to Clause 11 and not through the minutes of the pre-bid meeting.
  - 19.5 Nonattendance at the pre-bid meeting will not be a cause for disqualification of a tenderer.



*Husain*

- 20. Format and Signing of Tender**
- 20.1 The Tenderer shall prepare one original and two copies of the documents comprising the bid as described in Clause 13 of these Instructions to Tenderers, clearly marked "ORIGINAL" and "COPY" as appropriate. In the event of discrepancy between them, the original shall prevail.
- 20.2 The original of the Tender shall be typed or written in indelible ink, all copies shall be photostats of the original. The original and all copies shall be signed by a person or persons duly authorized to sign on behalf of the Tenderer, pursuant to Sub-Clauses 5.1 (a) or 5.2 (c), as the case may be. All pages of the Tender where entries or amendments have been made shall be initialled by the person or persons signing the Tender.
- 20.3 The Tender shall contain no alterations, omissions or additions, except those to comply with instructions issued by the Employer, or as necessary to correct errors made by the Tenderer, in which case such corrections shall be initialled by the person or persons signing the Tender.

#### D. Submission of Tenders

- 21. Sealing and Marking of Tenders**
- 21.1 The Tenderer shall seal the original and each copy of the Tender in an inner and an outer envelope, duly marking the envelopes as "ORIGINAL" and "COPY".
- 21.2 The inner and outer envelopes shall
- (a) be addressed to the Employer at the following address:
- Jamuna Test Works Consultants**  
c/o Consulting Consortium FAP 21/22  
House 4, Road 125, Gulshan-1  
Dhaka-1212, Bangladesh  
Tel: (880-2) 600751, 881199  
Fax: (880-2) 883990
- and
- (b) bear the following identification:
- Tender for Construction of Permeable Groynes at Test Site I - Kamarjani
  - DO NOT OPEN BEFORE [insert date]



The original and two copies of the Tender shall be delivered to the Employer at the address specified above.



- 21.3 In addition to the identification required in Sub-Clause 21.2, the inner envelope shall indicate the name and address of the Tenderer to enable the bid to be returned unopened in case it is declared "late" pursuant to Clause 23.
- 21.4 If the outer envelope is not sealed and marked as above, the Employer will assume no responsibility for the misplacement or premature opening of the Tender.
- 22. Deadline for the Submission of Tenders**
- 22.1 Tenders must be received by the Employer at the address specified above no later than the date and time stated in the Invitation for Tenders.
- 22.2 The Employer may, at his discretion, extend the deadline for submission of Tenders by issuing an Addendum in accordance with Clause 11, in which case all rights and obligations of the Employer and the tenderers previously subject to the original deadline will thereafter be subject to the deadline as extended.
- 23. Late Tenders**
- 23.1 Any tender received by the Employer after the deadline for submission of tenders prescribed in Clause 22 will be returned unopened to the tenderer.
- 24. Modification and Withdrawal of Tenders**
- 24.1 The Tenderer may modify or withdraw his Tender after bid submission, provided that written notice of the modification or withdrawal is received by the Employer prior to the deadline for submission of tenders.
- 24.2 The Tenderer's modification or withdrawal notice shall be prepared, sealed, marked and delivered in accordance with the provisions of Clause 21, with the outer and inner envelopes additionally marked "MODIFICATION" or "WITHDRAWAL", as appropriate.
- 24.3 No bid may be modified by the Tenderer after the deadline for submission of tenders.
- 24.4 Withdrawal of a tender during the interval between the deadline for submission of tenders and the expiration of the period of tender validity specified in the Form of Tender may result in the forfeiting of the Tender Security pursuant to Clause 17.





## E. Tender Opening and Evaluation

- |  |   |
|--|---|
| <p><b>25. Tender Opening</b></p>             | <p>25.1 The Employer will open the tenders, including modifications made pursuant to Clause 24, in the presence of tenderers' representatives who choose to attend, at the location, date and time stated in the Invitation for Tenders. The tenderers' representatives who are present shall sign a register evidencing their attendance.</p> <p>25.2 Envelopes marked "WITHDRAWAL" shall be opened and read out first. Tenders for which an acceptable notice of withdrawal has been submitted pursuant to Clause 24 shall not be opened.</p> <p>25.3 The tenderers' names, the Tender Prices, the total amount of each bid, any discounts, tender modifications and withdrawals, the presence or absence of Tender Security, and such other details as the Employer may consider appropriate, will be announced by the Employer at the opening. Any tender price, discount or alternative tender price which is not read out and recorded at bid opening will not be taken into account in tender evaluation.</p> <p>25.4 The Employer shall prepare minutes of the tender opening, including the information disclosed to those present in accordance with Sub-Clause 25.3.</p> |
| <p><b>26. Process to be Confidential</b></p> | <p>26.1 Information relating to the examination, clarification, evaluation and comparison of tenders and recommendations for the award of a contract shall not be disclosed to tenderers or any other persons not officially concerned with such process until the award to the successful tenderer has been announced. Any effort by a tenderer to influence the Employer's processing of bids or award decisions may result in the rejection of the tenderer's bid.</p>   |
| <p><b>27. Clarification of Tenders</b></p>   | <p>27.1 To assist in the examination, evaluation and comparison of tenders, the Employer may, at his discretion, ask any tenderer for clarification of his bid, including breakdowns of unit rates. The request for clarification and the response shall be in writing or by cable, but no change in the price or substance of the bid shall be sought, offered or permitted except as required to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the bids in accordance with Clause 29.</p>   |



28. **Examination of Tenders and Determination of Responsiveness**
- 28.1 Prior to the detailed evaluation of tenders, the Employer will determine whether each tender
- (i) has been properly signed;
  - (ii) is accompanied by the required securities;
  - (iii) is substantially responsive to the requirements of the Tender Documents; and
  - (iv) provides any clarification and/or substantiation that the Employer may require pursuant to Sub-Clause 15.4.
- 28.2 A substantially responsive tender is one which conforms to all the terms, conditions and specifications of the Tender Documents, without material deviation or reservation.
- A material deviation or reservation is one
- (i) which affects in any substantial way the scope, quality or performance of the Works;
  - (ii) which limits in any substantial way, inconsistent with the Tender Documents, the Employer's rights or the tenderer's obligations under the Contract; or
  - (iii) whose rectification would affect unfairly the competitive position of other tenderers presenting substantially responsive bids.
- 28.3 If a tender is not substantially responsive, it will be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the nonconforming deviation or reservation.
29. **Correction of Errors**
- 29.1 Tenders determined to be substantially responsive will be checked by the Employer for any arithmetic errors. Errors will be corrected by the Employer as follows:
- (a) where there is a discrepancy between the amounts in figures and in words, the amount in words will govern; and
  - (b) where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will govern, unless in the opinion of the



Employer there is an obviously gross misplacement of the decimal point in the unit rate, in which case the line item total as quoted will govern and the unit rate will be corrected.

- 29.2 The amount stated in the Form of Tender will be adjusted by the Employer in accordance with the above procedure for the correction of errors and, with the concurrence of the tenderer, shall be considered as binding upon the tenderer. If the tenderer does not accept the corrected amount of bid, his tender will be rejected, and the Tender Security may be forfeited in accordance with Sub-Clause 17.6 (b).

**30. Conversion to Single Currency**

(Not applicable)

**31. Evaluation and Comparison of Tenders**

- 31.1 The Employer will evaluate and compare only the tenders determined to be substantially responsive in accordance with Clause 28.
- 31.2 In evaluating the bids, the Employer will determine for each bid the Evaluated Tender Price by adjusting the Tender Price as follows:
- (a) making any correction for errors pursuant to Clause 29; and
  - (b) excluding Provisional Sums and the provision, if any, for Contingencies in the Summary Bill of Quantities, but including Daywork.
- 31.3 The Employer reserves the right to accept or reject any variation, deviation or alternative offer. Variations, deviations, alternative offers and other factors which are in excess of the requirements of the Tender Documents or otherwise result in the accrual of unsolicited benefits to the Employer shall not be taken into account in tender evaluation.
- 31.4 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 tender evaluation.
- 31.5 If the bid of the successful Tenderer is seriously unbalanced in relation to the Employer's estimate of the cost of work to be performed under the Contract, the Employer may require the Tenderer 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, the Employer may require that the amount of the Performance Security set forth in Clause 37 be increased at the expense of the successful Tenderer to a level sufficient to protect the Employer against financial loss in the event of default of the successful Tenderer under the Contract.

**32. Preference for Domestic Tenderers**

(Not applicable)

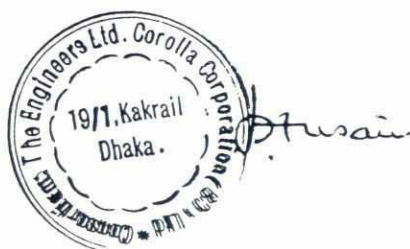


*Thsai.*



## F. AWARD OF CONTRACT

33. Award 33.1 Subject to Clause 34, the Employer is not bound to award the Contract to the Tenderer who has offered the lowest price, but will award the Contract to a tenderer whose bid has been determined to be substantially responsive to the Tender Documents, provided that such tenderer has been determined to be (i) eligible in accordance with the provisions of Sub-Clause 3.1; and (ii) qualified in accordance with the provisions of Clause 5.
- The Employer reserves the right to encourage merger of a joint venture between tenderers, in case none of the bids have been determined substantially responsive to the Tender Documents.
34. Employer's Right to Accept any Tender and to Reject any or all Tenders 34.1 Notwithstanding Clause 33, the Employer reserves the right to accept or reject any tender, and to annul the tender process and reject all tenders, at any time prior award of Contract, without thereby incurring any liability to the affected tenderer or tenderers or any obligation to inform the affected tenderer or tenderers of the grounds for the Employer's action.
35. Notification of Award 35.1 Prior to expiration of the period of tender validity prescribed by the Employer, the Employer will notify the successful Tenderer by cable confirmed by registered letter that his bid has been accepted. This letter (hereinafter and in the Conditions of Contract called the "Letter of Acceptance") shall name the sum which the Employer will pay the Contractor in consideration of the execution and completion of the Works and for remedy of any defects therein by the Contractor as prescribed by the Contract (hereinafter and in the Conditions of the Contract called "the Contract Price").
- 35.2 The notification of award will constitute the formation of the Contract.
- 35.3 Upon the furnishing by the successful Tenderer of a Performance Security, the Employer will promptly notify the other tenderers that their bids have been unsuccessful.





36. **Signing of Agreement**
- 36.1 At the same time that he notifies the successful Tenderer that his bid has been accepted, the Employer will send the Tenderer the Form of Agreement provided in the Tender Documents, incorporating all agreements between the parties.
- 36.2 Within 14 days of receipt of the Form of Agreement, the successful Tenderer shall sign the Form and return it to the Employer.
37. **Performance Security**
- 37.1 Within 28 days of receipt of the notification of award from the Employer, the successful Tenderer shall furnish to the Employer a Performance Security in the form of a bank guarantee in an amount equivalent to 10 percent of the Contract Price in accordance with the Conditions of Contract.
- The form of Performance Security provided in Section 3 of Volume I of the Tender Documents may be used or some other form acceptable to the Employer.
- 37.2 The Performance Security to be provided by the successful Tenderer shall be issue by a bank located in the People's Republic of Bangladesh and which has been determined by the successful Tenderer to be acceptable to the Employer.
- 37.3 Failure of the successful Tenderer to comply with the requirements of Clauses 36 or 37 shall constitute sufficient grounds for the annulment of the award and forfeiture of the Tender Security.



Section 3

Sample Form of Agreement  
Form of Performance Security  
Form of Bank Guarantee for Advance Mobilization Payment

## Sample Form of Agreement



### AGREEMENT

This Agreement made the . . . . . day of . . . . . 1994 between the Jamuna Test Works Consultants, c/o Rhein-Ruhr Ingenieur-Gesellschaft mbH, Dortmund, Germany, and represented by Consulting Consortium FAP 21/22, Dhaka, Bangladesh (hereinafter called "the Employer") of the one part and of . . . . . (hereinafter called "the Contractor") of the other part.

Whereas the Employer is desirous that certain Works should be executed by the Contractor, viz. the Construction of Permeable Groynes at Test Site I - Kamarjani and has accepted a Tender by the Contractor for the execution and completion of such Works and the remedying of any defects therein.

Now this Agreement witnesseth as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents shall be deemed to form and to read and construed as part of this Agreement, viz:
  - (a) The Letter of Acceptance (including its attachments, if any);
  - (b) The said Tender;
  - (c) The Conditions of Contract (Part II - Conditions of Particular Application);
  - (d) The Conditions of Contract (Part I);
  - (e) The Technical Specifications;
  - (f) The Tender Drawings; and
  - (g) The Priced Bill of Quantities.
3. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and to remedy any 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 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 the day and the year first before written.

Signed, sealed, and Delivered by the

said .....

in the presence of:

Binding Signature of Employer : .....

Binding Signature of Contractor : .....





## Annex A: SAMPLE FORM

## PERFORMANCE BANK GUARANTEE (UNCONDITIONAL)

To: **Jamuna Test Works Consultants**  
 Joint Venture  
 c/o Rhein-Ruhr Ingenieur-Gesellschaft mbH  
 Burgwall 5  
 D 44033 Dortmund  
 Box No. 103332  
 Germany  
 Fax: 0049 231 575556  
 Tel: 0049 231 54820

WHEREAS . . . . . (hereinafter called "the Contractor") has undertaken, in pursuance of Contract No. . . . . dated . . . . . to execute the Construction of Permeable Groynes at Test Site I - Kamarjani, comprising of civil engineering works (hereinafter called "the Contract");

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with his obligations in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee;

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you on behalf of the Contractor, up to a total of Taka . . . . . (*amount of Guarantee*)<sup>1</sup> . . . . . (*in words*), such sum being payable in the said currency, and we undertake to pay you, upon your first written demand without cavil or argument, any sum or sums within the limits of Taka . . . . . (*amount of Guarantee*) as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We agree that any sum payable under this Bank Guarantee shall be paid directly to your bank account No. . . . . with Banque Indosuez, Dhaka.

We herewith waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed thereunder or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid until the date of issue of the Defects Liability Certificate.

SIGNATURE AND SEAL OF THE GUARANTOR . . . . .  
 Name of Bank . . . . .  
 Address . . . . .  
 Date . . . . .

<sup>1</sup> Equivalent to 10% of the Contract Price named in the letter of Acceptance



Annex B: SAMPLE FORM

## BANK GUARANTEE FOR ADVANCE PAYMENT

To: **Jamuna Test Works Consultants**  
 Joint Venture  
 c/o Rhein-Ruhr Ingenieur-Gesellschaft mbH  
 Burgwall 5  
 D 44033 Dortmund  
 Box No. 103332  
 Germany  
 Fax: 0049 231 575556  
 Tel: 0049 231 54820

**Bank Protection Pilot Project FAP-21**  
**Construction of Permeable Groynes at Test Site I - Kamarjani**

Gentlemen:

In accordance with the provisions of the Conditions of Contract, Subclause 60.7 ("Advance Payment") of the above mentioned Contract, . . . . . [name of contractor] (hereinafter called "the Contractor") shall deposit with the Jamuna Test Works Consultants, (hereinafter called "the Employer"), a bank guarantee to guarantee his proper and faithful performance under the said Clause of the Contract in the amount of Taka . . . . . (amount of Guarantee) . . . . . (in words).

We, the . . . . . (bank or financial institution), as instructed by the Contractor, agree unconditionally and irrevocably to guarantee as primary obligator and not as Surety merely, the payment to the Employer on his first demand without whatsoever right of objection on our part and without his first claim to the Contractor, in the amount not exceeding Taka . . . . . (amount of Guarantee) . . . . . (in words).

We agree that any sum payable under this Bank Guarantee shall be paid directly to the Employers bank account No. . . . . with Banque Indosuez, Dhaka.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed thereunder or, of any of the Contract documents which may be made between the Employer and the Contractor, shall in any way release us from any liability under his guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall remain valid and in full effect from the date of the advance payment under the Contract until the Employer receives full repayment of the same amount from the Contractor.



Yours truly,

SIGNATURE AND SEAL: . . . . .  
 Name of Bank/Financial Institution: . . . . .  
 Address: . . . . .  
 Date: . . . . .

# CONSORTIUM: THE ENGINEERS LIMITED COROLLA CORPORATION (BD) LIMITED

19/1, KAKRAIL, DHAKA-1000 BANGLADESH. PHONES: 416817, 408067, 413930. FAX: 880-2-833113, TLX: 675632 BIL BI

**ORIGINAL**

Dated : April 16, 1994.

CON/FAP/21-22/64/94

Jamuna Test Work Consultants  
C/O. Consulting Consortium FAP 21/22  
House - 4, Road - 125  
Gulshan - 1,  
Dhaka.

PROJECT : TENDER FOR CONSTRUCTION OF PERMANENT GROYNES.  
FIRST SITE - 1. KAMARJANI.

Dear Sir,

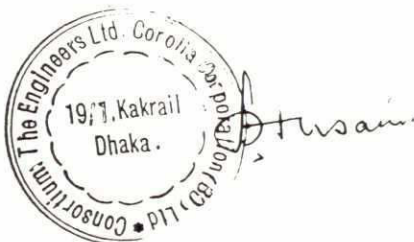
We are submitting herewith the Tender Documents duly filled in along with a Tender Bid Guarantee for Tk.2.5 Million from Arab Bangladesh Bank Limited, Karwan Bazar Branch, Dhaka.

As per tender requirement we are enclosing the following :

1. Major items of Construction Plant.
2. Key Personal and Organisation Chart.
3. Construction and Equipment Schedule.
4. Surveying Method and Equipment.
5. Dredging Method and Equipment.
6. Filling and Compaction Work.
7. Embankment Revetment, Bed Protection and Falling Apron.
8. Bored Pile Installation.
9. Installation of Piles and sheet Piling.

Insurance - we are quoting the price as indicated by our Insurance Company : As per minutes of meeting and further discussion on phone with your representative the cost of insurance may be adjusted by you for all contractor after you have finalised the rate with Sadharan Bima Corporation which is still under negotiation by you this has been indicated by your representative.

In the items of Demobilization 1.12 we have considered the equipments and surplus materials of the Employer to be demobilized and stored at suitable place near the river bank at Dhaka.



Contd.....P/2.



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# CONSORTIUM: THE ENGINEERS LIMITED COROLLA CORPORATION (BD) LIMITED

19/1, KAKRAIL, DHAKA-1000 BANGLADESH. PHONES : 416817, 408067, 413930. FAX : 880-2-833113, TLX : 675632 BIL BI.

: 2 :

VALUE ADDED TAX - As per Government of Bangladesh Tax rule we have calculated VAT at the rate of 4.5% on the total amount payable to us. This amount is excluded in our total contract price as per minutes of pre-bid meeting held on March 20, 1994.

Hope you will find all our Tender Documents in order.

Assuring our best service and co-operation.

Thanking you,

Yours faithfully,  
For CONSORTIUM:THE ENGINEERS LTD.  
COROLLA CORPORATION (BD) LIMITED



(ENG. M. HUSAIN)

- Enclo : 1) Tender Document Vol I - Vol IV.  
2) Bid Bank Guarantee No. KB/BG/078/94.  
3) All paper as per the letter.  
4) Letter of Authority to sign the Tender Paper & Agreement of Consortium.  
5) Minutes of the meeting.



# CONSORTIUM: THE ENGINEERS LIMITED COROLLA CORPORATION (BD) LIMITED

19/1, KAKRAIL, DHAKA-1000 BANGLADESH. PHONES : 416817, 408067, 413930. FAX : 880-2-833113, TLX : 675632 BIL BJ.

## MAJOR ITEM OF CONSTRUCTION PLANTS OWNED BY THE FIRM

<u>Sl #</u>	<u>Description</u>	<u>Number</u>	<u>Make/Type</u>	<u>Capacity</u>	<u>Condition</u>
1.	Diesel Pile Hammer	2 Nos.	K22, KOBE STEEL 1970.	45,000 ft/lbs/blow	good
2.	Loader for K22 Hammer	2 "	LA22 KOBE STEEL 1970.	MAST WEIGHT 24 M	GOOD
3.	P&H Crawler Crane	1 No.	P&H. JAPAN, 1974.	30 TON	GOOD
4.	INSLEY CRANE (TRUCK MOUNT)	1 NO.	PIENE HEIMER, GERMANY, 1968.	20 TON	GOOD
5.	ELECTRIC TOWER CRANE	1 NO.	PIENE HEIMER, GERMANY, 1966.	6 TON (440V 3 PH)	GOOD
6.	SCOTCH DERRICK	2 NOS.	TOSHIBA, JAPAN 1970	10 TON (220 V 3 PH)	GOOD
7.	AIR COMPRESSOR	2 NOS.	MITSUI, JAPAN 1974	100 TO 200 CFM	GOOD
8.	CONCRETE MIXER	20 NOS.	VARIOUS MAKE	VARIOUS	GOOD
9.	CAST-IN-SITU PILING RIG	2 SETS	WINCH GOTO, JAPANESE, 1976	2-3 TON	GOOD
10.	STONE CRUSHER	3 SETS	PESON LTD. ENGLAND MCGUTT, ITALY, 1970/72	6-7 TON/HR	GOOD
11.a.	ELECTRIC WELDING SET	8 SETS	VARIOUS MAKE	20 KW	GOOD
11.b.	DIESEL WELDING SET	2 SETS	DANYO. JAPAN 1974	30 KW	GOOD
12.	BAR BENDING MACHINE	3 NOS.	TOYO. KENTSU KOHKI LTD., JAPAN 1974	40 MM	GOOD
13.	BAR CUTTING MACHINE	3 NOS.	"	"	GOOD



CONT'D.....P/2.

