

SALEM CITY MUNICIPAL CORPORATION

THIRD TAMILNADU URBAN DEVELOPMENT PROJECT

DEDICATED WATER SUPPLY SCHEME TO SALEM CITY MUNICIPAL CORPORATION

NATIONAL COMPETITIVE BIDDING

PACKAGE VI

NAME OF WORK: Supplying, Laying, Jointing Testing and Commissioning of Mild Steel (MS) / Ductile Iron (DI) Pipes for Feeder Mains, construction of sump cum pump house and installation & testing of electromechanical / instrumentation works for Dedicated Water Supply Scheme to Salem City Municipal Corporation.

VOLUME I / IV

Invitation For Bid (IFB)

Section 1: Instructions To Bidders (ITB)

**Section 2: Forms of Bid, Qualification Information
and Letter of Acceptance**

Section 3: Conditions Of Contract

Section 4: Contract Data

Section 8: Forms Of Securities

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PERIOD OF SALE OF	:	FROM	04-01-2012
BIDDING DOCUMENT	:	TO	02-02-2012
TIME AND DATE OF PRE-BID CONFERENCE	:	DATE	10-01-2012 TIME 11.00 HOURS
LAST DATE AND TIME FOR RECEIPT OF BIDS	:	DATE	03-02-2012 TIME 15.00 HOURS
TIME AND DATE OF OPENING OF BIDS	:	DATE	03-02-2012 TIME 15.15 HOURS
PLACE OF OPENING OF BIDS	:	Conference Hall at Fifth floor, Commissionerate of Municipal Administration, Ezhilagam Annex, Chepauk, Chennai - 600 005.	
OFFICER INVITING BIDS	:	Commissioner, Salem City Municipal Corporation, SALEM – 636 001.	

INVITATION FOR BID

(IFB)

SALEM CITY MUNICIPAL CORPORATION

THIRD TAMILNADU URBAN DEVELOPMENT PROJECT

DEDICATED WATER SUPPLY SCHEME TO SALEM CITY MUNICIPAL CORPORATION

INVITATIONS FOR BIDS (IFB)
NATIONAL COMPETITIVE BIDDING

Bid No.: 17417/2010/SS2

Date: 30.12.2011

1. The Government of India has received a loan from the International Bank for Reconstruction & Development towards the cost of Third Tamil Nadu Urban Development Project and intends a part of the funds to cover eligible payments under the contracts for construction of works as detailed below. Bidding is open to all bidders from eligible source countries as defined in the *IBRD Guidelines for Procurement*. Bidders from India should, however, be registered with the Government of Tamilnadu or other State Governments/Government of India, or State/Central Government Undertakings. **Bidders are advised to note the minimum qualification criteria specified in Clause 4 of the Instructions to Bidders to qualify for the award of the contract.**

2. The Commissioner, Salem City Municipal Corporation, Salem invites bids for the construction of works detailed in the table.

3. Bidding documents (and additional copies) may be purchased from the office of The Commissioner, Salem City Municipal Corporation, from **04-01-2012** to **02-02-2012** for a non-refundable fee (three sets) as indicated, in the form of cash or Demand Draft on any Scheduled bank payable at Salem in favour of The Commissioner, Salem City Municipal Corporation. Interested bidders may obtain further information at the same address. Bidding documents requested by mail will be dispatched by registered/speed post on payment of an extra amount of Rs.1000/-. The Commissioner, Salem City Municipal Corporation will not be held responsible for the postal delay if any, in the delivery of the documents or non-receipt of the same.

The Bid document can also be freely downloaded from the Website i) www.tenders.gov.in ii) www.tenders.tn.gov.in iii) www.salemcorporation.gov.in and used at free of cost. The bidders, who have downloaded the bid documents, shall be solely responsible for checking the web site for any addendum / amendment issued subsequently to the bid document and takes into consideration the same while preparing and submitting the bids.

4. Bids must be accompanied by security of the amount specified for the work in the table below, drawn in favour of Commissioner, Salem City Municipal Corporation, Salem. Bid security will have to be in any one of the forms as specified in the bidding document and shall have to be valid for 45 days beyond the validity of the bid.