# CONSORTIUM: THE ENGINEERS LIMITED COROLLA CORPORATION (BD) LIMITED

19/1, KAKRAIL, DHAKA-1000 BANGLADESH. PHONES : 416817, 408067, 413930. FAX : 880-2-833113, TLX : 675632 BIL BJ.

: 2 :

<u>Sl #</u>	<u>Description</u>	<u>Number</u>	<u>Make/Type</u>	<u>Capacity</u>	<u>Condition</u>
14.	CLAM SHELL BUCKET	2 NOS.	KOBESTEEL, JAPAN 1982.	1 CM	GOOD
15.	PRIESTMAN GRAB	4 NOS.	PRIESTMAN ENGLAND`79.	0.6 CM	GOOD
16.	HIGH PRESSURE PUMP FOR JETTING.	3 NOS.	CUMMINS, INDIA 1978.	125 HP, 1500 RPM, 200 PSI.	GOOD
17.	RADIAL DRILL	1 NO.	TYPE 405, GERMANY `86.	UPTO 50 MM DIA, HOLE.	GOOD
18.	LATHE	2 NOS.	SIEMENS, GERMANY`76.	UPTO 5 FT.	GOOD
19.	UNIFLOAT (MAIN PIECES)	20 NOS.	BAILEY, ENGLAND`70	17'-6"x 8'-0"x 4'-0"	GOOD
20.	UNIFLOAT (END PIECES)	15 NOS.	BAILEY, ENGLAND`70	7'-0"x 4'-0" x 8'-0"	GOOD
21.	OUT BOARD ENGINE WITH BOAT.	2 NOS.	JOHNSON, USA, 1980 MARINER, JAPAN 1984.	40 HP, 25 HP	GOOD
22.	TRACTOR TRAILOR	5 NOS.	BELARVS, MASEY FERGUSON 1984	5 TON	GOOD
23.	CONCRETE VIBRATOR (PORTABLE)	40 NOS.	MIKASA, DONGFENG, JAPAN, CHINA.	12,000 VP/m	GOOD
24.	VARIOUS OTHER PORTABLE HAND TOOLS.	--	VARIOUS	VARIOUS	GOOD
25.	<u>GENERATOR :</u>				
	75 KVA, 3PH220 OR 3PH440		PERKINS, ENGLAND 1984		GOOD
	60 KVA, 3PH 440 V		DENYO, JAPAN 1979		GOOD
	17.5 KVA, 3PH 440V, 3PH 220 V 25.3 KVA		DENYO, JAPAN 1982		GOOD
	60 KVA, 3PH 440 V		KIRLOSKAR INDIA 1980		GOOD
	175-200 KVA. 3PH 240-440 V		DENYO, 1984		GOOD



Contd....P/3.

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# CONSORTIUM: THE ENGINEERS LIMITED COROLLA CORPORATION (BD) LIMITED

19/1, KAKRAIL, DHAKA-1000 BANGLADESH. PHONES : 416817, 408067, 413930. FAX : 880-2-833113, TLX : 675632 BIL BJ.

: 3 :

## EARTH MOVING EQUIPMENT

(OWNED BY COMPANY)

<u>Sl #</u>	<u>Description</u>	<u>Number</u>	<u>Make/Type</u>	<u>Capacity</u>	<u>Condition</u>
1.	Dozer	6	KOMATSU D-60P JAPAN 1984	D-6	GOOD
	Dozer	2	CATERPILLAR D-6 USA 1980	D-6	GOOD
	Dozer	1	RUSSIAN 1982	D-6	GOOD
2	Excavator	5	DAWEE/KOREA 1984	1 CM	GOOD
	Excavator	1	HITACHI/JAPAN 1984	1 CM	GOOD
3.	F.LOADER	3	KOMATSU/JAPAN 1986	3 CM	GOOD
4.	DUMP TRUCK	10	ISSUZU/JAPAN 1988	10 CM	GOOD
5.	VIBRIO COMPACTOR ROLLER.	2	INDIA 1993	5 TON	GOOD
6.	PLATE COMPACTOR	8	INDIA 1993	5 TON	GOOD
7.	WATER PUMP	50	KSB 1992-93	3"-4"	GOOD
8.	MUD PUMP	2		6 Cusec	GOOD

## ON HIRE

1. BARGE 250 T CAPACITY 3 NOS.
2. TUG BOAT 400 HP 2 Nos.





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## Mobilization of Equipment

1. Truck Mounted Crane on hire	20 Ton Capacity		August '94
2. Tractor with Trailor		4 Nos.	"
3. Fork Lift (on hire)		1 No.	"
4. Flat bed truck		2 Nos.	"
5. Diesel Pile Hammer	K22	2 Nos.	September '94
6. Loader for K22 Pile Hammer		2 Nos.	"
7. P & H Crane	30 Ton Capacity	1 No.	"
8. Truck Mounted Crane	20 " "	1 No.	"
9. Scotch Derrick		2 Nos.	"
10. Air Compressor	100-200 CFM	1 No.	"
11. Concrete Mixer diesel operated	10/7 Capacity	8 Nos.	"
12. Concrete Vibrator Needle Type		8 Nos.	"
13. Cast-in-Situ piling Rig complete with all Accessories		1 Set	"
14. Clam Shell Bucket	1 CM	2 Nos.	"
15. Lathe Machine	Upto 5'	1 No.	"
16. Drilling Machine	Upto 20 mm dia	1 No.	"
17. Unifloat (Main pieces)	17'-6" x 8'x4"	10 Nos.	"
18. Unifloat End Pieces	7'-0" x 4'x 8"	10 Nos.	"
19. Generator	25 KVA	2 Nos.	"



Cont'd....P/2

: 2 :

20. Hand Winch	5 Ton Capacity	4 Nos.	September `94
21. Unloading chain pulley and steel arrangement		2 Set	"
22. Transformer			
a) Welding Set		2 Nos.	"
b) Diesel Welding Set		2 Nos.	"
23. Gas Cutting Welding Set		2 Nos.	"
24. Oxygen/Acetylene Bottle		6 Nos.	"
25. Dozer	D 60P KOMATSU	5 Nos.	"
26. Excavator	DAWEE	2 Nos.	"
27. Front Loader	KOMATSU 3 CM	1 No.	"
28. Dump Truck	10 Ton	6 Nos.	"
29. Generator	250 KVA	1 No.	"
30. Survey Instrument			
a) Theodolite		2 Nos.	"
b) Levelling		4 Nos.	"
31. Excavator	DAWEE	1 No.	October `94
32. Vibro Compactor	India	2 Nos.	"
33. Plate Compactor	"	6 Nos.	"
34. Water Pump	2"-4"	12 Nos.	"
35. Barge	250 Capacity	3 Nos.	"
36. Tug Boat	400 HP	1 No.	"
37. Pile Cap (Cost Iron)		2 Nos.	"
38. Rails and Trolley for Slip way		1 Set.	"
39. Winch Machine		4 Nos.	"
40. Arrangement for laying Geotextile	As per drawing		"



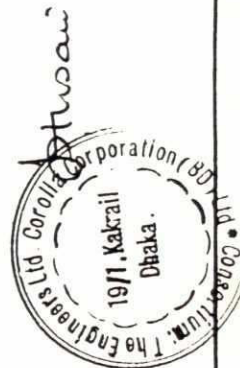
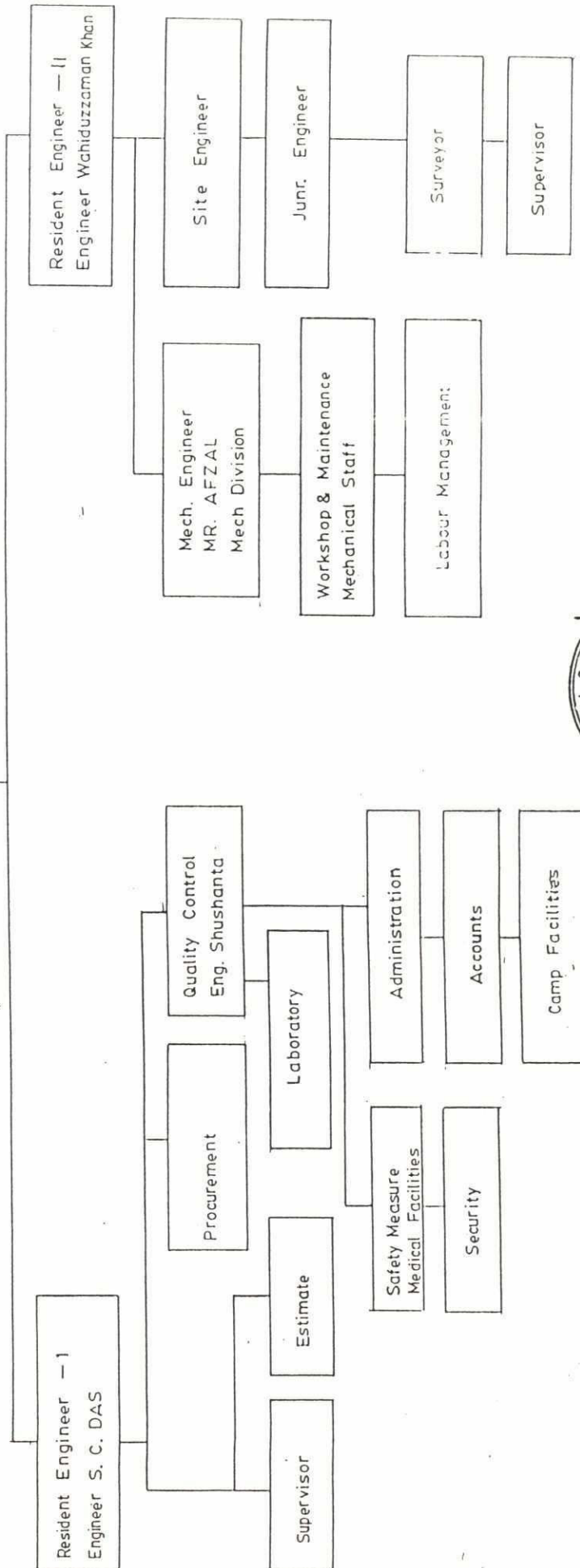
# KEY PERSONAL & ORGANIZATION CHART CONSTRUCTION OF PERMEABLE GROYNES TEST SITE KAMARJANI

FAP -21

CONSORTIUM : THE ENGINEERS LTD.  
COROLLA CORPORATION (BD) LTD.

MR. M. HUSAIN - MANAGEMENT & TECHNICAL  
MR.K.S.SHAHJAHAN - MANAGEMENT & FINANCE  
MR.N.YOUSUFF MANAGEMENT ADMINISTRATION

Project Manager  
General Manager  
Eng. A. S. MAQSOOD



CONSORTIUM: THE ENGINEERS LTD.  
COROLLA CORPORATION (B.D.) LTD.

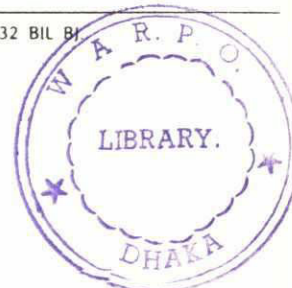
PROJECT-CONSTRUCTION OF PERMEABLE GROYNES AT KAMARJANI  
MOBILIZATION OF EQUIPMENT, MATERIALS AND CONSTRUCTION SCHEDULE

DESCRIPTION	July 1994	August 1994	September 1994	October 1994	November 1994	December 1994	January 1995	February 1995	March 1995	April 1995	M
1. Award of Contract											
2. Mobilization/Modification of Equipment Materials											
3. Site Installation											
4. Joint welding of Tubular Steel Piles											
5. Pile Installation On shore G-3 (Steel Piles)											
6. Pile Installation On shore G-2 (steel piles)											
7. Pile Installation On shore G-1 (steel piles)											
8. Installation Steel Sheer pile Cofferdam G-1											
8'1. Pile Installation											
8'2. Anchor Installation											
8'3 Backfilling -											
9. Installation Concrete Sheet pile Cofferdam G-A											
9'1. Pile Installation											
9'2. Anchor Installation											
9'3 Capping Beams. Walling Beams.											
9'4 Backfilling											
10. Pile Installation off shore G-3 (Steel piles)											
11. Pile Installation off shore G-2 (steel piles)											
12. Pile Installation off shore G-1 (steel piles)											
13. Spun Concrete pile Installation G-A											
14. Spun Concrete pile Installation G-B											
15. Bored pile Installation G-A											
16. Bored pile Installation G-B											
17. Earth Dam Construction C-1											
18. Earth Dam Construction G-3											
19. Earth Dam Construction G-2											
20. Revetments/ Filling Apron C-1											
20'1 Above Water level											
20'2 Below Water level											
21. Revetments/Filling Aprons G-3											
21'1 Above Water level											
21'2 Below Water Level											
22. Revetments/Bed Protection/Filling Aprons G-2											
22'1 Above Water Level											
22'2 Below Water Level											
23. Revetments/Bed Protection G-1											
23'1 Above Water Level											
23'2 Below Water Level											
24. COMPLETION OF WORKS & FINISHING											



# CONSORTIUM: THE ENGINEERS LIMITED COROLLA CORPORATION (BD) LIMITED

19/1, KAKRAIL, DHAKA-1000 BANGLADESH. PHONES : 416817, 408067, 413930. FAX : 880-2-833113, TLX : 675632 BIL BJ



## Methodology of Survey

### BATHYMETRIC SURVEY

1. Base lines to be set-up one at the country site and the other on the opposite char by traverse or triangulation on the Basis of BTS Co-ordinates. Pillars will be established on either side of the channel with Co-ordinate and height on each cross section position.
2. Direct distance and bearing of BLP pillars on both bank will be determined from their Co-ordinates. CS alignment will be fixed on the ground with 2 nos theodolite (EDM preferable) working simultaneously from both bank. Flags will be fixed along the alignments following which direction, level for cross-section will be run. Sounding will be taken by sounding Rod/ECHO sounder. ECHO-Sounder will be run by experience surveyor. The surveyor with EDM theodolite keep the ranging live on the transducer pipe of ECHO-Sounder by slow horizontal movement of theodolite.
3. To mark any point on the river bed the surveyor with the ECHO-Sounder should "MARK". Forth with the survey Assistant will hoist his signal Flag and the surveyor with the theodolite read the Angle momentarily. The same procedure will be continued until the boat reaches the other bank.
4. Level will be recorded 30-50 m interval if variation in level is mild. For variation level will be recorded at shorter interval so that exact profile will be shown by the survey.
5. Water level will be recorded simultaneously both end of the channel.

### CONTOUR SURVEY

1. Natural and existing feature of the ground shall be depicted by contour at 0.25 m in plain and 2.0 m interval in the undulating area appropriate to the given scale.
2. Temporary bench Mark (TBM) shall be fixed at selected position in the area for easy reference and distribution of elevation (spot height) at the chosen position following physical shape of the ground for the purpose of contouring. All bench Mark falling in the project area will be shown in the map. Contour will be drawn in accordance to the physical shape and condition of the terrain by viewing on the ground.



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## Triangulation Survey and Traverse Survey

1. Triangle closure average not to exceed : 2.00 "
2. Astronomical Azimuth (when applicable) : 2.00 "
3. After Azimuth adjustment, closing in position : 1.2500  
not exceed.

### Traverse Survey

1. Number of Azimuth courses between Azimuth check not to exceed : 50 "
2. Astronomical Azimuth probable error of result : 2.00 "
3. Azimuth closure at Azimuth check point not exceed (N=No of Station for carrying Azimuth) : 10 Sec $\sqrt{N}$
4. After Azimuth adjustment closing in position : 1:25000  
not to exceed.
5. The traverse survey will be performed with Theodolite in one double series i.e. one in normal position of the telescope and the second is a transit position of the telescope.
6. The horizontal distance measurement between traverse points are to be carried out with EDM. Equipment standardised for the correct length. The horizontal distance shall be corrected distance corrected for slope, stretch, temperature expansion and sag in unsupported tape measurement if standard theodolite is used.



*Amir*

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# CONSORTIUM: THE ENGINEERS LIMITED COROLLA CORPORATION (BD) LIMITED

19/1, KAKRAIL, DHAKA-1000 BANGLADESH. PHONES : 416817, 408067, 413930. FAX : 880-2-833113, TLX : 675632 BIL BJ.

## DREDGING METHOD AND EQUIPMENT

For dredging work we will engage the dredges from BIWTA. The dredging will be done by Cutter and Suction method.

## FILLING AND COMPACTION WORK.

Excavation and filling work will be done by Manual Labour, and also by mechanical mean ( Excavator, Dump Truck, Front Loader) depending on the site situation. We have got sufficient equipment to handle the project.

Compaction will be done by Dozer, Vibro Compactor, Plate Compactor etc.

List of equipment for Earth Work and compaction owned by the company is enclosed in Equipment List.

## EMBANKMENT REVETMENT, BED PREPARATION & FALLING APRON

The work will be executed as per specification laid down by the Consultants.

Bed will be prepared by engaging Dozer above water level and to proper shape. After necessary compaction and testing the falling apron work will be executed and blocks will be placed manually. For transportation of blocks to site of placement will be done by mechanical transport.

Geo-textile materials will be placed by mechanical devise for under water work with the help of Divers.



*Atiscu*

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Details of Tubular Steel Piles,Cast-in-Situ  
Piles & Equipment Mobilization





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## METHODOLOGY OF TUBULAR STEEL PILE, FABRICATION INSTALLATION AND DRIVING.

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1. STEEL TUBULAR PIPE : The Steel Pile will be unloaded from Mother Ship direct to our Barge for shipment and carried to Site. At site the pipes will be unloaded and stacked properly as per length at stackyard near the Workshop for Fabrication.
2. For fabrication and welding the pipe as per design length will be done at fabrication shop. The pipe joints will be Bevelled by portable Bevelling Machine. After removing the dust and scrapping the pipe will be welded by our specialised welder inside where required and out side. Each pass of welding will be scrapped before next run of weld is applied.
3. The welded joint will be tested by ULTRASONIC Method by our experts and after approval of the welding next phase of work will be undertaken.
4. Steel Pile Head to be fabricated as per drawing and fixed as per specification. Similarly the Pile Point reinforcement to be fabricated as per specification and drawing.
5. After the Tubular Steel Pipes are fabricated and approved sand blasting will be carried out and epoxy-zinc-rich paint will be applied. The piles will be ready for installation after paint has been applied and inspected by the Consultants or Employers representative and stacked properly length wise for next phase of work of installation.
6. From the stackyard the finished steel pipe will be shipped to installation Barge by mean of slipway. Steel Turbular Pile will be loaded in the trolley of slipway by mean of Crane. Slipway trolley will be operated by Winch diesel or electrically operated.
7. In the fabrication workshop we will use portable pipe cutting and bevelling machine, a number of welding transformer of capacity  
Welding Range : 20 - 300 Amp at 80 O.C.V.  
Electrode size : 1.6mm to 6mm with enough Gas cutting and welding sets.
8. Cast Iron Caps for Driving Tubular Steel Pipe dia 711mm and 500mm will be manufacture by us before starting driving of Steel Pipe.
9. Roller support for handling Tubular Pipe will be installed in the Workshop for cutting, welding etc.
10. Welding rod of the classification as mentioned here will be used for Pipe -  
Classification : AWS 5.1 - 69 : E6013  
BS 639-1976 E4333 R 13  
JIS D4303  
High Quality Rutile Coated all purposes Mild Steel Electrode.



### INSTALLATION OF TUBULAR STEEL PILE.

1. Before installation of steel pipe in water the central line of the pile is to be fixed up. To fixup the position of Pile and fixing barge we are to drive some auxiliary steel pile of 150mm to 200mm Ø. These dummy pipe will hold the Barge for driving steel pile. These piles are in addition of Anchor etc for stability of the Barge and movement and displacement during driving operation by Hammer supplied by the Employer.
2. 2 Nos. Barge will be employed during the installation and driving of pile for stacking the finished tubular steel pile and the other with crane and pile driving rig and hammer.
3. Tubular steel pile will be lifted and put into the position by crane mounted in the barge and as soon as the pile is position checked by surveyor and approved. Then the driving of pile by hammer will start. The same procedure will follow till the steel piles are driven to the required depth.
4. If during installation of Tubular Steel Pile any additional joint is required it will be done as per drawing and specification by Butt joint.
5. All record of driving that is penetration record will be maintained at site and record to be submitted to Engineer.
6. Tubular Steel Pile on Shore : On shore tubular steel pile will be driven by Pile rigs and diesel hammer after erecting and positioning the pile as per drawing. As the length of the Pile is less we will drive the same by K-22 Hammer and leader to proper depth and also we will use the equipment to be supplied by Employer.



# CONSORTIUM: THE ENGINEERS LIMITED COROLLA CORPORATION (BD) LIMITED

19/1, KAKRAIL, DHAKA-1000 BANGLADESH. PHONES: 416817, 408067, 413930. FAX: 880-2-833113, TLX: 675632 BIL BJ.

## Methodology for Construction of Permeable Groynes Test Site-I, Kamarjani.

### 1. BORED CAST-IN-SITU PILES.

The pile shall be bored (by direct mud circulation method using Bentonite as drilling fluid) cast in place Reinforced Concrete. No. of Borings will be done according to the requirement of time schedule.

### 2. FLOATING PLATFORM.

The floating platform will be made by using nos of uniflote/barge as per requirement. All the floating platform will be anchored very strongly before starting of piling works by anchors and guyes etc.

### 3. DETAILS OF PILING EQUIPMENTS PROPOSED TO MOBILISE AT SITE.

Tripod ( 20m HT)	-	2 Sets
Winch with Diesel Engine or Electrical	-	2 Sets
Drilling rod with diesel	-	2 Sets
Mud Pump with engine	-	2 Sets
High pressure pump	-	1 No.
Welding Machine	-	2 Nos.
Mixer Machine 0.3m, capacity	-	2 Nos.
Tremny Pipe with Funnel & Bucket	-	2 Sets.

### 4. PILE CONSTRUCTION METHODOLOGY.

The floating platform will be centered at the pile point where required. Steel casing  $\phi$  914 mm  $\phi$  - 508 mm  $\phi$  will be placed in position and the drilling of the bore hole will commence.

Contd....P/2.





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# CONSORTIUM: THE ENGINEERS LIMITED COROLLA CORPORATION (BD) LIMITED

19/1, KAKRAIL, DHAKA-1000 BANGLADESH. PHONES : 416817, 408067, 413930. FAX : 880-2-833113, TLX : 675632 BIL BJ.

: 2 :

The bore hole will be filled with drilling slurry (Bentonite), which circulates through the drilling rods and the chisel at the base.

Because of high viscosity, the Bentonite slurry stabilized the sides of bore hole and in addition the hydrostatic head due to higher specific gravity does not allow the bore hole to collapse, and also the back flows of water into the bore hole should be avoided. Once the bore hole has been drilled down to the final depth, fresh bentonite slurry from reserve tank shall be pumped through the bore hole for approx - 10 minutes so that the previous contaminated slurry is completely removed and the bore-hole is also thoroughly cleaned and all the cuttings from the base are removed. Only when the bore hole is completely filled with fresh slurry free from all cuttings, the circulation of fresh bentonite shall be stopped.

After the boring is completed, Reinforcement caging will be lowered to the bore hole.

Trimmy pipe and Funnel Assembly will then be lowered upto the total depth of bore hole through reinforcement. Concrete will be poured into the bore hole through the trimmy pipe. The bottom part of trimmy pipe will always remain at least 1 M., within concrete, so that the fresh concrete is always added in the concrete and in this way the concrete will rise to the required surface and trimmy pipe will gradually be lifted with the completion of casting.

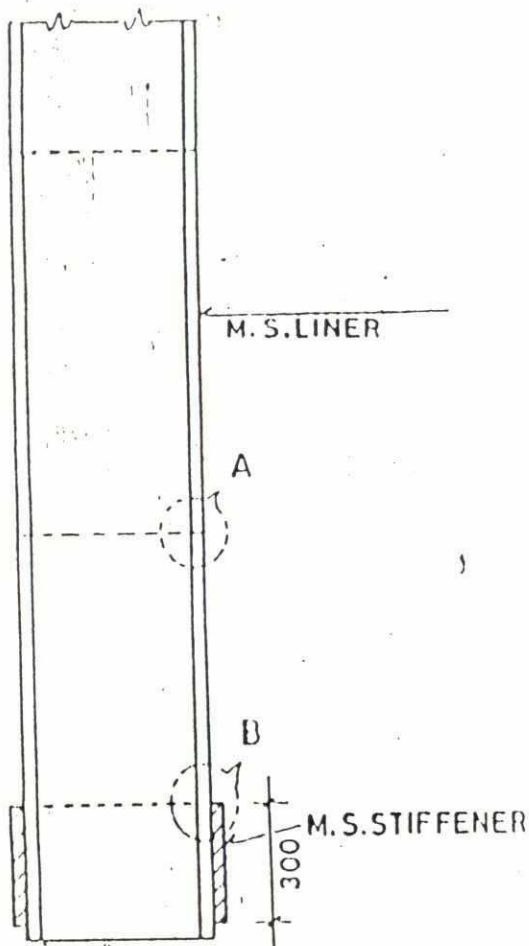
The steel casing will be lifted gradually or kept in position as per design and specification.



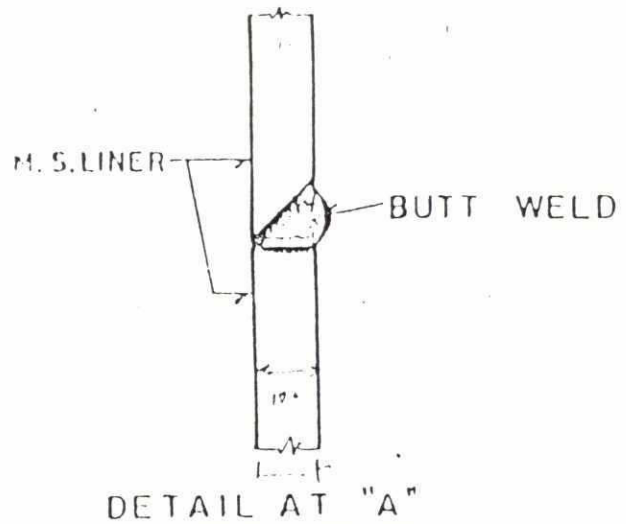
*Husain*



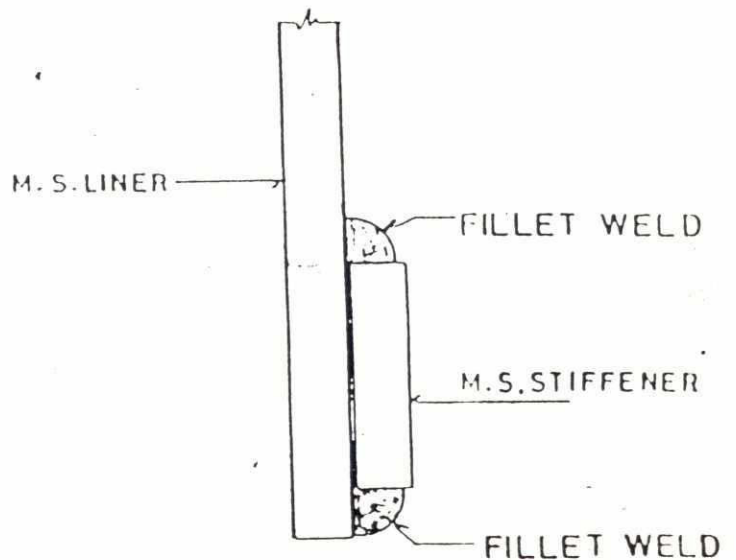
# DETAILS OF LINER WELDING



LINER FOR PILES



DETAIL AT "A"



DETAIL AT "B"

**NOTE - LINER IS NOT A STRUCTURAL MEMBER OF PILE ,  
LINER IS PROVIDED ONLY TO FACILITATE  
BORING AND CONCRETING OF PILE .**



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# CONSORTIUM: THE ENGINEERS LIMITED COROLLA CORPORATION (BD) LIMITED

19/1, KAKRAIL, DHAKA-1000 BANGLADESH. PHONES : 416817, 408067, 413930. FAX : 880-2-833113. TLX : 675632 BIL BJ

## METHODOLOGY OF STEEL SHEET PILING WORK.

1. All Steel Tubler Pile to be fabricated to proper length at work shop as per drawing and specification.
2. Before starting driving of steel pile the central line and location is to be fixed up by driving auxiliary steel pipe of 150 mm  $\Phi$  - 2 to 3 Nos.
3. Piles are to be loaded in the barge and carried to the location for driving.
4. Barge mounted with crane for driving the steel pile is to be fixed in position in water securely with the help of Anchor, Boya and Guyes.
5. Position of the pile to be verified by surveyed before pitching the pile.
6. Steel and Pre-stressed concrete sheet pile also will be driven similarly as per drawing and specification.





# EKA SHIPPING COMPANY

28/B, KAKRAIL, 2ND FLOOR  
DHAKA 1000, BANGLADESH  
PHONE : 419835, 401528  
FAX : 88-02-834657

Dated : April 16, 1994.

CONSORTIUM : THE ENGINEERS LTD.  
COROLLA CORPORATION (BD) LTD.,  
19/1, Kakrail  
Dhaka.

Sub : Quotation for Barge & Tug Boat on hire.

Dear Sir,

We will provide the following equipments on rental basis to  
CONSORTIUM : THE ENGINEERS LTD. - COROLLA CORPORATION (BD) LTD.,  
for the construction of Permeable Groyens at Kamarjani.

1. Flat Top Barge 400 Ton capacity - 1 No.
2. Barge 250 Ton to 300 Ton capacity  
(Local Manufactured) - 2 Nos.
3. Tug Boat 400 HP, Kelvin Engine - 1 No.
4. Tug Boat 460 HP, G.M. Engine - 1 No.

During execution of the work if the Barges and Tug Boats needs  
repair necessary spare parts list and nature of repair and  
materials required and its cost will be intimated to "Engineers"  
for approval. The cost will be Tk. 1 Million (One Million Taka)  
only. Work will be taken up after approval of the cost. Normal  
maintenance has been included in our hire charge.

Thanking you,

Yours faithfully,

*Kamal Bayazid*  
(KAMAL BAYAZID) 16.04.94  
Proprietor



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## Manufacturing of Concrete Blocks





CE

## MANUFACTURE OF CONCRETE BLOCKS.

=====

### I.

(A) Block size 20cm x 20cm x 20 cm.  
Total quantity = 780,000 Nos.  
Quantity of concrete = 6250 M3.

(B) Block size 25 cm x 25cm x 25 cm to  
40 cm x 40cm x 40 cm.

Total quantity = 175000 Nos (Approx.)  
Quantity of concrete = 4800 M3.

### II. PROCUREMENT OF MATERIALS.

- i) Bricks will be procured from Brick Field available in Kamarjani and within district area a radius of 10 KM from the Project site.
- ii) Cement will be procured from Chittagong Cement Clinker factory and Chattak Cement Factory and we will procure 10,000 bags of Cement monthly from these 2 Factory in Bangladesh.
- iii) Sand of F.M. 2.00 as per specification will be met from local sand and Patgram and Dimla sand respectively.

### III. PROGRAMME OF PRODUCTION IS ENCLOSED HEREWITH.

- iv) Necessary Steel Form will be manufactured in our Workshop at Dhaka.
- v) Casting Yard for Block will be made near each site and along the embankment.
- vi) 6 Nos. Diesel operated Concrete Mixer Machine 10/7 capacity with Needle Vibrator will be provided to Concrete work

### IV. Programm Schedule - Enclosed herewith.



CC

## PROCUREMENT OF BRICKS

There are 3 Nos. Brick Field within a radius of 10 KM from KAMARJANI Proposed FAP/21 Project Site. Our total requirement of Bricks will be about 4.5 Million 1st class Bricks. As per owner of the Brick field they can supply us 1.00 Million 1st Class Bricks from last season's production. The balance quantity of 3.5 Million Bricks can be procured by us from those Brick Field by end of December, 1994.

In order to keep our production schedule of Blocks we can start production of Blocks from 1st Week of October, 1994 and complete production of various sizes of Blocks by 15th March, 1995.



## IMPLEMENTATION SCHEDULE

COROLLA CORPORATION (B.D.) LTD.



# BANK PROTECTION AND RIVER TRAINING (AFPM) PILOT PROJECT

FAP 21/22

FLOOD PLAN CO-ORDINATION ORGANIZATION (FPCO)

To  
The Engineers Ltd and Corolla Corporation  
19/1 Kakrail  
Dhaka-1000

Project Office :  
Consulting Consortium FAP 21/22  
House 4, Road 125, Gulshan-1  
Dhaka-1212, Bangladesh  
Tel : (880-2) 600751, 881199  
Fax : (880-2) 883990



Our Ref. : CC/MISC/L/94-086

Date: 15/02/94

Subject : **Bank Protection Pilot Project FAP-21**  
**Construction of Permeable Groynes at Test Site I - Kamarjani**  
**Invitation for Tender (IFT)**

Dear Sirs,

1. The Flood Action Plan contains 11 main components and 15 supporting activities out of which the FAP 21/22 project is funded by Germany and France through the Kreditanstalt für Wiederaufbau (KfW) and Caisse Française de Développement (CFD).

The Project FAP 21/22 was awarded by the Flood Plan Coordination Organization (FPCO) represented by KfW to the Jamuna Test Works Consultants, a Joint Venture of Rhein-Ruhr Ingenieur-Gesellschaft mbH as lead partner, Compagine Nationale du Rhône, Prof. Dr. Lackner & Partners and Delft-Hydraulics in association with Bangladesh Engineering and Technological Services Ltd. (BETS) and Desh Upodesh Ltd. (DUL), the said joint venture called the "Employer" hereinafter.

It is intended that part of the proceeds of this fund will be applied to eligible payments under the contract for the Project FAP 21 - Construction of Permeable Groynes at Test Site I - near Kamarjani, district of Gaibanda.

Bidding is restricted to preselected tenderers from the Peoples Republic of Bangladesh.

2. The Employer invites sealed bids from preselected tenderers for the construction and the completion of

- five impermeable groynes by steel sheet piling, concrete sheet piling and soil dams;
- five permeable groynes, consisting of tubular steel piles, prestressed spun concrete piles and in-situ concrete piles of various diameters;



RHEIN-RUHR INGENIEUR-GES MBH, DORTMUND/GERMANY  
COMPAGNIE NATIONALE DU RHONE, LYON/FRANCE  
PROF. DR. LACKNER & PARTNERS, BREMEN/GERMANY  
DELFT HYDRAULICS, DELFT/NETHERLANDS

In association with :  
BANGLADESH ENGINEERING &  
TECHNOLOGICAL SERVICES LTD.  
DESH UPODESH LIMITED



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- embankment revetments and river bed protections, using natural and prefabricated materials;
  - steel constructions for survey gangways, and for remedying any defects therein.
3. Preselected tenderers may obtain further information from, and inspect and acquire the Tender Documents, at the Dhaka representative office of the Employer, at

**Jamuna Test Works Consultants, Joint Venture**

Consulting Consortium FAP 21/22

House 4, Road 125, Gulshan-1

Dhaka-1212, Bangladesh

Tel: (880-2) 600751, 881199

Fax: (880-2) 883990

4. A complete set of Tender Documents may be obtained by interested preselected tenderers on February 23, 1994, on submission of a written application to the above office.
5. The tenderers or their official representatives are invited to attend the pre-bid meeting, which will be held at office of the Consulting Consortium FAP 21/22, House 4, Road 125, Gulshan - 1, Dhaka-1212, Bangladesh, Tel: (880-2) 600751, 881199, Fax: (880-2) 883990, on ~~Sunday, March 20, 1994~~ at 10 hrs., in accordance with Clause 19 of the Instructions to Tenderers.
6. All tenders must be accompanied by a bid security of Tk. 2,500,000 (two and a half million) and must be delivered to

**Jamuna Test Works Consultants, Joint Venture**

Consulting Consortium FAP 21/22

House 4, Road 125, Gulshan-1

Dhaka-1212, Bangladesh

Tel: (880-2) 600751, 881199

Fax: (880-2) 883990

~~at or before 10 a.m. on Sunday, 17/04/1994.~~ Tenders will be opened immediately thereafter in the presence of tenderers' representatives who choose to attend.



C. Netzeband  
Project Manager  
Jamuna Test Works Consultants,  
Joint Venture





**BANK PROTECTION AND RIVER TRAINING (AFPM)  
PILOT PROJECT**

**FAP 21 / 22**

FLOOD PLAN CO-ORDINATION ORGANIZATION (FPCO)

Project Office :  
Consulting Consortium FAP 21/22  
House 4, Road 125, Gulshan-1  
Dhaka-1212, Bangladesh  
Tel : (880-2) 600751, 881199  
Fax : (880-2) 883990

To  
The Engineers Ltd. and Corolla Corporation  
19/1 Kakrail  
Dhaka 1000

Our Ref: CC/MISC/L/94-234

April 04, 1994

**Subject: Minutes of the Pre-bid Meeting and Questions/Answers**

Dear Sirs,

Please find enclosed the Minutes of the Pre-bid Meeting held on March 20, 1994 in the conference room of FPCO and Answers to all the Questions raised by the bidders.

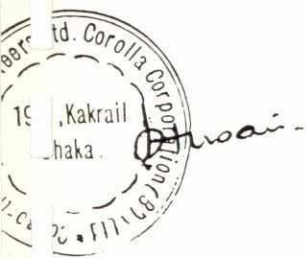
Thanking you

Yours sincerely,

  
C. Netzeband  
Project Manager

Encl: As mentioned above

Copy to: CN, HK, MS, SM, MA, MF, DO



CN/21

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**Subject:** Minutes of Pre-bid Meeting on Tendering FAP 21 test structure at Test Site I - Kamarjani held on March 20, 1994 at 10.00 hrs in the Conference Room of FPCO

A pre-bid meeting on tendering FAP 21 test structure - Groyne at Test Site I - Kamarjani was held on 20.03.94 in the conference room of the FPCO at 10.00 hrs with Chief Engineer, FPCO Mr. M. H. Siddiqi (BU) in the Chair.

**Participants were:**

FPCO:	Mr. Md. Noajesh Ali	Superintending Engineer
	Mr. Akhtar Alam	Executive Engineer
	Mr. M.N. Huda,	Chairman, Panel of Expert
FAP 21/22:	Mr. C. Netzeband	Project Manager
	Mr. S.M. Mansur	Deputy Project Manager
	Mr. A.Q. Mohammad Ali	Hydraulic Design Engineer
Tenderers:	Mr. Shamsur Rahman	M/S Wahidunnabi
	Mr. A.K.M. Saiful Alam	Neptune Commercial Ltd.
	Mr. Mahtabuddin Bhuiyan	M/S M.R. Sikder
	Engr. Md. Mohsin	M/S Mir Akhtar Hossain Ltd.
	Engr. Itemadud Daulah	DIRD-PCM JV
	Engr. A.R. Chowdhury	- do -
	Engr. Abdus Salam	The Bengal Electric Ltd.
	Engr. S.M. Anwar Hossain	Consortium of Agrani Engineers and Construction Ltd. and National Construction Ltd.
	Engr. Manzur Hussain	Consortium the Engineers Ltd. & Corolla Corporation (BD) Ltd.
	Engr. A.S. Maqsood,	- do -
	Engr. Wahiduzzaman Khan,	- do -
	Engr. Proshad Krishna Boiragi	The Engineers & Architects Ltd.
	Engr. Md. Atiqur Rahman	The Civil Engineers Ltd.
	Mr. B. Doza	AML-Monico
	Mr. M.A. Sobhan	Consultant to AML-Monico
	Engr. Joytirmoy Das	Soil Tech International

For discussions in the pre-bid meeting, the Consultant invited the tenderers to prepare as much as possible of their questions in writing by a letter dated March 09, 1994. Accordingly the Consortium of Agrani Engineers & Construction Ltd. and National Construction Ltd. put a bundle of queries regarding general conditions and technical specifications of the Tender Document. A reply to this query was prepared by the Consultant and was discussed in the pre-bid meeting.

With request from the Chairman, Consultant's Project Manager initiated discussion. At the outset he informed the meeting about two aspects. These are

- i) Insurance - The Consultant is negotiating with Sadharan Bima for an overall umbrella coverage of all equipment and works. If this is done, insurance requirement of successful tenderer will be determined on the basis of further need, if any. Position will be notified to each tenderer as soon as negotiation is made with Sadharan Bima.
- ii) Welding equipment under item 3.10 and 3.12 will not be supplied by the Employer as stated. Only 2 units of electric driven roller bed will be provided, i.e. only item 1 of Subsection 330 will be provided by the Employer.

The project Manager then answered the questions, gave explanations of queries and clarified positions as required.

The questions, answers, other information and changes are annexed to this minute as part of deliberations.

The meeting ended with thanks from the Chair.

**Additional information:**

- iii) BoQ item 5.04: should read m<sup>3</sup> (cubicmeter)
- iv) All questions/answers and additional information/changes will be issued in an Addendum to the Tender Documents and will become a part of the Contract lateron.
- v) Question/Answers: See enclosed Annex 1
- vi) Consumables of equipment: See enclosed Annex 2.

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## ANNEX 1

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### CODES:

- [1] Agrani Engineers and National Construction Corporation
- [2] Consortium The Engineers Ltd. and Corolla Corporation Ltd.
- [3] Soil Tech International
- [4] Md Wahidunnabi
- [5] Neptune Commercial
- [6] AML-Monico Consortium





# I ON GENERAL TERMS AND CONDITIONS

**Q.1** *Tender validity period has been mentioned 154 days in clause 16.1 of Vol. 1 for a project of 210 days which seems a long Tender validity period and price escalation may happen during the validity period which may affect the tender prices. [1]*

**A.1** The tender validity must cover the period within which the Contract can be awarded. Though it is scheduled to award the Contract by July, 1994, the latest date for its award has been set by end September '94. The period of time between date of tender submission and scheduled latest date of contract award corresponds to 22 weeks or 154 calendar days. The Works are scheduled for execution between October 01, 1994 and April 30, 1995 (see Appendix to Tender, § 43.1), accordingly any tenderer must give proper consideration to price escalation (refer Sub-Clause 72.1 of Part II of the Conditions of Contract), irrespective of the period of tender validity.

**Q.2** *Defect liability period has been mentioned 364 days i.e. one year for project of 7 months completion period only. Normally defect liability period does not exceed the time maximum of equivalent period of project completion time. We like to propose to keep defect liability period as half time of total project completion period, i.e. three and half months. [1]*

**A.2** Defects Liability Period must not be seen in proportion to the construction period, but must be appropriate for the type of works to be constructed. 364 calendar days are a suitable period to discover any hidden fault in the execution of the works after the end of the monsoon season following the construction of the test structures.

The limitation of defects liability under Sub-Clause 49.1 of Part II of the Conditions of Contract shall ensure Contractor's proper execution of Works, such as compaction of earth works, proper grading and placing of granular filters and proper laying of geotextile filters. Any damage to the Works due to improper execution by the Contractor will be his liability, but damages due to severe flooding are the responsibility of the Employer.