5. Bids must be delivered to "The Commissioner, Salem City Municipal Corporation", at **Room No. 2, Office of the Director of Municipal Administration, VI Floor, Ezhilagam Annex, Chepauk, Chennai – 600 005** during normal working hours on any of the working days on or before 15.00 hrs. on **03-02-2012** and will be opened on the same day at 15.15 hrs on **03-02-2012** at the **Conference Hall at fifth floor, Commissionerate of Municipal Administration, Ezhilagam Annex, Chepauk, Chennai-600 005**, in the presence of the bidders who wish to attend. If the office happens to be closed on the date of receipt of the bids as specified, the bids will be received and opened on the next working day at the same time and venue.

6. A pre-bid meeting will be held on **10-01-2012** at 11.00 hrs. at the office of The Commissioner, Salem City Municipal Corporation, Salem to clarify the issues and to answer questions on any matter that may be raised at that stage as stated in Clause 9.2 of 'Instructions to Bidders' of the bidding document.

7. Other details can be seen in the bidding documents.

TABLE

DEDICATED WATER SUPPLY SCHEME TO SALEM CITY MUNICIPAL CORPORATION

BID PACKAGES

<u>Package No.</u>	<u>Name of work</u>	<u>Approximate value of work (Rs.)</u>	<u>Bid security (Rs.)</u>	<u>Cost of Bid document (Rs.)</u>	<u>Period of completion</u>
1	2	3	4	5	6
Package VI	Supplying, Laying, Jointing Testing and Commissioning of Mild Steel (MS) / Ductile Iron (DI) Pipes for Feeder Mains, construction of sump cum pump house and installation & testing of electromechanical / instrumentation works for Dedicated Water Supply Scheme to Salem City Municipal Corporation.	424,300,000	4,243,000	10000+1200 (VAT) Total Rs.11200 for one set containing three copies	18 Months (Including Monsoon Period)

COMMISSIONER
Salem City Municipal Corporation

SECTION 1
INSTRUCTIONS TO BIDDERS
(ITB)

Section 1: Instructions to Bidders

Table of Clauses

A. General	Page No.	D. Submission of Bids	Page No.
1. Scope of Bid	8	19. Sealing and Marking of Bids	15
2. Source of Funds	8	20. Deadline for Submission of Bids	16
3. Eligible Bidders	8	21. Late Bids	16
4. Qualification of the Bidder	8	22. Modification and Withdrawal of Bids	16
5. One Bid per Bidder	11		
6. Cost of Bidding	11		
7. Site Visit	12		
B. Bidding Documents		E. Bid Opening and Evaluation	
8. Content of Bidding Documents	12	23. Bid Opening	16
9. Clarification of Bidding Documents	12	24. Process to be Confidential	17
10. Amendment of Bidding Documents	13	25. Clarification of Bids	17
		26. Examination of Bids and Determination of Responsiveness	17
		27. Correction of Errors	17
		28. Deleted	
		29. Evaluation and Comparison of Bids	17
		30. Deleted	
C. Preparation of Bids		F. Award of Contract	
11. Language of Bid	13	31. Award Criteria	18
12. Documents Comprising the Bid	13	32. Employer's Right to Accept any Bid and to Reject any or all Bids	18
13. Bid Prices	13	33. Notification of Award	18
14. Currencies of Bid and Payment	14	34. Performance Security	19
15. Bid Validity	14	35. Advance Payment and Security	19
16. Bid Security	14	36. Adjudicator	19
		37. Corrupt or Fraudulent Practices	19
17. Alternative Proposals by Bidders	15		
18. Format and Signing of Bid	15		

A. General

1. Scope of Bid

- 1.1 The **Commissioner Salem City Municipal Corporation, Salem** (referred to as Employer in these documents) invites bids for the construction of works (as defined in these documents and referred to as "the works") detailed in the table given in IFB.
- 1.2 The successful bidder will be expected to complete the works by the intended completion date specified in the Contract data.

2. Source of Funds

- 2.1 The Government of India has received a loan from the International Bank for Reconstruction and Development (hereinafter interchangeably called "the Bank") towards the cost of Third Tamil Nadu Urban Development Project and intends to apply a part of the funds to cover eligible payments under the contract for the Works. Payments by the Bank will be made only at the request of the borrower and upon approval of the Bank in accordance with the *Loan Agreement*, and will be subject in all respects to the terms and conditions of that Agreement. Except as the Bank may specifically otherwise agree, no party other than the borrower shall derive any rights from the *Loan Agreement* or have any rights to the loan/credit proceeds.
- 2.2 The loan agreement prohibits a withdrawal from the loan account for the purpose of any payment to persons or entities, or for any import of goods, if such payment or import, to the knowledge of the Bank, is prohibited by a decision of the United Nations Security Council, taken under Chapter VII of the Charter of the United Nations.

3. Eligible Bidders

- 3.1 This *Invitation for Bids* is open to all bidders from the eligible countries as defined under the *IBRD Guidelines for Procurement*. Any materials, equipment, and services to be used in the performance of the Contract shall have their origin in the eligible source countries.
- 3.2 All bidders shall provide in Section 2, Forms of Bid and Qualification Information, a statement that the Bidder is not associated, nor has been associated in the past, directly or indirectly, with the Consultant or any other entity that has prepared the design, specifications, and other documents for the Project or being proposed as Project Manager for the Contract. A firm that has been engaged by the Borrower to provide consulting services for the preparation or supervision of the works, and any of its affiliates, shall not be eligible to bid.
- 3.3 Government-owned enterprises in the Employer's country may only participate if they are legally and financially autonomous, operate under commercial law and are not a dependent agency of the Borrower or Sub-borrower.
- 3.4 Bidders shall not be under a declaration of ineligibility for corrupt and fraudulent practices issued by the Bank in accordance with sub-clause 37.1.

4. Qualification of the Bidder

- 4.1 All bidders shall provide in Section 2, Forms of Bid and Qualification Information, a preliminary description of the proposed work method and schedule, including drawings and charts, as necessary.
- 4.2 Deleted
- 4.3 All bidders shall include the following information and documents with their bids in Section 2:
 - (a) copies of original documents defining the constitution or legal status, place of registration, and principal place of business; written power of attorney of the signatory of the Bid to commit the Bidder;
 - (b) total monetary value of construction work performed for each of the last five years;
 - (c) experience in works of a similar nature and size for each of the last five years, and details of works under way or contractually committed; and clients who may be contacted for further information on those contracts;
 - (d) major items of construction equipment proposed to carry out the Contract;

- (e) qualifications and experience of key site management and technical personnel proposed for the Contract;
- (f) reports on the financial standing of the Bidder, such as profit and loss statements and auditor's reports for the past five years;
- (g) evidence of adequacy of working capital for this contract (access to line (s) of credit and availability of other financial resources);
- (h) authority to seek references from the Bidder's bankers;
- (i) information regarding any litigation or arbitration resulting from contracts executed by the Bidder in the last five years or currently under execution. The information shall include the names of the parties concerned, the disputed amount, cause of litigation, and matter in dispute;
- (j) proposals for subcontracting components of the Works which in aggregate add to more than 20 percent of the Bid Price (for each, the qualifications and experience of the identified sub-contractor in the relevant field should be annexed); No vertical splitting of works for sub contracting is acceptable; and
- (k) the proposed methodology and program of construction including Environmental Management Plan, backed with equipment planning and deployment, duly supported with broad calculations and quality control procedures proposed to be adopted, justifying their capability of execution and completion of the work as per technical specifications within the stipulated period of completion as per milestones.
- (l) Certificate from the engineer-in-charge duly attested by the Notary Public to be furnished.