The tenderers shall calculate all rates and prices of the tender in consideration of Sub-Clause 49.1. Alternatively a percentage deduction from the total tender amount may be offered for a reduced liability period of six Months.

**Q.3** *In clause 31.5 it has been mentioned that performance security may be increased for any inconsistency in quoting prices. We need clarification for the said clause for smooth preparation of tender document. [1]*

**A.3** Sub-Clause 31.5 of Instruction of Tenderers deals with unbalanced tenders.

If a particular item has been offered by a tenderer at an exaggerated and highly unreasonable price, the Employer may require the tenderer to submit a detailed cost analysis in support of the said rate or sum.

If a tenderer offers all work items to be carried out in the early stage of the project at extremely high prices but those to be carried out near the end of the construction period at very low prices, a certain risk exists that a contractor, after cashing-in the major amounts at the early stage of the project fails to complete the remaining part in the required time and quality. To prevent such situations the Employer may require the amount of the Performance Security to be suitably increased.

**Q.4** *Whether all provisional items of work will be executed or not or approximately how many percentage of provisional items of work may be executed so as to understand the total programme depending on the volume of work. [1]*



A.4 Provisional Works will be entirely at the discretion of the Employer and the contractor is not entitled to any claim in case any or all of the Provisional Works will not be executed. No estimate of its final volume can be given at this stage. However for scheduling the execution of the works, it should be assumed that all Provisional Works will be carried out. In other words, the 210-days construction period covers all such works and no time extension will be given for execution of provisional work items already included in the Bill of Quantities.

Q.5 *In quoting rates for lump sum items of work whether analysis to be submitted or not. [1]*

A.5 It is not required to submit analysis of lump sum work items, however would be appreciated, since it will facilitate an easier and proper assessment of such sums.

Q.6 *In quoting rates as per clause 14.3 of Vol-I, it has been advised not to consider custom duties, import duties and value added tax. But as per GOB rules we are to pay VAT on service charges in construction. What to be followed and please explain who will pay VAT. [1]*

A.6 Value Added Tax, customs duties etc. will be paid by the Government of the Peoples' Republic of Bangladesh.

Q.7 *Monthly amortization of advance payment has been proposed 25 % against 15 % of advance payment, we like to propose the recovery amount from advance payment 15 % from the interim payment. [1]*

A.7 Repayment of the Advance Payment will be effected as per Sub-Clause 60.6 (b). The rate of deduction from a Interim Payment Certificates is set at 25 % to ensure complete recovery prior to the time when 80 % of the Contract Price has been certified for payment.

Q.8 *In clause 29 (a), (b) correction of errors in quoting rate has been mentioned. If there is discrepancy between the original and copy of tender which one to be followed. [1]*

A.8 In case of discrepancies between the ORIGINAL Tender and any of the copies, only the ORIGINAL will govern. However, tenderers attention is drawn to Clause 20.2 of the Instructions to Tenderers, which requires that any copy of the tender to be submitted to the Employer must be a photostat of the ORIGINAL.

Q.9 *As per clause 37.1 for submission of 10 % performance security 28 days may not be sufficient to maintain the Bank formalities in our country because it needs approval from Board of Directors of any bank which happens normally twice in a month. For the reasons mentioned there should be relaxation of time limit pending approval of Board of Directors of bank and forfeiture of tender security as per clause 37.3 of Vol-I should be relaxed. [1]*

A.9 Submission of the Performance Security within 28 days of the receipt of notification of award from the Employer is a reasonable period, also for conditions in Bangladesh. Anyway, the Performance Security must be submitted by the successful Tenderer as soon as practically possible. Any delay in submission of the Security will automatically delay payment of Advance Payment to the Contractor. In any such case delays would be Contractor's own risk and responsibility and do not entitle to any claim, whatsoever.

Sub-Clause 37.3 of Instructions to Tenderers remains unchanged.

Q.10 *Alternatively to avoid sometimes unnecessary hazard by the bank, we like to propose for provision of submission of performance security from any financial institution like financial investment organisation or insurance company approved by the Central Bank of*





(Bangladesh Bank) Bangladesh like many other international competitive bidding tender in the country. [1]

A.10 Bonds issued by insurance, financial institutions or investment organisations are not acceptable as replacement for the Performance Security.

Q.11 Provision has been provided to deduct 10 % as retention money from the interim progressive Bill although 10 % performance security for faithful performance of the work to be established. We like to propose not to deduct retention money as already 10 % performance security have to be established before contractual obligation. Because for a serious project like Jamuna Test Site I at Kamarjani with 7 month completion time period smooth cash flow to run the project may be disturbed if 10 % retention money is deducted in addition to 25 % deduction for mobilisation advance recovery i.e. total 35 % cash recovery from every progressive Bill will definitely put the constructor in such a financial problem that expenditure for continuity of project will be disturbed in addition to other taxes deduction. [1]

A.11 The retention money as per Sub-Clause 60.4 of Part II of the Conditions of Contract may be reduced to 5 % of the Final Price of the Contract.

Q.12 For any variation of work as in Clause 52.1, 52.2 whether the provisional prices will be paid during interim payment or not. [1]

A.12 Any Provisional Item ordered in writing by the Employer and executed by the Contractor will be verified for payment in the month following the execution of the respective item.

Q.13 As mentioned in Sub-Clause 34.7 page 44 of Vol-II construction of housing & sheds for labourers, skilled workers, field officers & godown etc. has not been incorporated in the Bill of Quantities. How to incorporate the cost of housing in tender prices [1]

A.13 Cost of construction of housing, sanitary facilities, etc. for labours, workers, officers, etc. are to be included in Item 1.02 of Bill No. 01 of the Bill of Quantities. Refer to BoQ, General Conditions, para 3.1 and Specification, Section 500.

Q.14 In Sub-Clause 49.1 of Vol-II, defect liability has been limited for all permanent work including earth works, cofferdam and filter materials also. Usually in every year the project area goes under flood water and for obvious reason the earthen work and filter materials may go washed away. For such item of works defect liability obligation till after one year of work completion should be relaxed as we have much limitation to protect these earthen and filter works. [1]

A.14 Refer to Item 2 above. In addition attention is drawn to Specifications, Subsection 570, which require the Contractor to protect the Site against a Construction Flood defined at level +20.0 m PWD.

Q.15 If we like to form any union or consortium with any company experienced in relevant field of work beyond your pre-selected contractor whether we can form it or not. [1]

A.15 Joint Ventures may be formed only among contractors' pre-selected by the Employer for this project. Other contractors' may be engaged as sub-contractors, always provided that their capability is assessed to be satisfactory and subject to final consent by the Employer.

Q.16 Monthly amortization of advance payment 25 % - 20 %. [2]

A.16 Monthly amortization of advance will be 25 % as mentioned in Sub-Clause 60.7.

Q.17 Retention money - Cl. 60.4 - 10 % - maxim 5 %

*It should be maxim 5 % as in other international tenders. [2]*

A.17 Retention money may be reduced to 5 % as proposed. Refer to Question/Answer 11.

Q.18 Sub-Clause - 73.2/14.3 - 73.2 Vol. II (page 56), 14.3 (page 2-6) Vol. 1

*Local Taxation - Taxes - on the services performed under the contract - VAT.*

*These two Sub-Clauses are contradictory in one case the VAT is included and in other place it is excluded [2].*

A.18 Both Clause 14.3 of I.T.T. and Sub-Clause 73.2 of Part II, Conditions of Contract state that bid prices to be except customs duties, import duties and VAT

Total amount of VAT should be shown separately with the offer and will be paid by the Client.

Q.19 SITE VISIT

*Instructions to Tenderer, Clause - 8.3*

*A site visit is requested concurrently represented by the employer or employer's representative and the pre-qualified contractor duly co-ordinate by the employer at their suitable time but certainly will in advance from the time of submission of tender document. Such visit is anticipated to clarify lot of queries of the tenderer instantly and apprise the tenderer of the site situation more in details by the employer's representative which is expected to enable the tenderer to submit a responsive bid to the requirement of the tenderer document. [3]*

A.19 Site Visit Clause 8.3

The Employer is not going to arrange a site visit. The bidder is requested to visit site themselves. Any clarification regarding the site may be obtained from Dhaka office of the Employer.

Q.20 *We understand that for all the material to be brought from abroad the bidder has to quote only for loading transportation and unloading as per description contained in the bill of quantity viz. Item No. 3.20, 3.21, 3.22, 3.53 and the employer shall take care of the customs and importation tax formalities. [3]*

A.20 Customs and Importation formalities will be done by the Employer/Client. For other details refer to Specification, Sub-Sections 200 and 300.

Q.21 *Whether tender security in the form of insurance guarantee obtained from any recognized insurance company instead of bank guarantee shall be acceptable to the Employer. [3]*

A.21 Insurance guarantees are not acceptable.

Q.22 *Whether performance bond and advance payment guarantee from insurance company is acceptable.*

A.22 Insurance guarantees are not acceptable.



Q.23 Refer - Volume - 1, Page 1-3. The minimum amount of third party insurance has been shown as Tk. 100 million per occupance seems very much high. Please reconfirm. [4]

A.23 For the time being we reconfirm. Final decision will be made after the insurance modalities are finalized. (Refer to the information given in the Pre-Bid Meeting).

Q.24 Refer - Volume - 2, Page 23, Clause 52.1 and 52.2. In both the clause the Engineer has been vested the power to 'Fix' the rate of variation works after due consultation with the Employer and the Contractor. Whether the work 'Fix' will bear the same meaning of the work 'Approve'. Once the rates of variation works have been fixed or approved by the Engineer, will it mean that he has consulted the Employer and as if the rates have been fixed/approved by the Employer. [4]

A.24 "Fix" means a rate determined by Employer, in case Contractor does not agree to a justified price. In this context "Fix" means approved on the part of Employer, but the Contractor may have the reason for a claim, though he is obligated to carry out the Works also in the absence of a final settlement of such claim (if any). "Approved" means a rate/price proposed by Contractor and accepted by Employer.

Q.25 Refer - Volume - 2, Page 29, Clause 60.2, first para. It is stated that the Engineer will certify the monthly bill statement to the Employer within 28 days. Since the work shall have to be completed in 7 months time on crush programme basis, the 28 days time for bill certification is a long time. This may be 7 (seven) days time. [4]

A.25 Bill certification time of maximum 28 days cannot be hanged to 7 days as proposed.

Q.26 The local people has not yet received compensation for land acquired earlier. So they may raise obstruction unless the arrear compensation is paid to them. [5]

A.26 Land acquisition for the permanent works will be done by the Employer and the Client. For the site installation area of the contractor if being outside the area acquired by the Employer the contractor shall undertake and pay for the necessary land acquisition.

Q.27 All equipments to be supplied by employer may be delivered at a time at Mongla port only and not in piece meal to arrange transportation to the site. [5]

A.27 The Employer will try to get all equipment and materials delivered by one shipment to Mongla port.

However, the contractor shall consider several shipments to Mongla and/or Chittagong due availability of vessels and schedule constraints.

Q.28 Payment: Fortnightly statement for claims may be permitted and payment be made within 7 (seven) days of claim. [5]

A.28 Proposals for fortnightly statement of claims and payment within 7 (seven) days cannot be considered.



## II ON TECHNICAL TERMS AND SPECIFICATION

**Q.29** *Project location has not been exactly determined, whether bore log has been done or not. If any bore log report is available, what is the SPT value up to the level of driven sheet pile bottom level. [1]*

**A.29** Project location is defined under Specification, Subsection 501 (2). Subsoil conditions are described under Subsection 020, Specifications and complete bore logs and SPT-values are presented on Drawing No. KA-004. The complete subsoil investigation report may be checked by any interested tenderer at the Employers' Dhaka office. If, consequently to the effects of the coming monsoon season, the construction works must be carried out at a completely different location, Sub-Clause 12.2 of the Conditions of Contract would apply.

**Q.30** *As per water level feature only three month duration is peak working time with minimum water level. Whether sub-surface de-watering involvement will be required or not for geotextile filter/granular filter placing work below water level. [1]*

**A.30** For subsurface dewatering in connection with excavations and fills refer to Specifications, Subsections 513, 923 (4) and 939 (3). Placing of granular or geotextile filters will be carried out either above or below water level, as stipulated in the Bill of Quantities and does not require dewatering.

**Q.31** *For concrete block no item for form work separately is provided in the schedule. For strength of 15 N/mm<sup>2</sup> concrete trial mix design how to be followed and whether by volume or weight. [1]*

**A.31** Concrete block form work is to be included in the respective item for providing the blocks (e.g. BoQ, Item 22.05: 'approved form work boxes', see term 'provide' and 'complete' under Items 13 and 14 of the General Directions of BoQ).

Concrete mix for blocks shall follow the Nominal Concrete Mix as per Subsection 1047 of the Specifications. Individual mix components may be measured by volume or weight.

**Q.32** *For coarse aggregate whether we can use shingles or Brick chips alternatively. [1]*

**A.32** Coarse aggregates for concrete blocks as per Subsection 1040 may be broken first-class bricks refer Subsection 1045. However concrete for bored piles (Section 1200) and structural concrete (Section 1600) shall only be produced with aggregates of natural dense stone or crushed stone/shingles.

**Q.33** *In Clause 1047 (1) and (2) of Vol.III, minimum compressive strength of concrete 15 N/mm<sup>2</sup> and average compressive strength 20 N/mm<sup>2</sup>. Precisely what strength to be attained. Minimum mix. proportion you have mentioned 1:3:6 which seems practically impossible to attain your desired strength. [1]*

**A.33** Compressive strength for concrete blocks under Subsection 1040 of Specifications shall be minimum 15 N/mm<sup>2</sup> for any one test cube of a series of three test cubes, but the minimum average strength of a series of test cubes shall be 20 N/mm<sup>2</sup>. This requirement may be achieved provided the specified cement content and water-cement ratio is maintained.

**Q.34** *The German Industrial standard (DIN) specification guide line like DIN-17120 - st 37-3, DIN - 18800, DIN - 8560, DIN - 8563, DIN 50049 - 3.1 B etc. etc. hand note or any Duetz standard hand leaf is available, would you please supply any cop of it ? [1]*





A.34 Generally any Standard referred to in the Specifications may be substituted by an equivalent national or international Standard, refer to Specifications, Subsection 123. The successful Tenderer will be provided with a set of Standards referred to in the Specifications.

Q.35 *For placing of granular filter how the gradation to be maintained. Whether by determining the seepage gradient of sub-soil material or by abiding the standard gradation method. [1]*

A.35 The gradation of granular filter material shall be controlled by regular sieve analyses. Whenever required, the individual components of a filter layer must be well blended to achieve the desired results, refer to Subsection 1010, Specifications. Details of filter design will be decided later on, in consideration of prevailing subsoil conditions and type/grading of material provided by the Contractor.

Q.36 *For laying of turfing on embankment in clause 1079 (2), it is mentioned that extra 10 cm fertile soil to be placed. Is it necessary to put extra fertile soil or just over the compacted embankment. [1]*

A.36 Grass sods for turfing of embankment slopes shall be laid on a 10 cm thick layer of fertile soil (Subsection 1079(2) of Specifications). This is an extra layer to be placed on the compacted and finished slope of the respective embankment.

Q.37 *As mentioned in clause 310 for lending of equipments like pile installation equipment, steel pile assembly equipment, crawler crane and pontoon, is it enough to execute the project. In Bill No -3 for different equipment, number is not mentioned. How to arrive at lump sum rate without knowing the number. [1]*

A.37 Bill No. 03 of the BoQ covers taking-over of Employers' equipment by the Contractor. Bill No. 03 and Specifications, Section 300 are to be read in conjunction.

Example: BoQ-Item 3.01: The respective equipment is detailed under Subsection 322 (which includes Figure 322-1) and the shipped units are specified under Subsection 321, and so on.

Q.38 *Is it customary to provide site laboratory or whether we can test materials etc. from any institution adjacent to site. [1]*

A.38 The Contractor shall provide at Site a laboratory as specified under Subsection 560. All related cost are to be included in BoQ-Item 1.06. A nearby institution will not be accepted.

Q.39 *Whether any surveying equipment mainly some of important equipment like electronic distance measurement (EDM) is available with the owner or not. [1]*

A.39 Contractor must maintain his own survey equipment, including EDM, as specified under Section 600 of the Specifications. The Employer has available a range of survey equipment, which, however, can not be made available to the Contractor on a permanent basis.

Q.40 *In case of any dredged spoil/surplus what may be the maximum distance for spreading the surplus as per clause 850 920 in Vol.III. [1]*

A.40 Disposal of surplus/unsuitable dredged material shall be within 300 m.

Q.41 *For earth work with desired compaction whether it may be necessary for any imported classified soil or not. For embankment the requirement for degree of density from 0'6 - 0'75 as per clause 935 (6) in Vol III is difficult to attain by sandy soil as available in the project area, what to be followed. [1]*

A.41 Material for fill shall correspond to Subsection 933(1) and (2) and the requirements for degree of compaction relates to those materials. The Contractor has to select the compaction equipment and layer thickness accordingly. Unsuitable soil, i.e. highly cohesive material will not be accepted for construction of embankments or impermeable groynes.

Q.42 *For steel sheet pile whether there is any expansion joint or not. Such item is not available in the Bill of Quantities. [1]*

A.42 14 Steel sheet pile cofferdam does not require expansion joints.

Q.43 *If the SPT value become high beyond the allowable driving blows at bottom layer what may be the consequences for sheet pile, tubular pile and R.C.C. pre-cast piling. [1]*

A.43 In case the tubular steel piles or prestressed spun concrete piles can not be installed to Design Depth (refer Subsection 1533 of Specifications) auxiliary measures shall be employed, such as removal of soil from pile interior by airlift pump or similar means and subsequent redriving, providing of additional friction reduced rings, etc. Such measures will be decided at the time between Employer and Contractor.

Q.44 *Item no. 31.02 in Bill No. 31 for Groyne G-3 as alternative item, compaction of existing sub-soil surface with specified degree of density has been depicted but up to what depth of fill to be compacted has not been mentioned. Please clarify it. [1]*

A.44 Refer to Specification, Subsection 935 (6), which specifies a compaction of present surface up to 0.5 m depth.

Q.45 *The equipments to be given by the owner, how to be used either on rental basis or service charges/operation cost basis. For any mode of use please clarify in details so as to incorporate cost involvement in tender prices. [1]*

A.45 Refer to Specification, Subsections 310 and 340, which specify the conditions of equipment hire.

Q.46 *Whether the construction equipment will be unloaded at Chittagong port or not. [2]*

A.46 Construction equipment may be unloaded at Chittagong or Mongla port. So rate for both to be quoted by the bidder.

Refer to Question/Answer 27

Q.47 *Subsection: 450 - Pile installation on shore*

Who will supply:

1.	Crawler crane with piling loader	
2.	Diesel pile hammer	- K 35
3.	Diesel pile hammer	- K 22 [2]

A.47 The Contractors have to provide all equipment as asked for in the tender and all equipment he seems necessary for the execution of the works, except those items provided by the employer and described under Specification Subsection 300 (310 to 350).

Items Sl. No. 1 to 3 under Subsection 450 shall be supplied by the Contractors.

These items are available in Bangladesh.





Q.48 Subsection: 600

*We will follow the instruction of surveying as laid down by you. Why you want the surveying method along with the tender. [2]*

A.48 Surveying and sounding works are very important items of the works. Therefore, the tenderer shall submit details of the intended surveying methods and equipment, which will influence the evaluation of tender.

Q.49 Specification Subsection 933/944

Falling and Backfilling from Borrow Pit.

*\* Requested indication regarding proximity of the borrow pit where-from sand/soil to be collected for backfilling purposes. [3]*

A.49 Backfill materials to be collected from a maximum distance of 300 m from the fill location.

Q.50 *Please indicate ownership of the borrow pit area. We presume BWDB is the owner of the borrow pit area. In case the borrow pit area is a public land and does not belong to BWDB please advise whether the tenderer has to consider the cost towards payment to the land owner. [3]*

A.50 Ownership of the borrowpit land will be with the employer. Refer to Question/Answer 26.

Q.51 *Please indicate whether the employer shall keep the contractor indemnified against all cost that the contractor may incur towards crop compensation during execution of the work or the employer wish to compensate the private land owner directly whose property may interfere with the project area and the execution of the work. [3]*

A.51 As the borrow area being purchased by the owner, no crop compensation should be considered by the bidder. Refer to Question/Answer 26

Q.52 Specification Subsection - 322

*Power Pack for Vibrator and Hydraulic hammer*

PTC - Power Pact Model MH 600

*Because of very rare use of such mechanical unit in the country following information are requested:*

1. *Type of fuel to be used*
2. *Type/Grade of lub oil to be used*
3. *Rate of fuel consumption in litre/hr operation. [3]*

A.52 The necessary information are given in Annex 2.

Q.53 Specification: Subsection 350

*The item P 1.04 (page 4-6) Volume 1 is not clearly understood. Please clarify with example. [3]*

A.53 The clarification regarding clause 1.04 is given in Subsection 410 (1), (2), (3) and (4) of Vol. III, Specification.



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Q.54 Please indicate where the equipment supplied by the employer to the contractor as indicated vide Subsection No. 320, 330, 340, 350 has to be returned after completion of the work. [3]

A.54 All equipment under Section 300 of the Specifications will become property of the Client after the works are finished.

Since the exact location is not yet decided, for pricing, the contractor shall consider a stockyard in or near Dhaka.