4.4 Bid from Joint Venture are not acceptable.

4.5 A. To qualify for award of the contract, each bidder in its name should have in the last five years i.e 2006-07, 2007-08, 2008-09, 2009-10 and 2010-11. (Works completed till date will also be considered)

- (a) achieved, in at least two financial years, a minimum annual financial turnover (in all classes of civil engineering works only) of Rs.230 million
- (b) satisfactorily completed as a prime contractor, or as subcontractor duly certified by the employer / main contractor and supported by authorization from the employer for sub-contracting , at least **one similar work** of value not less than Rs. 175 million
- (c) executed in any one year, as a prime contractor, or as subcontractor, duly certified by the employer / main contractor and supported by authorization from the employer for sub-contracting the following minimum quantities of work:
 - (i) Should have supplied, laid, jointed and tested water supply pumping main of MS pipe of size 700 mm dia and above for a length of not less than 3 km
 - (ii) Should have supplied, laid, jointed and tested water supply pumping main of CI/DI/PSC pipe of size 350 mm dia and above for a length of not less than 14 km
 - (iii) Should have constructed ground level sump of capacity not less than 5 Lakh Liter – 1 No.
 - (iv) Should have constructed of pipe carrying bridge – 1 no
 - (v) Should have supplied, erected and commissioned pump sets of total capacity 100 HP and above .
- (d) The contractor or his identified sub-contractor should possess required valid license for executing the water supply/sanitary engineering works and should have executed similar water supply/sanitary engineering works totaling Rupees 10.00 Lakhs in any one year.

(@) at 2011-2012 price level. Financial turnover and cost of completed works of previous years shall be given weight age of 5% per year based on rupee value to bring them to 2011- 2012 price level.

**The bidder has to furnish the qualification details of identified sub contractors along with the bid and ensure that the identified sub contractors are not changed during the execution of work.*

4.5 B. Each bidder should further demonstrate:

- (a) Availability (either owned or leased or by planned procurement against mobilization advances) of the following key and critical equipment for this work:

■Concrete mixer (8 to 10 Cft)	2 Nos.
■Loader cum excavator (0.5 cum each)	1 No.
■Tipper / Truck (6 to 10 tonnes each)	2 Nos.
■Dewatering Pump sets of 10-20 H.P	3 Nos.
■Hydraulic mobile crane (boom height 10 m)	1 No.
■Vibrator	3 Nos.
■Tools and plants for jointing pipes	10 Nos.
■Pipe cutting machinery	5 Nos.
■Leveling Instrument	2 Nos.
■Compactor / Roller (8 to 10 tonnes)	1 No.
■Chain pulley block (5 mt capacity)	2 Nos.
■Electric Welding Machine	2 Nos.
■Diesel generator welding machine	2 Nos.

Note:

Based on the studies, carried out by the Engineer the minimum suggested major equipment to attain the completion of works in accordance with the prescribed construction schedule are shown in the above list.

The bidders should, however, undertake their own studies and furnish with their bid, a detailed construction planning and methodology supported with layout and necessary drawings and calculations (detailed) as stated in clause 4.3 (k) above to allow the employer to review their proposals. The numbers, types and capacities of each plant/equipment shall be shown in the proposals along with the cycle time for each operation for the given production capacity to match the requirements.

- (b) availability for this work of a Project Manager and other key personnel with adequate experience as required below;
- i). Project Manager -B.E.(Civil) with minimum of 15 years experience -1No.
 - ii) Project Engineer – BE (Mechanical) with minimum 10 years experience – 1 No. and
- (c) liquid assets and/or availability of credit facilities of no less than Rs. 75 million in the format given in Section 2.
(Credit lines/letter of credit/certificates from Banks for meeting the funds requirement etc.) -

4.5 C. To qualify for a package of contracts made up of this and other contracts for which bids are invited in the IFB, the bidder must demonstrate having experience and resources sufficient to meet the aggregate of the qualifying criteria for the individual contracts.

4.6 Sub-contractor's experience and resources will not be taken into account in determining the Bidder's compliance with the qualifying criteria, except to the extent stated in Clause 4.5 [A] above.

4.7 Bidders who meet the minimum qualification criteria will be qualified only if their available bid capacity is more than the total bid value. The available bid capacity will be calculated as under:

$$\text{Assessed Available Bid capacity} = (A * N * 1.5 - B)$$

where

A = Maximum value of civil engineering works executed in any one year during the last five years (updated to 2011-12 price level) taking into account the completed as well as works in progress.

N = Number of years prescribed for completion of the works for which bids are invited i.e. 1 1/2 years.

B = Value, at 2011-12 price level, of existing commitments and on-going works to be completed during the next 1 1/2 years.

Note: *The statements showing the value of existing commitments and on-going works as well as the stipulated period of completion remaining for each of the works listed should be countersigned by the Engineer in charge, not below the rank of an Executive Engineer or equivalent.*

- 4.8** Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have:
- made misleading or false representations in the forms, statements and attachments submitted in proof of the qualification requirements; and anywhere else in their bids and/or
 - record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc.; for which the bidders will disclose such instances of poor performance during last 5 years and/or
 - participated in the previous bidding for the same work and had quoted unreasonably high bid prices and could not furnish rational justification to the employer.

5. One Bid per Bidder

5.1 Each bidder shall submit only one bid for one package. A bidder who submits or participates in more than one Bid (other than as a subcontractor who will not submit its bid as bidder or in cases of alternatives that have been permitted or requested) will cause all the proposals with the Bidder's participation to be disqualified.

6. Cost of Bidding

6.1 The bidder shall bear all costs associated with the preparation and submission of his Bid, and the Employer will in no case be responsible and liable for those costs.

7. Site visit

7.1 The Bidder, at the Bidder's own responsibility and risk is encouraged to visit and examine the Site of Works and its surroundings and obtain all information that may be necessary for preparing the Bid and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the Bidder's own expense.

B. Bidding Documents

8. Content of Bidding Documents

8.1 The set of bidding documents comprises the documents listed in the table below and addenda issued in accordance with Clause 10:

Invitation for Bids

Section	1	Instructions to Bidders
	2	Forms of Bid and Qualification Information
	3	Conditions of Contract
	4	Contract Data
	5	Specifications
	6	Drawings
	7	Bills of Quantities
	8	Forms of Securities

8.2 Of the three sets of the bidding documents supplied, two sets should be completed and returned with the bid.

9. Clarification of Bidding Documents

9.1 A prospective bidder requiring any clarification of the bidding documents may notify the Employer in writing or by cable (hereinafter "cable" includes telex and facsimile) at the Employer's address indicated in the invitation to bid. The Employer will respond to any request for clarification which he received earlier than 15 days prior to the deadline for submission of bids. Copies of the Employer's response will be forwarded to all purchasers of the bidding documents, including a description of the enquiry but without identifying its source.

9.2 Pre-bid meeting

- 9.2.1 The bidder or his official representative is invited to attend a pre-bid meeting which will take place at the O/o Commissioner, Salem City Municipal Corporation, Salem at 11.00 hrs on **10-01-2012**.
- 9.2.2 The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.
- 9.2.3 The bidder is requested to submit any questions in writing or by cable to reach the Employer not later than one week before the meeting.
- 9.2.4 Minutes of the meeting, including the text of the questions raised (without identifying the source of enquiry) and the responses given will be transmitted without delay to all purchasers of the bidding documents. Any modification of the bidding documents listed in Sub-Clause 8.1 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 10 and not through the minutes of the pre-bid meeting.
- 9.2.5 Non-attendance at the pre-bid meeting will not be a cause for disqualification of a bidder.

10. Amendment of Bidding Documents

- 10.1 Before the deadline for submission of bids, the Employer may modify the bidding documents by issuing addenda.
- 10.2 Any addendum thus issued shall be part of the bidding documents and shall be communicated in writing or by cable to all the purchasers of the bidding documents. Prospective bidders shall acknowledge receipt of each addendum by cable to the Employer.
- 10.3 To give prospective bidders 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 bids, in accordance with Sub-Clause 20.2 below.

C. Preparation of Bids

11. Language of the Bid

- 11.1 All documents relating to the bid shall be in the English language.