Q.55 Who will pay the salary, fuel etc. of the operational and maintenance cost of crane operator, mechanic etc. of 150 T crane ? [5]

A.55 Operation and Maintenance of the 150 T crane and the barge will be provided by the crane/barge owner (refer to Subsection 340 and 350). Consumable like fuel and lubricants have to be provided by the contractor refer to Question/Answer and Annex ?

Q.56 BWDB will construct the embankment and groynes will be constructed in relation to this embankment. The commencement date 1st October will depend on completion of BWDB embankment. This should be ensured. [5]

A.56 Embankment to be constructed by BWDB can be connected to the groyne, later than October, 1994. The connection time is not dependent with our time schedule for commencement of the works.

Q.57 Bathymetric Survey Work

BoQ Item 06 requires this 'to be carried out prior to commencement of Construction Works at Site'. Vol II spec. C. 650 requires this 'must be completed prior to the start of any construction activities within the river'.

Clarifications are needed on the type of sounding equipment which is expected to be used under this circumstances. If echosounder is required to be used, then BWDB/IWA's support will be needed. [6]

A.57 Bathymetric survey works will require echosounding. If the contractor can not provide such services, he shall subcontract such works to specialised companies.

Q.58 Dredging Works

Vol. II Spec. c. 800 includes Spec. for dredging works. Apparently dredging works are not required under this Contract. Clarifications are needed in this respect. [6]

A.58 Dredging Works:

At this stage only excavation below water level (for driving piles near bank-line) is expected. Dependent on final site situation, also "dredging" by floating equipment may be required.

Q.59 Prestressed Spun Concrete Piles

Drg. No. KA-401 shows use of these piles for Groyne G-A. Drg. No. KA-403 shows its prestressing details without mentioning the extent of prestressing force applied in the pile. Before taking delivery of the same, information will be needed either on the amount of prestressing force applied or on its axial load-moment interaction diagram to plan the handling and driving operations efficiently.



*Information are needed on the grade of steel proposed to be used in the steel joint plate. Is it constituted of corrosion-resistant material ? [6]*

A.59 Prestressed Spun Concrete Piles:

Spec. Subsection 240 contains the required information. refer also to BoQ item 3.60, page 3.61

Q.60 *Imported materials and equipment are to be transported to site by the Contractor. Two situation may arise in handling them:*

- a) *If the materials and equipment can be loaded directly to carrying vessels from mother vessel, the transportation cost will be less.*
- b) *If the materials and equipment are unloaded at harbour, transported to some place for loading on carrying vessel by truck, the transportation cost will be twice of that indicated in (a).*

*Which cost to be quoted by the Contractor ? [1]*

A.60 Employer is trying to get all the equipment and materials shipped on one vessele which will unload at Mongla where there should not be any problem of unloading them from mother vessel to carrying vessel of the contractor. In Consultant's opinion 'a' should be considered for costing and transportation of goods and materials. Refer to Question/Answer 27.



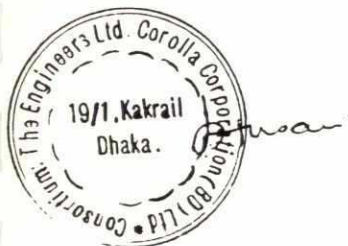


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## ANNEX 2

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## I CONSUMPTION OF THE 150 CRANE:

- a) The fuel (diesel) consumption of the 150 ton capacity crane (Manitowoc 4000 W) is 25 litres per hour.
- b) Lub oil consumption for this crane is 0.75 (point Seven Five) Litres per hour.

## II TANK CAPACITIES AND CONSUMPTION OF:

- Power pack PTC Model MH 600 (ref to Subsection 322)
- Vibrator PTC - Vibrofonceur Model 50 MH (refer to Subsection 323)
- Hydraulic Piling Hammer Menck MHF 10-15 (refer to Subsection 324)

The tank capacity of hydraulic power pack is 100 liters and will leave the manufacturer with HYDRELF 46 produced by ELF. It is recommended to change the hydraulic oil every 600 hours. The same oil will supply the vibrator 50 H4 and the MENCK hydraulic hammer.

The vibrator gearbox contains 22 liters of KASSILA 200 produced by ELF. It is recommended to change the oil every 100 hours of vibration.

The fuel consumption of the power pack at maximum load is 80 liters per hour for a fuel tank capacity of 1000 liters.

## III SPECIFICATION OF MINERAL OILS FOR THE ITEMS UNDER II

### Excerpt of Operating Manual

#### IV - OILS

- A) - VIBROFONCEUR 50 MH  
"Extreme pressure" oil,  
meeting standard : ISO 67/43 category CC

#### LIST OF CERTAIN BRANDS OF MISCIBLE MINERAL OILS FOR THE CHRAKCASE OF THE VIBRATORY GEARBOX

BRAND	NAME	VISCOSITY Cst at 40°C	VISCOSITY NUMBER	FREEZING POINT °C	DENSITY
AGIP	BLASIA 220	220	85	- 20	0.895
BP	GR. XP 220	220	93	- 21	0.904
ELF	KASSILLA 220 * REDUCT ELF 220	210/230 190/242	99 90	- 18 - 10	0.900 0.910
ESSO	SPARTAN, EP 220	210	93	- 21	0.908
MOBIL	MOBILGEAR 630	208	94	- 21	
SHELL	OMALA 220	220	100	- 18	0.900
TOTAL	CARTER EP 220	220	96	- 12	0.896

\* Original oil ex P.T.C factory.

**Note:** Owing to its bisulphide additives, KASSILLA 220 reduces friction and lowers the operating temperature.  
In the event of non-stop operations (cut-off wall jobs, for example), it is recommended to use a miscible mineral synthetic oil : MOBIL SHC 630

BY COLD WEATHER (FROM - 5° c TO - 20 °c):

ELF	REDUCTELF HPN 68	68	105	- 27	0,900
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B) POWER PACK MH 600

Engine: Category CD, service conditions API  
SAE 30 oil: see manufacturer's manual.

Reducer (or multiplier) power take off in the event of twin hydraulic pumps : KASSILA 200 oil as for the VIBROFONCEUR.

Hydraulic circuit oil tank : oil for hydrostatic transmission meeting standard : ISO 6743/4 category. HV

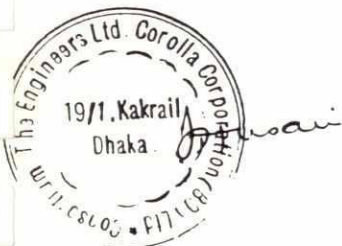
LIST OF CERTAIN BRANDS OF MISCIBLE MINERAL OILS (GROUP 4)  
FOR HYDRAULIC TRANSMISSION TANK FILLING GEARBOX

BRAND	NAME	VISCOSITY Cst at 40°C	VISCOSITY NUMBER	FREEZING POINT °C	DENSITY
AGIP	ARNICA 46	42	186	- 28	0.871
BP	SHF 46	46	174	- 36	0.872
	TP 46	46	173	- 40	0.883
ELF *	HYDRELF 46	49.8	152	- 42	0.881
ESSO	UNIVIS N 46	44.5	172	- 36	0.876
MOBIL	DTE 15 M	46	150	- 48	0.880
	MOBILFLUID	49	151	- 52	0.880
TOTAL	EQUIVIS ZS 46	46	160	- 36	0.875
SHELL	TELLUS T 46	46	180	- 40	0.868

\* Original oil ex P.T.C factory.

BY COLD WEATHER (FROM - 5° c TO - 20 °c):

ELF	HYDRELF 22	68	23.6	- 42	0.867
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# Pre bid Meeting

20/3/94

97

Participants	Organization/Firm	Signature
1. M. H. Liddleme	FPCO	
2. Md. Noajesh AL.	FPCO	H.B.L. up
3. Akhtar Alam	FPCO	malam
4. Mr. Not seaband	FAP 4/22	
5. S. M. Mondur	FAP 4/22	unghon
6. A. Q. Mohammad AL.	FAP 4/22	
7. Shamsur Rahman AL	MD. WAHIDUR NAISI	
8. A.K.M. SAIFUL ALAM	NEPTUNE COMMERCIAL LTD.	
9. MAHTAB UDDIN BHUIYAN	M/S, M.R. SIKDER	
10. Engr. Md. Mohsin	M/S Mir Akhter Hossain Ltd.	
11. Engr. Hemad ud Daulah	DIRD-PCM JV	
12. Engr. A.R. Chandany	DIRD-PCM JV	
13. Engr. Abdus Salam	The Bengal Electric Ltd	
14. Engr. S.M. Anwar Hossain	Consortium of Anwar Engineering & Const. Co. Ltd. & National Cons. Co. Ltd.	
15. ENR MANZUR HUSAIN	CONSORTIUM THE ENGINEERS LTD	
16. Engr. A.S. MAQSOOD	- DO -	
17. Engr. Waliduzzaman Khan	- DO -	



## Participants

- Engr. Proshad Krishna Borraji  
 18 Engr. Md. Atiqur Rahman  
 19. <sup>3</sup> ~~Engr.~~ <sup>Engr.</sup>  
 20. M.A. Sabhan  
 21. Engr. Jyotirmoy Das  
 22. Mr. M. N. Huda

## Organisation/Forum

The Engineers & Architects Ltd.  
 THE CIVIL ENGINEERS LTD.  
 ANL - MONICO  
 Consultant to ANL MONICO  
 SOILTECH INTERNATIONAL LTD.  
 Chairman/ PDE  
 FT Co

## Signature

Borraji 29/3/94  
 M. A. Sabhan 20/3/94  
 Engr. Jyotirmoy Das 20/3/94  
 Mr. M. N. Huda 20/3/94



Engr. Jyotirmoy Das

## Analysis of Items





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Analysis for Item No. 1.02

A)

1. Office	30 M x 5 M	= 150 M2
2. Store Cement	40 M x 5 M	= 200 M2
3. General Store	15 M x 5 M	= 75 M2
4. Work shop	40 M x 15 M	= 600 M2
5. Laboratory	20 M x 5 M	= 100 M2

Living Quarter

6. Engineer & Staff	5 x 40	= 200 M2
7. Operator/Worker	2 x 4 x 50	= 400 M2
8. Generator Room	1 x 10 x 6	= 60 M2
9. Ansar-Guard		= 70 M2
Total :		1,855 M2

Say 1,855 M2 @ Tk. 2,200.00 = Tk. 40,81,000.00

B) Water Supply System	..... L.S....	Tk. 2,50,000.00
C) Water Tubewell	..... L.S....	Tk. 5,00,000.00
D) Electric supply & Maintenance cost @ 20,000 x 7.25 Months		Tk. 1,45,000.00
E) Site Development		Tk. 3,00,000.00
F) Rent for land = 600 M x 100 M = 60,000 M2 @ 6.00		Tk. 3,60,000.00
		Tk. 56,36,000.00
G) Add for overhead & profit 12.5%		Tk. 7,04,500.00
		Tk. 63,40,500.00
H) Add for Income tax 2.5%		Tk. 1,58,512.00
		Tk. 64,99,012.00

Say Tk. 65,00,000/-



BD

# Analysis for Item No. 1.03

## A. Mobilization & Repairs of own Equipment

i) P & H Crane/other crane & spares L.S.	Tk. 3,00,000/-
ii) Diesel Hammer K 22,K13 & spares	Tk. 2,00,000/-
iii) Generators	Tk. 2,50,000/-
iv) Winch & other equipments spares	Tk. 3,00,000/-
v) Uni Floats repairing & painting	Tk. 1,50,000/-
vi) Slip way for shifting steel piles to place of installation and in barge	Tk. 4,00,000/-

## B.

i) Transportation to Site all equipments @ Tk. 1,50,000/- per trips 3 Nos.Trips	Tk. 4,50,000/-
ii) Labour charge for loading and unloading at Dhaka yard & Project site.	Tk. 1,50,000/-

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Tk.22,00,000/-

## C. Add for Overhead & Profit 12.5%

Tk. 2,75,000/-

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Tk.24,75,000/-

## E. Add for Income Tax 2.5%

Tk. 61,875/-

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Tk.25,36,875/-

**Say = Tk.25,00,000/-**



b3

Analysis of Item No. 1.06

Unit Per Month

Basis for 7 Months

(Site Laboratory with Maintenance and Operation)

A. Equipments of Laboratory	Tk. 12,50,000/-
B. Furniture, Fixture etc. L.S.	Tk. 70,000/-
C. <u>Establishment</u>	
Lab in charge (1 No.) @ Tk.15,000/- x 7 months	
Technician ( 3 Nos) @ Tk. 5,500/- x 7 "	
Lab helper ( 4 Nos) @ Tk. 2,500/- x 7 "	Tk. 2,90,500/-
D. Materials/Chemicals for Testing @ Tk. 15,000/- x 7 months	Tk. 1,05,000/-
E. Transport for Lab for Performing testing and collection of sample @ Tk.15,000/- x 7 months	Tk. 1,05,000/-
	<hr/> Tk. 18,20,500/-
F. Add for overhead & profit 12.5%	Tk. 2,27,562/-
	<hr/> Tk. 20,48,062/-
G. Add for Income Tax 2.5%	Tk. 51,201/-
	<hr/> Tk. 20,99,263/-
	Say Tk. 21,00,000/-

Rate of Cost per Month Tk. 3,00,000/-



62

Analysis for Item No. 1.12

A. Cost of Materials

1) Sundries materials such as wire rope, chips, shakles etc. Tk. 1,50,000/-

B. Cost of Labour

1) 200 x 25 = 5,000 Working days @ Tk. 80/- /day Tk. 4,00,000/-

C. Shifting all materials & equipment from site to Dhaka yards (own)

Hire charge of Barge including fuel & operators 4 trips @ Tk. 1,50,000/- /trips Tk. 6,00,000/-

D. Labour charge for unloading & carriage to the Dhaka yard Tk. 3,40,000/-

E. Supervision including salary for staff Tk. 70,000/-

Tk. 15,60,000/-

F. Add for Overhead & Profit 12.5% Tk. 1,95,000/-

Tk. 17,55,000/-

G. Add for Income Tax 2.5% Tk. 43,875/-

Tk. 17,98,875/-

Say = Tk. 18,00,000/-  
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16

Analysis for Item No. 10.23

Steel Pile  $\phi$  711.2 x 14.2 mm installation  
Output considered = 310 RM

A. Cost of Materials (output considered 310 RM)

i)  $\phi$  7  $\div$  8 wire rope with sakle and clips  
 $\frac{25 \times 310}{200} = 40 \text{ M @ Tk.350/-}$  Tk. 14,000/-

ii) Pipe support for pile Rig  
2.0 Ton @ Tk. 15,000/- Tk. 30,000/-

Tk. 44,000/-

Rate component per RM Tk.142/-

B. Cost of Equipment

i) Auto Rig with K22 Hammer with  
accessories complete 12 W.days @ Tk. 10,000/- Tk. 1,20,000/-

ii) Fuel 20 G x 12 x 4.53 = 1087 litre @ Tk.15/- Tk. 16,308/-

Tk. 1,36,308/-

Rate component per RM Tk.440/-

C. Cost of Labour

Operator = 2 x 12 W.days @ Tk. 250/- Tk. 6,000/-  
Skill worker = 12 x 8 W.days = 96 M-D @ Tk.120/- Tk. 11,520/-  
C.worker = 12 x 6 W.days = 72 M-D @ Tk.80/- Tk. 5,760/-

Tk. 23,280/-

Rate component per RM Tk.75/-

D. Others

Supervision including salary of field staff  
& Engineers L.S. Tk. 20 000/-

Rate component per RM Tk.80/-

GENERAL SUB TOTAL (A+B+C+D)

Tk. 2,23,588/-

E. Add for overhead & profit 12.5%

Tk. 27,948/-

Tk. 2,51,536/-

D. Add for Income Tax 2.5%

Tk. 6,288/-

Tk. 2,57,825/-

Rate per RM Tk.831/-



18

Analysis for Item No. 10.25

1220 x 20 mm Pile installation (Off-SHORE)  
Output considered = 210 RM

A. Cost of Materials

i) Tools & Tackles	Tk. 5,000/-
ii) Temporary pile support, materials for encchoring the barge during driving the pile and other arrangement arrangement.	Tk. 30,000/-
	<hr/> Tk. 35,000/-

Rate component per RM Tk.166/-

B. Cost of Equipment

i) Barge 13 W-D @ Tk.3000/-	Tk. 39,000/-
ii) Tag 13 W-D @ Tk.2000/-	Tk. 26,000/-
iii) POL L.S.	Tk. 45,000/-
	<hr/> Tk.1,10,000/-

Rate component per RM Tk.524/-

C. Cost of Labour

Operator = 2 x 13 W.days = 26 W.days @ Tk. 500/-	Tk. 13,000/-
Skill worker = 13 x 6 W.days =78 W-D @ Tk.120/-	Tk. 9,360/-
Semi worker = 13 x 4 W.days = 52 W-D @ Tk.80/-	Tk. 4,160/-
	<hr/> Tk. 26,520/-

Rate component per RM Tk.126/-

D. Others

Supervision including salary of field staff & Engineers L.S.	Tk. 15,000/-
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Rate component per RM Tk.71/-

GENERAL SUB TOTAL (A+B+C+D)	Tk. 1,86,520/-
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E. Add for overhead & profit 12.5%	Tk. 23,315/-
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Tk. 2,09,835/-

D. Add for Income Tax 2.5%	Tk. 5,246/-
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Tk. 2,15,080/-

Rate per RM Tk.1,024/-



68

Analysis for Item No. 12.16

Output considered = 450 M<sup>3</sup>

A. Cost of Materials

1) Cement 450 m <sup>3</sup> x 210 kg/m <sup>3</sup> = 94.5 Ton @ Tk.4,400.00 P/M <sup>3</sup>	Tk. 4,15,800.00
2) Brick Chips 450 M <sup>3</sup> x .9 = 405 M <sup>3</sup> @ Tk. 920.00/M <sup>3</sup>	Tk. 3,72,600.00
3) Sand 450 M <sup>3</sup> x .45 = 202.5 M <sup>3</sup> @ Tk. 350.00/M <sup>3</sup>	Tk. 70,875.00
4) Form work materials 11250 M <sup>2</sup> ÷50 = 225 M <sup>2</sup> @ Tk.600.00/M <sup>2</sup>	Tk. 1,35,000.00
	Tk. 9,94,275.00

Rate component/ M<sup>3</sup> = 2,210.00

B. Cost of Labour

1) Concreting, Pouring & Curing etc.450 M <sup>3</sup> @ Tk.105.00 P/M <sup>3</sup>	Tk. 47,250.00
2) Form fitting,filling,fixing etc. 450 M <sup>3</sup> x 25 M <sup>2</sup> /M <sup>3</sup> 11,250 M <sup>3</sup> @ Tk. 18.00 P/M <sup>2</sup>	Tk. 2,02,500.00
3) Storing in/c Local handling 450 M <sup>3</sup> ÷ .008/block = 56250 Pcs @ Tk.0.50 each	Tk. 28,125.00
	Tk. 2,77,875.00

Rate component/M<sup>3</sup> = 617.00

C. Equipment & Machineries

1) Mixer Machine 450 M <sup>3</sup> ÷ 35 M <sup>3</sup> /day = 13 W.Day @ Tk.500.00	Tk. 6,500.00
2) Vibrator = 13 W.Day @ Tk.100.00	Tk. 1,300.00
3) Fuel = 13 x 2 x 8 x 4.53 x 1.1 (for vibrator) 1,036 Litre @ Tk. 15.00	Tk. 15,540.00
	Tk. 23,340.00

Rate component/M<sup>3</sup> = Tk.52.00

D. Others (out put consideration = 450 M<sup>3</sup>),  
Supervision in/c, the salary for field  
staff & Engineer ..... L.S.....

Tk. 62,000.00

Rate component/M<sup>3</sup> = Tk.138.00

General sub Total/M<sup>3</sup> (A+B+C+D)

Tk.13,57,490.00

E. Add for Overhead & Profit 12.5%

Tk. 1,69,686.00

Tk.15,27,176.00

F. Add for Income Tax 2.5%

Tk. 38,179.00

Tk.15,65,355.00

Rate Per M<sup>3</sup> = Tk. 3,478/-



14

Analysis for Item No. 12.19

Output considered = 650M<sup>2</sup>

A. Cost of Materials

i) Bricks for both layer 650 M <sup>2</sup> x 86 = 55900 Nos. @ Tk.2.20	Tk. 1,22,980/-
ii) 12 SWQ Mesh wire netting 650 M <sup>2</sup> x 2 x 1.0447 = 1358.15 M <sup>2</sup> @ Tk. 100/-	Tk. 1,35,815/-
iii) 1 " wooden pegs = 163 " x .075 x .075 = 0.92 M <sup>3</sup> @ Tk.18,000/-	Tk. 16,560/-
	<hr/> Tk. 2,75,355/-
Rate component/M <sup>2</sup> Tk.424/-	

B. Cost of Labour

i) Soling & Hearing bond 650 M <sup>2</sup> @ Tk.26/-	Tk. 16,900/-
ii) Mesh placing including fixing pcs. & binding in 2 layer 1300 M <sup>2</sup> @ Tk.22/-	Tk. 28,600/-
	<hr/> Tk. 45,500/-
Rate component/M <sup>2</sup> Tk.70/-	

C. Cost of Equipment including sundries &  
tools 650 M<sup>2</sup> @ Tk.25/-

Tk. 16,250/-

Rate component/M<sup>2</sup> Tk.25/-

D. Others

Supervision including salary for field  
staff and Engineers L.S.

Tk. 33,800/-

Rate component/M<sup>2</sup> Tk.52/-

GENERAL SUB TOTAL (A+B+C+D)

Tk. 3,70,905/-

E. Add for Overhead & Profit 12.5%

Tk. 46,363/-

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Tk. 4,17,268/-

F. Add for Income Tax 2.5%

Tk. 10,432/-

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Tk. 4,27,700/-

Rate per M<sup>2</sup> Tk.658/-





69

Analysis for Item No. 13.01

Output considered = 1 TON

A. Cost of Materials

- |  |           |
|--|-----------|
| 1) To be supplied by the employer                            | Nil       |
| 2) Sundries materials such wire rope, clip shakels etc. L.S. | Tk. 215/- |

B. Cost of Labour

- |  |           |
|--|-----------|
| 1) Local carriage & handling 4.5 M-D @ Tk.80/- | Tk. 360/- |
| 2) Erection :                                  |           |
| Crane operator 2 hrs. @ Tk. 30/- per hr.       | Tk. 60/-  |
| Helper 2 hrs. @ Tk. 15/- per hr.               | Tk. 30/-  |
| Driver 2 hrs. @ Tk. 20/- per hr.               | Tk. 40/-  |
| Steel fixer 24 hrs. @ Tk. 15/- per hr.         | Tk. 360/- |
|  | Tk. 850/- |

Rate component per ton Tk.850/-

C. Equipment & Machineries

- |                                       |             |
|---------------------------------------|-------------|
| 1) Crane 1.25 hrs. @ Tk.750/- per hr. | Tk. 937/-   |
| 2) Truck 1.25 hrs. @ Tk.200/- per hr. | Tk. 250/-   |
| 3) Fuel 18 Ltrs. @ Tk. 15/- per hr.   | Tk. 270/-   |
|                                       | Tk. 1,457/- |

Rate component per ton Tk.1,457/-

D. Others (output considered = 1 T)

Supervision including salary of staff & Engineers L.S.	Tk. 250/-
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GENERAL SUB TOTAL (A+B+C+D)	Tk.2,772/-
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E. Add for Overhead & Profit 12.5%	Tk. 346/-
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Tk.3,118/-

F. Add for Income Tax 2.5%	Tk. 78/-
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Tk. 3,196/-

Rate per ton Tk.3,196/-



1/1

Analysis for Item No. 20.48

Output considered = 1 No.

A. Cost of Materials

1) Cutting .0754 M <sup>2</sup>	
a) Oxygen 0.8 bottle @ Tk. 400/-	Tk. 320/-
b) Acetylene 0.3 bottle @ Tk.1,400/-	Tk. 420/-
c) Electrodes 1.25 packet @ Tk. 300/-	Tk. 375/-
	<hr/>
	Tk.1,115/-

Cost Tk. 1,115/- for Each No.

B. Cost of Equipment

I) Welding Machine 4 Hrs. @ Tk. 60/-	Tk. 240/-
II) Pipe cutting set including accessories L.S	Tk. 200/-
III) Grinding Machine with stone L.S	Tk. 60/-

---

Tk. 500/-

Cost Tk. 500/- for Each No.

C. Labour Cost

I) Welder - 1.5 M-D @ Tk.250/-	Tk. 375/-
II) Semi skilled 1.5 M-D @ Tk. 80/-	Tk. 120/-
	<hr/>
	Tk. 495/-

Cost Tk. 495/- for Each No.

D. Others (output considered 1 No.)

Supervision including the salary of field staff & Engineers L.S	Tk. 250/-
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Cost Tk. 250/- for Each No.

<u>General sub Total (A+B+C+D)</u>	Tk.2,360/-
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E. Add for Overhead & Profit 12.5%	Tk. 295/-
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Tk.2,655/-

F. Add for Income Tax 2.5%	Tk. 66/-
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Tk.2,721/-

Rate Tk. 2,721/- for Each No.



fn

Analysis for Item No. 32.05

Output considered = 1800M<sup>3</sup>

(Av. Size = 30 cm x 30 cm x 30 cm /Block)

A. Cost of Materials

1) Cement 1800 M <sup>3</sup> x 210 Kg/M <sup>3</sup> = 378 Ton @ Tk.4400/- /Ton	Tk. 16,63,200/-
2) Brick Chips 1800 x .9 = 1620 M <sup>3</sup> @ Tk. 920/- /M <sup>3</sup>	Tk. 14,90,400/-
3) Sand 1800 x .45 = 810 M <sup>3</sup> @ Tk.350/- /M <sup>3</sup>	Tk. 2,83,500/-
4) Form Work 30,000 M <sup>2</sup> ÷ 30 = 1000 M <sup>2</sup> @ Tk.750/- /M <sup>2</sup>	Tk. 7,50,000/-
	<hr/> Tk. 41,87,100/-

Rate component/M<sup>3</sup> Tk.2,326/-

B. Cost of Labour

1) Concreting, Paving, Curing etc. complete 1800 M <sup>3</sup> @ Tk.105/- /M <sup>3</sup>	Tk. 1,89,000/-
2) Form work fitting, fixing etc. complete 30000 M <sup>2</sup> @ Tk.20/- /M <sup>2</sup>	Tk. 6,00,000/-
3) Storing including local handling 66667 Nos. Block @ Tk 2/- Each	Tk. 1,33,334/-
	<hr/> Tk. 9,22,334/-

Rate component/M<sup>3</sup> Tk. 512/-

C. Equipment & Machineries

1) Mixer Machine 1800 ÷ 35 M <sup>3</sup> = 52 W.days @ Tk.500/- /day	Tk. 26,000/-
2) Conc. Vibrator 52 W.days @ Tk. 100/- /day	Tk. 5,200/-
3) Tractor for local carriage (Hire charge) 4320 ÷ 40 ÷ = 108 W.days @ Tk.1000/- /day	Tk. 1,08,000/-
4) Fuel 1473 gal x 4.53 = 6672.69 litres @ Tk. 15/- /litre	Tk. 1,00,090/-
	<hr/> Tk. 2,39,290/-

Rate component/M<sup>3</sup> Tk. 133/-

Others ( output considered = 1800 M <sup>3</sup> , Supervision including the salary of field staff and Engineers L.S.	Tk. 5,20,600/-
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GENERAL SUB TOTAL (A+B+C+D)

Tk. 58,69,324/-

E. Add for Overhead & Profit 12.5%

Tk. 7,33,665/-

F. Add for Income Tax 2.5%

Tk. 66,02,989/-

Tk. 1,65,074/-

Tk. 67,68,063/-

Rate per M<sup>3</sup> Tk. 3,760/-



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# Analysis for Item No. 32.09

Output considered = 700M³

## A. Cost of Materials

1) Stone, Grading Range E, D50 = 30 CM supplied by Employer

2) Sundries L.S

Tk. 7,000/-

Tk. 7,000/-

Rate Component/M³ = Tk.10/-

## B. Labour Cost

1) Load and unloading the stone on Boat 700 M³  
@ Tk. 40/- /M³

Tk. 28,000/-

2) Placing the boulder in proper place 1400 Tons  
@ Tk.200/- /Ton

Tk.2,80,000/-

Tk.3,08,000/-

Rate Component/M³ = Tk.440/-

## C. Equipment & Machineries

1) Hire charge of Boat 700 ÷ 12 = 58 Boat-Day  
@ Tk.1000/- /Day

Tk. 58,000/-

Rate Component/M³ = Tk. 83/-

## D. Others (output considered = 700M³)

Supervision including salary for field staff  
and Engineers L.S

Tk. 54,967/-

Rate Component/M³ = Tk. 79/-

GENERAL SUB TOTAL (A+B+C+D)

Tk. 4,27,967/-

E. Add for Overhead & Profit 12.5%

Tk. 53,496/-

Tk. 4,81,463/-

F. Add for Income Tax 2.5%

Tk. 12,037/-

Tk. 4,93,500/-

Rate per M³ = Tk.705/-





72

Analysis for Item No. 40.01

Output considered = 22\*

A. Cost of Materials

1) Cement= $22 \times \frac{1}{4} (.914)^2 \times 400 \times 1.1 \times 1/100 = 6.35T$ @ Tk.4,400/Ton	Tk. 27,940/-
2) Stone Chips= $14.43 \times 1.1 \times .9 = 14.29M^3$ @Tk.1,413/- / $M^3$	Tk. 20,192/-
3) Sand = $14.43 \times 1.1 \times 4.5 = 7.14$ @ Tk. 450/- / $M^3$	Tk. 3,214/-
4) Mud Tank 8'- 0" x 4'-0" x 4'-0" with labour cost L.S	Tk. 5,500/-
5) Ventonite $14.43 \times 1.1 = 15.87M^3$ @ Tk.35/- / $M^3$	Tk. 555/-
	<hr/> Tk. 57,401/-

Rate component/M = Tk. 2,609/-

B. Labour Cost

1) Boring with fabrication, Concreting, Placing of reinforcement etc. complete. 22* @ Tk. 425/-	Tk. 9,350/-
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Rate component/M = Tk. 425/-

C. Equipment and Machineries

1) Mixer Machine $14.43 \times 1.1 = 15.87 M^3$ @ Tk. 150/-	Tk. 2,380/-
2) Sundries L.S	Tk. 500/-

Rate component/M = Tk. 131/-

D. Others (output considered = 22\*)

Supervision including the salary for field staff and Engineers L.S	Tk. 2,090/-
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Rate component/M = Tk. 95/-

Sub Total (A+B+C+D)	Tk. 71,721/-
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E. <u>Add for Overhead &amp; Profit</u> 12.5%	Tk. 8,965/-
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Tk. 80,686/-

F. <u>Add for Income Tax</u> 2.5%	Tk. 2,017/-
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Tk. 82,703/-

Rate per M = Tk.3,760/-



Analysis for Item No. 40.05Output considered = 1 TonA. Cost of Materials

i) Cost of Bar 1.02 x 1 = 1.02 "	
@ Tk.22,500/- /T	Tk. 22,950/-
ii) Cost of G.I.Wire 5 Kg @ Tk.50/- /Kg	Tk. 250/-
iii) Cost of Welding for steel cage	
2 x 24 Nos. = 48 Nos. @ Tk.17.85 Each	Tk. 856/-
	<hr/>
	Tk. 24,056/-

Rate component/Ton Tk.24,056/-

B. Labour Cost for fabrication 1 Ton  
@ Tk.1000/- /Ton

Tk. 1,000/-

Rate component/Ton Tk.1,000/-

C. Equipment & Machineries

Cutting, Bending, Local carriage etc. 1 Ton L.S. Tk. 1,000/-

Rate component/Ton Tk.1,000/-

D. Others (output considered = 1 Ton)

Supervision including salary for field staff and Engineers L.S.

Tk. 1,000/-

GENERAL SUB TOTAL (A+B+C+D)

Tk. 27,056/-

E. Add for Overhead & Profit 12.5%

Tk. 3,382/-

Tk. 30,438/-

F. Add for Income Tax 2.5%

Tk. 761/-

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Tk. 31,199/-

Rate per Ton Tk.31,199/-







# সদ্বারন বীমা কর্পোরেশন

## SADHARAN BIMA CORPORATION

(Established under Act No. VI of 1973)

33, DILKUSHA COMMERCIAL AREA,

POST BOX NO. 607

DHAKA-1000

BANGLADESH.

Sadharan Bima Corporation

Co-Marine Dept. Local Office

34/25, Dilkusha C/A, Dhaka

### CONTRACTORS' ALL RISKS POLICY

Whereas the Insured named in the Schedule hereto has made to the Sadharan Bima Corporation (hereinafter called "the Insurer") a written proposal by completing a Questionnaire which together with any other statements made in writing by the Insured for the purpose of this Policy is deemed to be incorporated herein,

Now this Policy of Insurance witnesseth that subject to the Insured having paid to the Insurer the premium mentioned in the Schedule and Subject to the terms, exclusions, provisions and conditions contained herein or endorsed hereon the Insurer will indemnify the Insured in the manner and to the extent hereinafter provided.

#### General Exclusions

The Insurer will not indemnify the Insured in respect of loss, damage or liability directly or indirectly caused by or arising out of or aggravated by

- (a) War, invasion, act of foreign enemy, hostilities (whether war be declared or not), civil war, rebellion, revolution, insurrection, mutiny, riot, civil commotion, strike, lock-out, military or usurped power, a group of malicious persons or persons acting on behalf of or in connection with any political organisation, conspiracy, confiscation commandeering, requisition or destruction or damage by order of any government de jure or de facto or by any public authority ;
- (b) nuclear reaction, nuclear radiation or radioactive contamination ;
- (c) wilful act or wilful negligence of the Insured or of his representatives ;
- (d) cessation of work whether total or partial.

In any action, suit or other proceeding where the Insurer allege that by reason of the provisions of Exclusion

(a) above any loss, destruction, damage or liability is not covered by this Insurance the burden of proving that such loss, destruction, damage or liability is covered shall be upon the Insured.

#### Period of Cover

The liability of the Insurer shall commence, notwithstanding any date to the contrary specified in the Schedule, directly upon commencement of work or after the unloading of the items entered in the Schedule at the site. The Insurers' liability expires for parts of the insured contract works over or put into service.

At the latest the insurance shall expire on the date specified in the Schedule. Any extensions of the Period of Insurance are subject to the prior written consent of the Insurer.



## GENERAL CONDITIONS

1. The due observance and fulfilment of the terms of this Policy in so far as they relate to anything to be done or complied with by the Insured and the truth of the statements and answers in the questionnaire and proposal made by the Insured shall be a condition precedent to any liability of the Insurer.
2. The Schedule and the Section (s) shall be deemed to be incorporated in and form part of this Policy and the expression "this Policy" wherever used in this contract shall be read as including the Schedule and the Section(s). Any word or expression to which a specific meaning has been attached in any part of this Policy or of the Schedule or of the Section(s) shall bear such meaning wherever it may appear.
3. The Insured shall at his own expense take all reasonable precautions and comply with all reasonable recommendations of the Insurer to prevent loss, damage or liability and comply with statutory requirements and manufacturers' recommendations.
4. a) Representatives of the Insurer shall at any reasonable time have the right to inspect and examine the risk and the Insured shall provide the representatives of the Insurer with all details and information necessary for the assessment of the risk.  
b) The Insured shall immediately notify the Insurer by telegram and in writing of any material change in the risk and cause at his own expense such additional precautions to be taken as circumstances may require, and the scope of cover and/or premium shall, if necessary, be adjusted accordingly.

No material alteration shall be made or admitted by the Insured whereby the risk is increased, unless the continuance of the insurance be confirmed in writing by the Insurer.

5. In the event of any occurrence which might give rise to a claim under this Policy, the Insured shall
  - a) immediately notify the Insurer by telephone or telegram as well as in writing, giving an indication as to the nature and extent of loss or damage;
  - b) take all steps within his power to minimize the extent of the loss or damage;
  - c) preserve the parts affected and make them available for inspection by a representative or surveyor of the Insurer;
  - d) furnish all such information and documentary evidence as the Insurer may require;
  - e) inform the police authorities in case of loss or damage due to theft or burglary.

The Insurer shall not in any case be liable for loss, damage or liability of which no notice has been received by the Insurer within 14 days of its occurrence.

Upon notification being given to the Insurer under these conditions, the Insured may carry out the repairs or replacement of any minor damage; in all other cases a representative of the Insurer shall have the opportunity of inspecting the loss or damage before any repairs or alterations are effected. If a representative of the Insurer does not carry out the inspection within a period of time which could be considered as adequate under the circumstances the Insured is entitled to proceed with the repairs or replacement.

The liability of the Insurer under this Policy in respect of any item sustaining damage shall cease if said item is not repaired properly without delay.

6. The Insured shall at the expense of the Insurer do and concur in doing and permit to be done all such acts and things as may be necessary or required by the Insurer in the interest of any rights or remedies, or of obtaining relief or indemnity from parties (other than those insured under this Policy) to which the Insurer shall be or would become entitled or subrogated upon their paying for or making good any loss or damage under this Policy, whether such acts and things shall be or become necessary or required before or after the Insured's indemnification by the Insurer.
7. If any difference shall arise as to the amount to be paid under this Policy (liability being otherwise admitted) such difference shall be referred to the decision of any Arbitrator to be appointed in writing by the parties in difference or if they cannot agree upon a single Arbitrator to the decision of two Arbitrators, one to be appointed in writing by each of the parties, within one calendar month after having been required in writing so to do by either of the parties, or, in case the Arbitrators do not agree, of an Umpire to be appointed in writing by the Arbitrators before entering upon the reference. The Umpire shall sit with the Arbitrators and preside at their meetings. The making of an award shall be a condition precedent to any right of action against the Insurer.
8. If a claim is in any respect fraudulent, or if any false declaration is made or used in support thereof, or if fraudulent means or devices are used by the Insured or anyone acting on his behalf to obtain any benefit under this Policy, or if a claim is made and rejected and no action or suit is commenced within three months after such rejection or, in case of arbitration, taking place as provided herein, within three months after the Arbitrator or Arbitrators or Umpire have made their award, all benefit under this Policy shall be forfeited.
9. If at the time any claim arises under the Policy there be any other insurance covering the same loss, damage or liability the Insurer shall not be liable to pay or contribute more than their rateable proportion of any claim for such loss, damage or liability.



It is agreed and understood that otherwise subject to the terms, exclusion, provisions and conditions contained in the policy or endorsed thereon and subject to the Insured having paid the agreed extra premium, this policy shall be extended to cover loss or damage due to strike, riot and civil commotion which for the purpose of this Endorsement shall mean (subject always to the Special Conditions hereinafter contained) loss of or damage to the property insured directly caused by,

1. the act of any person taking part together with others in any disturbances of the public peace (whether in connection with a strike or lock-out or not) not being an occurrence mentioned in condition 2 of the special Conditions hereof.

2. the action of any lawfully constituted authority in suppressing or attempting to suppress any such disturbance or in minimizing the consequences of any such disturbance.

3. the wilful act of any striker or locked-out worker done in furtherance of a strike or in resistance to a lock-out.

4. the action of any lawfully constituted authority in preventing or attempting to prevent any such act or in minimizing the consequences of any such act.

Provided that it is hereby further expressly agreed and declared that

1. all the terms, exclusions, provisions and conditions of the policy shall apply in all respects to the insurance granted by this extension save in so far as the same are expressly varied by the following special Conditions and any reference to loss or damage in the wording of the policy shall be deemed to include the perils hereby insured against.

2. the following Special Conditions shall apply only to the insurance granted by this extension and the ~~work~~ wording of the policy shall apply in all respects to the insurance granted by the policy as if this Endorsement had not been made thereon.

#### Special Conditions

1. This insurance does not cover

- a. loss or damage resulting from total or partial cessation of work or the retarding or interruption or cessation of any process or operation.
- b. loss or damage occasioned by permanent or temporary dispossession resulting from confiscation, commandeering or requisition by any lawfully constituted authority.
- c. loss or damage occasioned by permanent or temporary dispossession of any building resulting from the unlawful occupation by any person of such building.

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Endorsement 002

Cover for Cross Liability

It is agreed and understood that otherwise subject to the terms, exclusions, provisions and conditions contained in the Policy or endorsed thereon and subject to the Insured having paid the agreed extra premium, the Third Party Liability cover of the Policy shall apply to the insured parties named in the Schedule as if a separate policy had been issued to each party, provided that the Insurers shall not indemnify the Insured under this Endorsement in respect of liability for

- loss of or damage to items insured or insurable under Section I of the Policy, even if not recoverable due to an excess or any limit,
- fatal or non-fatal injury or illness of employees or workmen who are or could have been insured under Workmen's Compensation and/or Employers' Liability insurance.

The Insurers' total liability in respect of the insured parties shall not however exceed in the aggregate for any one accident or series of accidents arising out of one event the limit of indemnity stated in the Schedule.

Extra premium:



### Maintenance Visits Cover

Maintenance cover: from to

38.1

100

Munchener Ruck  
Munich Re

Endorsement 005

Special Conditions Concerning the Construction and/or Erection Time Schedule

It is agreed and understood that otherwise subject to the terms, exclusions, provisions and conditions contained in the Policy or endorsed thereon, the following shall apply to this insurance:

The construction and/or erection time schedule together with any other statements made in writing by the Insured for the purpose of obtaining cover under the Policy as well as technical information forwarded to the Insurers is deemed to be incorporated herein.

The Insurers shall not indemnify the Insured in respect of loss or damage caused by or arising out of or aggravated by deviations from the construction and/or erection time schedule exceeding the number of weeks stated below unless the Insurers had agreed in writing to such a deviation before the loss occurred.

Deviation from time schedule:            weeks





Endorsement 006

Cover of Extra Charges for Overtime, Night Work, Work on Public Holidays, Express Freight



It is agreed and understood that otherwise subject to the terms, exclusions, provisions and conditions contained in the Policy or endorsed thereon and subject to the Insured having paid the agreed extra premium, this insurance shall be extended to cover extra charges for overtime, night work, work on public holidays and express freight (excluding airfreight).

Provided always that such extra charges shall be incurred in connection with any loss of or damage to the insured items recoverable under the Policy.

If the sum(s) insured of the damaged item(s) is (are) less than the amount(s) required to be insured, the amount payable under this Endorsement for such extra charges shall be reduced in the same proportion.

Limit of indemnity: any one occurrence

Extra premium:



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Exclusion of loss, Damage or Liability Due to Flood and Inundation

It is agreed and understood that otherwise subject to the terms, exclusions, provisions and conditions contained in the policy or endorsed thereon, the Insurers shall not indemnify the Insured for loss, damage or liability directly or indirectly caused by or resulting from flood and inundation.

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Endorsement 103

Exclusion of Loss of or Damage to Crops, Forests and Cultures

It is agreed and understood that otherwise subject to the terms, exclusions, provisions and conditions contained in the Policy or endorsed thereon, the Insurers shall not indemnify the Insured for loss, damage or liability directly or indirectly caused to crops, forests and/or any cultures during the execution of the contract works.

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Münchener Rück  
Munich Re

Endorsement 104

Special Conditions Concerning the Construction of Dams and Water Reservoirs

It is agreed and understood that otherwise subject to the terms, exclusions, provisions and conditions contained in the Policy or endorsed thereon, the Insurers shall not indemnify the Insured in respect of

- grouting of soft rock areas and/or other additional safety measures even if their necessity arises only during construction,
- expenses incurred for dewatering even if the quantities of water originally expected are exceeded substantially,
- loss or damage due to breakdown of the dewatering system if such breakdown could have been avoided by sufficient stand-by facilities,
- expenses incurred for additional sealing or waterproofing and additional facilities for the discharge of run-off and/or underground water,
- loss or damage due to subsidence if caused by insufficient compacting,
- cracks and leakage.





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It is agreed and understood that otherwise subject to the terms, exclusions, provisions and conditions contained in the Policy or endorsed thereon, the Insurers shall only indemnify the Insured for loss, damage or liability directly or indirectly caused to camps and stores by fire, flood or inundation if these camps and stores are located above the highest water level recorded anywhere on the site during the last 20 years and the individual storage units are either at least 50 m apart or separated by fire walls.

It is also agreed that the Insurers shall indemnify the Insured for any one occurrence only up to a limit of indemnity of

for camps,  
for each individual storage unit.




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Endorsement 108

Warranty Concerning Construction Plant, Equipment and Machinery

It is agreed and understood that otherwise subject to the terms, exclusions, provisions and conditions contained in the Policy or endorsed thereon, the Insurers shall only indemnify the Insured for loss, damage or liability directly or indirectly caused to construction plant, equipment and machinery by flood and inundation if, after the execution of works or in case of any interruption, such construction plant, equipment and machinery are kept in an area not endangered by 20-year floods.

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 Münchener Rück  
Munich Re

208

Endorsement 109

Warranty Concerning Construction Material

It is agreed and understood that otherwise subject to the terms, exclusions, provisions and conditions contained in the Policy or endorsed thereon, the Insurers shall only indemnify the Insured for loss, damage or liability directly or indirectly caused to construction material by flood and inundation if such construction material does not exceed three days' demand and the exceeding quantities are kept in areas not endangered by 10-year floods.

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Munich Re

229

Endorsement 110

Special Conditions Concerning Safety Measures with Respect to  
Precipitation, Flood and Inundation

It is agreed and understood that otherwise subject to the terms, exclusions, provisions and conditions contained in the Policy or endorsed thereon, the Insurers shall only indemnify the Insured for loss, damage or liability caused directly or indirectly by precipitation, flood and inundation if adequate safety measures have been taken in designing and executing the project involved.

Adequate safety measures shall mean that allowance is made for precipitation, flood and inundation up to a return period of 10 years for the location insured and the entire policy period on the basis of the statistics prepared by the meteorological agencies.

Loss, damage or liability resulting from the Insured's not immediately removing obstructions (eg sand, trees) from watercourses, whether carrying water or not, in order to maintain free waterflow shall not be indemnifiable.





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Endorsement 111

Special Conditions Concerning Removal of Debris from Landslides

It is agreed and understood that otherwise subject to the terms, exclusions, provisions and conditions contained in the Policy or endorsed thereon the Insurers shall not indemnify the Insured in respect of

- expenses incurred for the removal of debris from landslides in excess of the costs of excavating the original material from the area affected by such landslides,
- expenses incurred for the repair of eroded slopes or other graded areas if the Insured has failed to take the measures required or to take them in time.

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Münchener Rück  
Munich Re

201

SADHARAN BIMA CORPORATION.  
MISC.U/W.DEPTT LO.Dhaka.:::

Schedule attaching to and forming part of policy No-SBC/DAK/LO/CAR/  
PVT/P-01/8/94. A/c.M/s.The Engineers Ltd., :::::::::::::::::::::::::::::::

ENDORSEMENT NO:

- 001. Cover for loss or damage due to strike, Riot and Civil commotion (RCC).
- 002. Cover for Cross Liability.
- 003. Maintenance Visitor cover (12 months)
- 005. Special conditions concerning the construction and/or Erection time schedule(max deviation one week).
- 006. Cover of Extra Charges for Overtime, Night work, work on public Holidays Express Freight.
- 010. Exclusion of loss, Damage or liability Due to Flood and Inundation.
- 103. Exclusion of loss of or Damage to Crops. Forests and Cultures.
- 104. Special conditions concerning the Construction of Dams and Water Reservoirs.
- 107. Warranty concerning Camps and Stores.
- 108. Warranty concerning construction plant, Equipment and Machinery.
- 109. Warranty concerning Construction Material.
- 110. Special conditions Concerning safety Measures with respect to precipitation Flood and Inundation.
- 111. Special conditions concerning Removal of Debris from landslidas.

  
(Mahmudul Haq Khan)

Manager

Sadharaan Bima Corporation  
New Market, Dhaka, D.O.  
24, Diksha Chh, Dhaka

772

**SADHARAN BIMA CORPORATION .LOCAL OFFICE, DHAKA.**

**Schedule attaching to and forming part of policy No-SBC/DAK/LO/CAR/PVT/P-01/8/)**<sup>4</sup>.

**CONSTRUCTION OF TEST STRUCTURE AT KAMARJANI UNDER FAP 21/22 PILOT PROJECT  
CONSTRUCTION EQUIPMENT AND FIRST/REPLACEMENT COST**

Sl. No.	Name	Mark/Model	No.	Cost		
				Original		Tk. Equivalent
A. NON-FLOATING						
1	Crawler Crane 150 T	Manitowoc 4000W (1970)	1	-		22,500,000
2	PTC Power Unit (with spares & accessories)	M H 600 (New)	1	FF	966,769	6,670,700
3	Hydraulic Hammer (with spares & accessories)	HMF 10-15 (New)	1	FF	3,445,805	23,776,100
4	Vibrator (with spares & accessories)	50 H4 (New)	1	FF	1,007,857	6,954,200
5	Casing Guide Frame	PTC (New)	1	FF	146,100	1,008,100
6	Electric Wire Winches (with spares & accessories)	STEEN 400 size 14 (New)	2	DM	93,887	2,206,350
7	Rubber-Tyred Rollers	SH 15T 0102990106 (new)	4	FF	270,400	1,865,750
8	Rubber-Tyred Rollers	SH 15T 01029900063 (new)	8	FF	136,000	938,400
9	Spares for Crawler Crane 150 T	Manitowoc 4000W (New)	Set	US\$	5,288	211,500
Total						66,131,100
B. FLOATING						
1.	Barge, 120' x 40' x 8' with accessories	Cap 400T (Old)	1	-		10,000,000
2.	Inflatable Working Boat with accessories	Wiking Meteor 460 Convertible (New)	1	DM	25,500	599,250
3.	Unsinkable Boat with accessories	Dynaglass Fisherman 20 DX	1	Sing. \$	25,344	651,350
Total						11,250,600

**CONVERSION RATES:**

1 GBP (UK £)	=	Tk. 59.50
1 US \$	=	Tk. 40.00
1 Sing. \$	=	Tk. 25.70
1 DM	=	Tk. 23.50
1 FF	=	Tk. 6.90



Cont.... P/2.

*Handwritten signature/initials*

FAP 21/22 TEST STRUCTURES  
MONITORING EQUIPMENT

Sl. No.	Item	Description	Qty.	Cost		
				Original		Tk. Equivalent
1	Survey Computer and Software	Master Chart (On Navipro 1000)	1	DM	29,500	693,250
2	Position Fixing Equipment DGPS	Ashtech DHS 12 Base/Remote	1	US\$	18,500	740,000
		Ashtech DHS 12 Remote	1	US\$	14,500	580,000
		Microtel Telemetry	1	GBP	3,075	182,960
		10 W Booster, Antenna	1	GBP	470	27,965
3	Echo-sounder	Marimatech, E-Sea Sound 103	1	DM	23,000	540,500
		Portable Transducer	1	DM	10,120	237,820
4	Tide & Wave Monitoring	Ultrasonic Tide Gauge IT-PH 600	1	DM	8,115	190,700
		Ultrasonic Anemometer	1	DM	3,850	90,475
		MESA-WNT				
		Telemetry System	1	DM	3,745	88,010
		STROBL "Dafu 7021" other Accessories	1 Set	DM	32,197	756,630
5	Survey Post-Processing System	486 Processor 4 Mb RAM	1	DM	3,000	70,500
		Colour VGA Display				
		A4 Printer HP Deskjet 500C	1	DM	800	18,800
		Design Jet 200 Ink/Jet A1 Plotter	1	DM	7,350	172,725
Total						4,390,335

*Mythi Mahan*  
Manager.





SBC/DAK/LO/CAR/PVT/P-01/8/94.

<p>Name and Address of Insured <b>Jamuna Test Works consultants.</b> Joint Venture as principal. House No-4, Road No-125, Gulshan, Dhaka.</p> <p><b>Consortium:-</b> M/s. The Engineers Ltd. Coralla Corporation (BD) Ltd., as contractor.</p>	<p>Title of Contract <b>Jamuna river bank protection (FAP-21) and river Training/ AFPM (FAP-22) Pilot project:-</b></p> <p><b>Northern part in village-Dhuticho- Site of Construction</b> and southern part in Analer chara under p.s. Gaibandha, Bangladesh.</p>
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Section I—  
Material Damage

Insured Items	Sums Insured	Deductible
1. Contract Work (permanent and temporary work, including all materials to be incorporated herein)		Works:- TK.30,00,000/=
1.1 Contract Price	TK.11,27,70,590.00	-A.G.G. TK.3,00,000/=
1.2 Materials or Item supplied by the Principal(s)	TK.7,06,89,380.00	others under a.o.a. CPM; 20% of loss amount but minimum TK.25,000/=
2. Construction Plant and Equipment	TK.7,05,21,435.00	under a.c.a.
3. Construction Machinery according to attached list.	as per list attached.	
4. Clearance of Debris		
Total sum Insured under Section I :	TK.25,39,81,405.00	

Risk	Limits of Indemnity (I)	Deductibles
Earthquake, volcanism tsunami	100%	TK. 30,00,000/-
Storm, cyclone, flood, inundation, landslide	100%	TK. 30,00,000/-

1) Limit of indemnity in respect of each and every loss or damage and/or series of losses or damages arising out any one event

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Section II- Third Party Liability		
Insured items	Limits of Indemnity 2)	Deductibles
1. Bodily Injury 1.1 anyone person 1.2 total	10,00,000/=	TK. 50,000/=
2. Property Damage		T.P.P.D. only.

2) Limit of indemnity in respect of any one accident or series of accidents arising out of one event

Period of Insurance  
( subject to the provisions concerning the Period of Cover )

from 01-06-94. to 31-05-95 Plus(12 months Maintance)

Incorporated in this Policy is Questionnaire and proposal No. i.e. 01-06-95 to 31-05-96.  
The following endorsements are attached to and form part of this Policy:

Endorsement Nos. Schedule attached hereto.

Subject to the Condition:-

- 1) Floating Equipment(s) are excluded from the scope of this policy cover but this exclusion ~~xxx~~ does not for the equipment's on barge which are not an integral part of the floating device.
- ii) "No known or unknown loss (s) occurred and/or originated prior to the date of payment of premium i.e. 28-08-94 shall be indemnifiable under this insurance."

Premium receipt No-748083 dt. 24-8-94. &  
748206 dt. 28-8-94.

Total Premium TK. 34,07,443.95  
( Inclusive of extra premiums for the above-mentioned endorsements )

In Witness whereof the Undersigned being duly authorized by the Insurer and on behalf of the Insurer has/have hereunto set his/their hand(s) at

this 28th day of August. 19 94.

CAR @ 10.50% on TK. 18,34,59,970.00 TK. 19,26,329.68  
CPM @ 14.70% on TK. 7,05,21,435.00 TK. 10,36,665.10

For and on behalf of  
SADHARAN BIMA CORPORATION

Plus 15% Vat.

... ..  
Total Premium. TK. 34,07,443.95  
=====

*[Signature]*  
Manager.





# সাধারণ বীমা কর্পোরেশন

## SADHARAN BIMA CORPORATION

24/25, Dilkusha C/A, Dhaka.  
Telegrams

Local Office Address

Head Office:  
SADHARAN BIMA CORPORATION  
33, DILKUSHA COMMERCIAL AREA  
DACCA-2.

PREMIUM	
Marine	0.49% 561,512.26
War & SRCC	
S. D. Vat. 15%	84,226.83
Total	152,792.45
	798,531.54

MARINE COVER NOTE No. DAK/LO/MG/Private-91/94

19/9/94 19

Subject to the Clauses and conditions of the Corporation's Marine Cargo Policy Form in use at the time of shipment or despatch and to the Clauses and Conditions of Cover specified in the schedule hereto this Cover Note is effected for the Period of Cover stated below to insure for the voyage and/or voyages and/or transits stated the interest specified herein shipped and/or despatched within the limits of this Cover Note either by or for account of the Insured named below in which the said Insured has an insurable interest unless insured elsewhere prior to such interest being acquired or the insurance of which is in the Insured's hands or under the Insured's control as selling and/or Purchasing Agent. This Cover Note does not cover the interest of any other person or persons.

### THE SCHEDULE

M/R No. A-740623

dt. 19-9-94.

The Insured: Jamuna Test Works Consultants,

Consulting Consortium PAB

Address: 21/22, House 4, Road 125, Gulshan-1 Dhaka,

Interest Covered: Construction Equipments with Spares.

In Transit By: Per any steamer or power vessel as per Institute Classification Clause and/or conveyance by road and/or rail and/or approved aircraft and/or parcel post to be declared.

Voyage: From Chittagong/Mongla/Dhaka To Galbandha. INLAND VESSELS as arranged and/or Rate as per Tariff

Amount insured TK. 114,594,339/-

Conditions of cover FPA OF INLAND VESSEL RISKS.

As per Institute of London Underwriters' Clauses current on the date of sailing  
Warranted that interest insured under this cover is shipped under deck.

Period: This acceptance is valid for shipments made from midnight 19/9/94 until midnight 18/9/95 unless previously exhausted by declaration/s.

Cancellation: In accordance with the Cancellation Clause of this Cover Note, endorsed on reverse hereon

Other Conditions: As endorsed on reverse hereon.

Declaration: Notice of shipments falling within the Scope of this cover are to be made as follows:  
(a) By the Shippers: Prior to shipment or as soon as possible thereafter, to the undermentioned Local Office of the Corporation at:-

24/25, Dilkusha C/A, Dhaka

In the Interests of the Insured and of the Bank concerned it is suggested that suitable clause be inserted in

Letter of Credit requesting shipments to be declared by the Shippers as noted above

(b) By the Insured: To the above Local Office of the Corporation.

On receipt of the above declaration from the Insured the Policy/Certificate will be issued by the Corporation

For and on behalf of  
Sadharan Bima Corporation

*[Signature]*  
Asstt. Manager.

Code No. me



28C

SALES, BILWADE, CH, BILWADE

0.400 261,215.26

28.000,48 271.26V

24.000,25 271.26V

22.000,25 271.26V

## CONDITIONS ON WHICH THIS COVER NOTE IS ISSUED

### BASIS OF VALUATION:

To be valued for insurance the basis of valuation to be invoice cost plus 10%, or as may be arranged.

### DECLARATIONS:

To be made to the Local Office of the Corporation as indicated in this Cover Note prior to despatch or as soon as possible after departure of vessel or conveyance giving the following details: (1) Name of steamer (2) Port of shipment. (3) Nature and quantity of goods shipped together with shipping marks, number of packages and nature of packing (4) Name of Insured under this cover quoting this Cover Note number and date of issue. (5) Invoice cost plus freight and shipping charges plus ten percent or such percentage as may have been specifically agreed in advance. It is a condition of this Cover Note that until expiry the Insured is bound to declare hereunder each and every shipment or despatch falling within its scope without exception whether arrived or not.

### LOSS OR DAMAGE PRIOR TO SHIPMENT OR DESPATCH.

Should this Cover Note extend to cover the insured interest prior to shipment or despatch, in event of loss or damage by insured perils prior to shipment or despatch the Insured is also bound to declare to the Corporation the value of the insured interest at risk at the time of the loss or damage and to pay the appropriate premium thereon.

### TRANSFER OF INTEREST

Nothing herein shall prevent the transfer of a Policy or Certificate issued in terms of this Cover Note on sale pledge or other transfer of the interest in the insured goods by the within named Insured or the Insured's Assignee.

### CANCELLATION:

This Cover Note may be cancelled by the Corporation or by the Insured under the following condition:

**MARINE AND TRANSIT RISKS:** By 30 days notice in writing.

**WAR RISKS:** By 7 days notice in writing.

**STRIKES RIOTS & CIVIL COMMOTION RISKS:** By 48 hours notice in writing.

Cancellation shall become effective on the expiry of the stipulated period calculated from midnight of the day on which notice of the cancellation is issued by or to the Corporation But shall not apply to:—

- Any insurance against the said risk which shall have attached in accordance with the condition of this Cover Note before cancellation becomes effective.
- War risk cover in respect of any Declaration of goods for shipment by a named vessel or of specified goods to be shipped by a vessel to be named later accepted by the Corporation before the time at which the cancellation becomes effective, such goods not having been loaded on board the overseas vessel before that time provided the goods be loaded on board the overseas vessel and the vessel sails within 15 days from midnight of the day on which the cancellation becomes effective, but if the War Risks Cover shall have attached and the vessel does not sail within the said 15 days the War Risks Cover in respect of such Declaration shall end on the expiry of that period notwithstanding anything to the contrary contained in the provisions of this Cover Note.

Nothing in this clause shall operate to cause a declaration to attach to this Cover Note if such declaration would be excluded owing to the vessel not having sailed within the Period of Cover stated herein.

### CLAIMS PAYABLE:

As may be shown in Certificates or Policies issued in respect of Declarations made in terms of this Cover Note.



## INLAND TIME CLAUSES HULLS

This Insurance is subject to Bangladesh law and in Practice & in absence of the same English law & Practice.

### 1. NAVIGATION

1.1 The Vessel is covered subject to the provisions of this insurance at all times and has leave to sail navigate with or without pilots, to go on trial trips and to assist and tow vessels or craft in distress, but it is warranted that the Vessel shall not be towed, except as is customary or to the first safe port or place when in need of assistance, or undertake towage or salvage services under a contract previously arranged by the Assured and/or Owners and/or Managers and/or Charterers. This Clause 1.1 shall not exclude customary towage in connection with loading and discharging.

1.2 In the event of the Vessel being employed in trading operations which entail cargo loading or discharging at "Inland river" from or into another vessel (not being a harbour or inshore craft) no claim shall be recoverable under this insurance for loss of or damage to the Vessel or liability to any other vessel arising from such loading or discharging operations, including whilst approaching, lying alongside and leaving, unless previous notice that the Vessel is to be employed in such operations has been given to the Underwriters and any amended terms of cover and any additional premium required by them have been agreed.

1.3 In the event of the vessel sailing (with or without cargo) with an intention of being (a) broken up, or (b) sold for-breaking up, any claim for loss of or damage to the Vessel occurring subsequent to such sailing shall be limited to the market value of the Vessel as scrap at the time when the loss or damage is sustained, unless previous notice has been given to the Underwriters and any amendments to the terms of cover, insured value and premium required by them have been agreed. Nothing in this Clause 1.3 shall affect claims under Clauses 8 and/or 11.

### 2. CONTINUATION

Should the Vessel at the expiration of this insurance be at 'Inland river' or in distress or at a port of refuge or of call, she shall, provided previous notice be given to the Underwriters, be held covered at a pro rata monthly premium to her port of destination.

### 3. BREACH OF WARRANTY

Held covered in case of any breach of warranty as to cargo, trade, locality, towage, salvage services or date of sailing, provided notice be given to the Underwriters immediately after receipt of advice and any amended terms of cover and any additional premium required by them be agreed.

### 4. TERMINATION

This Clause 4 shall prevail notwithstanding any provision whether written typed or printed in this insurance inconsistent therewith. Unless the Underwriters agree to the contrary in writing.

4.1 The cover will cease as soon as the Vessel Crosses the Inland Water without the prior consent of the insurers and for non-compliance of the warranties set forth in the policy.

4.2 any change, voluntary or otherwise, in the ownership or flag, transfer to new management, or charter on a bareboat basis, or requisition for title or use of the Vessel, provided that, if the Vessel has cargo on board and has already sailed from her loading port or is at 'Inland river' in ballast, such automatic termination shall if required be deferred, whilst the Vessel continues her planned voyage, until arrival at final port of discharge if with cargo or at port of destination if in ballast. However, in the event of requisition for title or use without the prior execution of a written agreement by the Assured, such automatic termination shall occur fifteen days after such requisition whether the Vessel is at 'Inland river' or in port.

A pro rata daily net return of premium shall be made.

### 5. ASSIGNMENT

No assignment of or interest in this insurance or in any moneys which may be or become payable thereunder is to be binding on or recognised by the Underwriters unless a dated notice of such assignment or interest signed by the Assured, and by the assignor in the case of subsequent assignment, is endorsed on the Policy and the Policy with such endorsement is produced before payment of any claim or return of premium thereunder.

### 6. PERILS

6.1 This insurance covers loss of or damage to the subject-matter insured caused by

6.1.1 perils of the Inland rivers, lakes or other navigable waters

6.1.2 fire, explosion

6.1.3 violent theft by persons from outside the Vessel

6.1.4 jettison

6.1.5 piracy

6.1.6 breakdown of or accident to nuclear installations or reactors

6.1.7 contact with aircraft or similar objects, or objects falling therefrom, land conveyance, dock or

harbour equipment or installation	58
6.1.8 earthquake volcanic eruption or lightning.	59
6.2 This insurance covers loss of or damage to the subject-matter insured caused by	60
6.2.1 accidents in loading discharging or shifting cargo or fuel	61
6.2.2 Bursting of boilers breakage of shafts or any latent defect in the machinery or hull	62
6.2.3 negligence of Master Officers Crew or Pilots	63
6.2.4 negligence of repairers or charterers provided such repairers or charterers are not an Assured here under	64 65
6.2.5 barratry of Master officers or Crew,	66
provided such loss or damage has not resulted from want of due diligence by the Assured, Owners or Managers.	67 68
6.3 Master Officers Crew or Pilots not to be considered Owners within the meaning of this Clause 6 should they hold shares in the Vessel.	69 70
<b>7 POLLUTION HAZARD</b>	71
This insurance covers loss of or damage to the vessel caused by any governmental authority acting under the powers vested in it to prevent or mitigate a pollution hazard, or threat thereof, resulting directly from damage to the Vessel for which the Underwriters are liable under this insurance, provided such act of governmental authority has not resulted from want of due diligence by The Assured, the Owners, or Managers of the Vessel or any of them to prevent or mitigate such hazard or threat. Master, Officers, Crew or pilots not to be considered Owners within the meaning of this Clause 7 should they hold shares in the Vessel.	72 73 74 75 76 77
<b>8 3/4THS COLLISION LIABILITY</b>	78
8.1 The Underwriters agree to indemnify the Assured for three fourths of any sum or sums paid by the Assured to any other person or persons by reason of the Assured becoming legally liable by way of damages for	79 80 81
8.1.1 loss of or damage to any other vessel or property on any other vessel	82
8.1.2 delay to or loss of use of any such other vessel or property thereon	83
8.1.3 general average of, salvage of, or salvage under contract of, any such other vessel or property thereon.	84 85
where such payment by the Assured is in consequence of the Vessel hereby insured coming into collision with any other vessel.	86 87
8.2 The indemnity provided by this Clause 8 shall be in addition to the indemnity provided by the other terms and conditions of this insurance and shall be subject to the following provisions:	88 89
8.2.1 Where the insured Vessel is in collision with another vessel and both vessels are to blame the, unless the liability of one or both vessels becomes limited by law, the indemnity under this Clause 8 shall be calculated on the principle of cross-liabilities as if the respective Owners had been compelled to pay to each other such proportion of each other's damages as may have been properly allowed in ascertaining the balance or sum payable by or to the Assured in consequence of the collision	90 91 92 93 94 95
8.2.2 in no case shall the Underwriters' total liability under Clauses 8.1 and 8.2 exceed their proportionate part of three-fourths of the insured value of the Vessel hereby insured in respect of any one collision.	96 97 98 99
8.3 The Underwriters will also pay three-fourths of the legal costs incurred by the Assured or which the Assured may be compelled to pay in contesting liability or taking proceedings to limit liability, with the prior written consent of the Underwriters.	100 101
<b>EXCLUSIONS</b>	102
8.4 Provided always that this Clause 8 shall in no case extend to any sum which the Assured shall pay for or in respect of	103 104
8.4.1 removal or disposal of obstructions, wrecks, cargoes or any other thing whatsoever	105
8.4.2 any real or personal property or thing whatsoever except other vessels or property on other vessels.	106 107
8.4.3 the cargo or other property on, or the engagements of, the insured Vessel	108
8.4.4 loss of life, personal injury or illness	109
8.4.5 pollution or contamination of any real or personal property or thing whatsoever (except other vessels with which the insured Vessel is in collision or property on such other vessels).	110 111
<b>9 SISTERSHIP</b>	112
Should the Vessel hereby insured come into collision with or receive salvage services from another vessel belonging wholly or in part to the same Owners or under the same management, the Assured shall have the same rights under this insurance as they would have were the other vessel entirely the property of Owners not interested in the Vessel hereby insured; but in such cases the liability for the collision or the amount payable for the services rendered shall be referred to a sole arbitrator to be agreed upon between the Underwriters and the Assured.	113 114 115 116 117 118
<b>10 NOTICE OF CLAIM AND TENDERS</b>	119
10.1 In the event of accident whereby loss or damage may result in a claim under this insurance, notice shall be given to the policy issuing office prior to survey officer so that a surveyor may be appointed to represent the Underwriters should they so desire.	120 121 122
10.2 The Underwriters shall be entitled to decide the port to which the Vessel shall proceed for docking or repair (the actual additional expense of the voyage arising from compliance with the Underwriters requirements being refunded to the Assured) and shall have a right of veto concerning a place of repair or a repairing firm.	123 124 125 126



10.3	The Underwriters may also take tenders or may require further tenders to be taken for the repair of the Vessel. Where such a tender has been taken and a tender is accepted with the approval of the Underwriters, an allowance shall be made at the rate of 30% per annum on the insured value for time lost between the despatch of the invitations to tender required by Underwriters and the acceptance of a tender to the extent that such time is lost solely as the result of tenders having been taken and provided that the tender is accepted without delay after receipt of the Underwriters' approval.	127 128 129 130 131 132 133
	Due credit shall be given against the allowance as above for any amounts recovered in respect of fuel and stores and wages and maintenance of the Master officers and Crew or any member thereof, including amounts allowed in general average, and for any amounts recovered from third parties in respect of damages for detention and/or loss of profit and/or running expenses, for the period covered by the tender allowance or any part thereof.	134 135 136 137 138
	Where a part of the cost of the repair of damage other than a fixed deductible is not recoverable from the Underwriters the allowance shall be reduced by a similar proportion.	139 140
10.4	In the event of failure to comply with the conditions of this Clause 10 a deduction of 15% shall be made from the amount of the ascertained claim.	141 142
<b>11 GENERAL AVERAGE AND SALVAGE</b>		143
11.1.	This insurance covers the Vessel's proportion of salvage, salvage charges and/or general average, reduced in respect of any under-insurance, but in case of general average sacrifice of the Vessel the Assured may recover in respect of the whole loss without first enforcing their right of contribution from other parties.	144 145 146 147
11.2	Adjustment to be according to the law and practice obtaining at the place where the adventure ends, as if the contract of affreightment contained no special terms upon the subject; but where the contract of affreightment so provides the adjustment shall be according to the York Antwerp Rules.	148 149 150 151
11.3	When the Vessel sails in ballast, not under charter, the provisions of the York- Antwerp Rules, 1974 (excluding rules X X and XXI) shall be applicable, and the voyage for this purpose shall be deemed to continue from the port or place of departure until the arrival of the Vessel at the first port or place thereafter other than a port or place of refuge or a port or place of call for bunkering only. If at any such intermediate port or place there is an abandonment of the adventure originally contemplated the voyage shall thereupon be deemed to be terminated.	152 153 154 155 156 157
11.4	No claim under this Clause 11 shall in any case be allowed where the loss was not incurred to avoid or in connection with the avoidance of a peril insured against.	158 159
<b>12 DEDUCTIBLE</b>		160
	This policy shall be subject to a compulsory deductible @ 1.00% on the Sum Insured with a minimum of Tk. 100,000/- (One Lac) in respect of each and every claim including Sue, Labour and Salvage charges but excluding "Total Loss" or Constructive Total Loss.	161 162 163
<b>13 DUTY OF ASSURED (SUE AND LABOUR)</b>		164
13.1	In case of any loss or misfortune it is the duty of the Assured and their servants and agents to take such measures as may be reasonable for the purpose of averting or minimising a loss which would be recoverable under this insurance.	165 166 167
13.2	Subject to the provisions below and to Clause 12 the Underwriters will contribute to charges properly and reasonably incurred by the Assured their servants or agents for such measures. General average, salvage charges (except as provided for in Clause 13.5) and collision defence or attack costs are not recoverable under this Clause 13.	168 169 170 171
13.3	Measures taken by the Assured or the Underwriters with the object of saving, protecting or recovering the subject-matter insured shall not be considered as a waiver or acceptance of abandonment or otherwise prejudice the rights of either party.	172 173 174
13.4	When expenses are incurred pursuant to this Clause 13 the liability under this insurance shall not exceed the proportion of such expenses that the amount insured hereunder bears to the value of the Vessel as stated herein, or to the sound value of the Vessel at the time of the occurrence giving rise to the expenditure if the sound value exceeds that value. Where the Underwriters have admitted a claim for total loss and property insured by this insurance is saved, the foregoing provisions shall not apply unless the expenses of suing and labouring exceed the value of such property saved and then shall apply only to the amount of the expenses which is in excess of such value.	175 176 177 178 179 180 181 182
13.5	When a claim for total loss of the Vessel is admitted under this insurance and expenses have been reasonably incurred in saving or attempting to save the Vessel and other property and there are no proceeds, or the expenses exceed the proceeds, then this insurance shall bear its pro rata share of such proportion of the expenses, or of the expenses in excess of the proceeds, as the case may be, as may reasonably be regarded as having been incurred in respect of the Vessel; but if the Vessel be insured for less than its sound value at the time of the occurrence giving rise to the expenditure, the amount recoverable under this clause shall be reduced in proportion to the under-insurance.	183 184 185 186 187 188 189 190
13.6	The sum recoverable under this Clause 13 shall be in addition to the loss otherwise recoverable under this insurance but shall in no circumstances exceed the amount insured under this insurance in respect of the Vessel.	191 192 193
<b>14 NEW FOR OLD</b>		194
	This policy is subject to a pro-rata condition of average if the insured value is less than the market value of the vessel hereby covered at the time of loss.	195 196
<b>15 BOTTOM TREATMENT</b>		197
	In no case shall a claim be allowed in respect of scraping gritblasting and/or other surface preparation or painting of the Vessel's bottom except that	198 199
15.1	gritblasting and/or other surface preparation of new bottom plates ashore and supplying and applying	200



	any "shop" primer thereto	201.
15.2	gritblasting and/or other surface preparation of: the butts or area of plating immediately adjacent to any renewed or refitted plating damaged during the course of welding and/or repairs, areas of plating damaged during the course of fairing, either in place or ashore,	202 203 204
15.3	supplying and applying the first coat of primer/anti-corrosive to those particular areas mentioned in 15.1 and 15.2 above.	205 206
	shall be allowed as part of the reasonable cost of repairs in respect of bottom plating damaged by an insured peril.	207
16	<b>WAGES AND MAINTENANCE</b>	208
	No claim shall be allowed, other than in general average, for wages and maintenance of the Master, Officers and Crew, or any member thereof, except when incurred solely for the necessary removal of the Vessel from one port to another for the repair of damage covered by the Underwriters, or for trial trips for such repairs, and then only for such wages and maintenance as are incurred whilst the Vessel is under way.	209 210 211 212
17	<b>AGENCY COMMISSION</b>	213
	In no case shall any sum be allowed under this insurance either by way of remuneration of the Assured for time and trouble taken to obtain and supply information or documents or in respect of the commission or charges of any manager, agent, managing or agency company or the like, appointed by or on behalf of the Assured to perform such services.	214 215 216 217
18	<b>UNREPAIRED DAMAGE</b>	218
18.1	The measure of indemnity in respect of claims for unrepaired damage shall be the reasonable depreciation in the market value of the Vessel at the time this insurance terminates arising from such unrepaired damage, but not exceeding the reasonable cost of repairs.	219 220 221
18.2	In no case shall the Underwriters be liable for unrepaired damage in the event of a subsequent total loss (whether or not covered under this insurance) sustained during the period covered by this insurance or any extension thereof.	222 223 224
18.3	The Underwriters shall not be liable in respect of unrepaired damage for more than the insured value at the time this insurance terminates.	225 226
19	<b>CONSTRUCTIVE TOTAL LOSS</b>	227
19.1	In ascertaining whether the Vessel is a constructive total loss, the insured value shall be taken as the repaired value and nothing in respect of the damaged or break-up value of the Vessel or wreck shall be taken into account.	228 229 230
19.2	No claim for constructive total loss based upon the cost of recovery and/or repair of the Vessel shall be recoverable hereunder unless such cost would exceed the insured value. In making this determination, only the cost relating to a single accident or sequence of damages arising from the same accident shall be taken into account.	231 232 233 234
20	<b>FREIGHT WAIVER</b>	235
	In the event of total or constructive total loss no claim to be made by the Underwriters for freight whether notice of abandonment has been given or not.	236 237
21	<b>DISBURSEMENTS WARRANTY</b>	238
21.1	Additional insurances as follows are permitted:	239
21.1.1	Disbursements, Managers Commissions, Profits or Excess or Increased Value of Hull and Machinery. A sum not exceeding 25% of the value stated herein.	240 241
21.1.2	Freight, Chartered Freight or Anticipated Freight, insured for time. A sum not exceeding 25% of the value as stated herein less any sum insured, however described, under 21.1.1.	242 243
21.1.3	Freight or Hire, under contracts for voyage. A sum not exceeding the gross freight or hire for the current cargo passage and next succeeding cargo passage (such insurance to include, if required, a preliminary and an intermediate ballast passage) plus the charges of insurance. In the case of a voyage charter where payment is made on a time basis, the sum permitted for insurance shall be calculated on the estimated duration of the voyage, subject to the limitation of two cargo passages as laid down herein. Any sum insured under 21.1.2 to be taken into account and only the excess thereof may be insured, which excess shall be reduced as the freight or hire is advanced or earned by the gross amount so advanced or earned.	244 245 246 247 248 249 250 251 252
21.1.4	<i>Anticipated Freight if the Vessel sails in ballast and not under Charter.</i> A sum not exceeding the anticipated gross freight on next cargo passage, such sum to be reasonably estimated on the basis of the current rate of freight at time of insurance plus the charges of insurance. Any sum insured under 21.1.2 to be taken into account and only the excess thereof may be insured.	253 254 255 256 257
21.1.5	<i>Time Charter Hire or Charter Hire for Series of Voyages.</i> A sum not exceeding 50% of the gross hire which is to be earned under the charter in a period not exceeding 18 months. Any sum insured under 21.1.2 to be taken into account and only the excess thereof may be insured, which excess shall be reduced as the hire is advanced or earned under the charter by 50% of the gross amount so advanced or earned but the sum insured need not be reduced while the total of the sums insured under 21.1.2 and 21.1.5 does not exceed 50% of the gross hire still to be earned under the charter. An insurance under this Section may begin on the signing of the charter.	258 259 260 261 262 263 264 265
21.1.6	Premiums. A sum not exceeding the actual premiums of all interests insured for a period not exceeding 12 months (excluding premiums insured under the foregoing sections but including, if required, the premium or estimated calls on any Club or War etc. Risk insurance) reducing pro rata monthly.	266 267 268 269
21.1.7	Returns of premium. A sum not exceeding the actual returns which are allowable under any insurance but which would not be recoverable thereunder in the event of a total loss of the Vessel whether by insured perils or otherwise.	269 270 271



21.1.8	Insurance irrespective of amount against:	272
	Any risks excluded by Clauses 23, 24, 25 and 26 below.	273
21.2	Warranted that no insurance on any interests enumerated in the foregoing 21.1.1 to 21.1.7 in excess of the amounts permitted therein and no other insurance which includes total loss of the Vessel P. p. i., f. i. a., or subject to any other like term, is or shall be effected to operate during the currency of this insurance by or for account of the Assured, Owners, Managers or Mortgagees. Provided always that a breach of this warranty shall not afford the Underwriters any defence to a claim by a Mortgagee who has accepted this insurance without knowledge of such breach.	274 275 276 277 278 279
<b>22</b>	<b>RETURNS FOR LAY-UP AND CANCELLATION</b>	280
	Return for cancellation shall be allowed for uncommenced month by retaining the premium required for short period policies of this insurance be cancelled by prior agreement between the insured and the insurers. But there shall be no return for the vessel being laid-up during the currency of the policy for any reason what soever.	281 282 283 284
	The following clauses shall be paramount and shall override anything contained in this insurance inconsistent there with.	285 286
<b>23</b>	<b>WAR EXCLUSION</b>	287
	In no case shall this insurance cover loss damage liability or expense caused by	288
23.1	war civil war revolution, rebellion insurrection, or civil strike arising therefrom, or any hostile act by or against a belligerent power.	289 290
23.2	capture seizure arrest restraint or detainment (barratry and piracy excepted), and the consequences thereof or any attempt thereat	291 292
23.3	derelict, mines, torpedoes, bombs or other derelict weapons of war.	293 294
<b>24</b>	<b>STRIKES EXCLUSION</b>	295
	In no case shall this insurance cover loss damage liability or expense caused by	296
24.1	strikers, locked-out workmen, or persons taking part in labour disturbances, riots or civil commotions	297
24.2	any terrorist or any person acting from a political motive.	298 299
<b>25</b>	<b>MALICIOUS ACTS EXCLUSION</b>	300
	In no case shall this insurance cover loss damage liability or expense arising from	301
25.1	the detonation of an explosive	302
25.2	any weapon of war	303
	and caused by any person acting maliciously or from a political motive.	304
<b>26</b>	<b>NUCLEAR EXCLUSION</b>	305
	In no case shall this insurance cover loss damage liability or expense arising from any weapon of war employing atomic or nuclear fission and/or fusion or other like reaction or radioactive force or matter.	306

তার : "বীমা"

সংস্থাপন বিভাগ ফোন : ২৫৬১৬২ (মুদ্রন ভাণ্ডার)



সাধারণ বীমা কর্পোরেশন

SADHARAN BIMA CORPORATION

DAK/18/MPH-32/94  
 প্রধান কার্যালয় : সাধারণ বীমা ভবন, ৩৩ দিলকুশা বাঃ এঃ, ডাক বাক্স নং ৬০৭  
 ঢাকা-১০০০, বাংলাদেশ

Managing Director,  
 Mrs. Jamuna Test Workers  
 Consultant's House No. 4,  
 Road No. 125, Gulshan,  
 Dhaka-1212  
 প্রিয় মহোদয়,

স্থানীয় কার্যালয় :

বিভাগ- marine v/c.

আমরা আনন্দের সহিত নিম্নবর্ণিত কাগজ পত্রাদি/দলিল দস্তাবেজ-এর প্যাকেট  
 ও চালান আপনার নিকট এতদসঙ্গে পাঠাইয়া দিলাম। ফেরৎ ডাকে অবশ্যই চালানের এক  
 কপি অত্র ভাণ্ডারে প্রেরণ করিবেন।

marine Hull Policy no.  
 DAK/18/MPH/Prt-02/94. (original).

আপনার বিশ্বস্ত  
 সাধারণ বীমা কর্পোরেশনের পক্ষে

আইয়



# সাধারণ বীমা কর্পোরেশন

## SADHARAN BIMA CORPORATION

Money Receipt No. (ESTABLISHED UNDER ACT NO. VI OF 1973)  
A-740616 dt. 28-8-94 Head Office:  
33, Dilkusha Commercial Area, Dhaka-1000 (Bangladesh)

Local Office,  
24-25, Dilkusha C/A,  
Dhaka

### MARINE HULL POLICY

No. DAK/LO/MPH/Pvt-02/94

PREMIUM 3.20%	Tk. 3,20,000.00
+ 15% VAT	Tk. 48,000.00
STAMP	Tk. 20,000.00
Total	Tk. 3,88,000.00

SUM INSURED Tk. 1,00,00,000/= (One Crore only)

We, the Underwriters, hereby agree, in consideration of payment to us by or on behalf of the Assured of the premium specified in the Schedule, to insure against loss damage liability or expense in the proportions and manner hereinafter provided in the Schedule.

IN WITNESS where of we the SADHARAN BIMA CORPORATION have hereunto set our hands  
in the 3rd day of September 19 94

(In the event of accident whereby loss or damage may result in a claim under this Policy, immediate notice in Writing should be given to the Corporation's Office

at 24-25, Dilkusha C/A, Dhaka.

Signed for & on behalf of  
Sadharaan Bima Corporation

Deputy Manager

ABS.



SCHEDULE

POLICY NUMBER DAK/LO/MPH/Pvt-02/94 dt 24-8-94

NAME OF ASSURED Jamuna Test Works Consultants  
House No-4, Road NO- 125  
Gulshan, Dhaka-1212

VESSEL Tug No-BG-7, D-9572: Year 1980: Steel Body.

VOYAGE OR PERIOD OF INSURANCE 24-8-94 to 23-8-95 (one Year)

SUBJECT-MATTER INSURED Tug No. BG-7, D-9572 1 Year 1980: Steel body.

AMOUNT INSURED HEREUNDER One Corore only.

PREMIUM RATE AND PREMIUM	3.20%.....Tk. 3,20,000.00
	15% VAT ...Tk. 48,000.00
	Stamp.....Tk. 20,000.00
	<u>Tk. 3,88,000.00</u>

CLAUSES, ENDORSEMENTS, SPECIAL CONDITIONS AND WARRANTIES

Risk: Comprehensive Risks as per Inland Time Clause-Hulls  
Deductable Tk. 1.00% of Sum Insured for each and every  
Claims (other than total &/or constructive total loss only)

- Warranties:
- Warranted that the vessel complies with all Government Regulations Regarding Navigation and safety as in force.
  - Warranted that the vessel will be operated under a valid annual survey certificate issued by the Government of the Peoples Republic of Bangladesh.
  - Warranted that the vessel will ply only on the Inland River of Bangladesh.
  - The Vessel shall not engage in towage except in accordance with rules governing tows as laid down by BIWTA.
  - Warranted that no lay up return shall be allowed.
  - Existing clause must be maintained.

Issued in lieu of Cover Note No. DAK/LO/MCH/pvt-02/94 dt. 24-8-94

THE ATTACHED CLAUSES AND ENDORSEMENTS FORM PART OF THIS POLICY.



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500740 = 20,000/-