12. Documents comprising the Bid

- 12.1 The bid submitted by the bidder shall comprise the following:

- (a) The Bid (in the format indicated in Section 2).
- (b) Bid Security;
- (c) Priced Bill of Quantities;
- (d) Qualification Information Form and Documents;

and any other materials required to be completed and submitted by bidders in accordance with these instructions. The documents listed under Sections 2, 4 and 7 of Sub-Clause 8.1 shall be filled in without exception.

12.2 Deleted

13. Bid Prices

- 13.1 The contract shall be for the whole works as described in Sub-Clause 1.1, based on the priced Bill Quantities submitted by the Bidder.
- 13.2 The bidder shall fill in rates and prices and line item total (both in figures and words) for all items of the Works described in the **Bill of Quantities** along with total bid price (both in figures and words). *Items for which no rate or price is entered by the bidder will not be paid for by the Employer when executed and shall*

be deemed covered by the other rates and prices in the Bill of Quantities. Corrections, if any, shall be made by crossing out, initialing, dating and rewriting.

- 13.3** All duties, taxes, and other levies payable by the contractor under the contract, or for any other cause shall be included in the rates, prices and total Bid Price submitted by the Bidder.

Note: *“Bidders may like to ascertain availability of excise/custom duty exemption benefits available in India to the contracts financed under World Bank loan/credits. They are solely responsible for obtaining such benefits which they have considered in their bid and in case of failure to receive such benefits for reasons whatsoever, the employer will not compensate the bidder (contractor). Where the bidder has quoted taking into account such benefits, he must give all information required for issue of certificates in terms of such notifications as per form attached to the Qualification Information in the bid. To the extent the employer determines the quantity indicated therein are reasonable keeping in view the bill of quantities, construction programme and methodology, the certificates will be issued and no subsequent changes will be permitted. No certificate will be issued for items where no quantity/capacity of equipment is indicated in the statement. The bids which do not conform to the above provisions will be treated as non responsive and rejected. Any delay in procurement of the construction equipment /machinery/goods as a result of the above shall not be a cause for granting any extension of time.”*

- 13.4** The rates and prices quoted by the bidder are subject to adjustment during the performance of the Contract in accordance with the provisions of Clause 47 of the Conditions of Contract.

14. Currencies of Bid and Payment

- 14.1** The unit rates and the prices shall be quoted by the bidder entirely in Indian Rupees.

15. Bid Validity

- 15.1** Bids shall remain valid for a period not less than ninety days after the deadline date for bid submission specified in Clause 20. A bid valid for a shorter period shall be rejected by the Employer as non-responsive.

- 15.2** In exceptional circumstances, prior to expiry of the original time limit, the Employer may request that the bidders may extend the period of validity for a specified additional period. The request and the bidder's responses shall be made in writing or by cable. A bidder may refuse the request without forfeiting his bid security. A bidder agreeing to the request will not be required or permitted to modify his bid, but will be required to extend the validity of his bid security for a period of the extension, and in compliance with Clause 16 in all respects.

15.3 Deleted

15.4 Deleted

16. Bid Security

- 16.1** The Bidder shall furnish, as part of his Bid, a Bid security in the amount as shown in column 4 of the table of IFB for this particular work. This bid security shall be in favour of Commissioner Salem City Municipal Corporation, Salem and may be in one of the following forms:

- a bank guarantee issued by a nationalized / scheduled bank located in India in the form given in Section 8; or
- Certified cheque, Bank draft or Letter of Credit in favour of Commissioner Salem City Municipal Corporation, Salem payable at Salem.

- 16.2** Bank guarantees issued as surety for the bid shall be valid for 45 days beyond the validity of the bid.

- 16.3** Any bid not accompanied by an acceptable Bid Security and not secured as indicated in Sub-Clauses 16.1 and 16.2 above shall be rejected by the Employer as non-responsive.

- 16.4** The Bid Security of unsuccessful bidders will be returned within 28 days of the end of the bid validity period specified in Sub-Clause 15.1.

- 16.5** The Bid Security of the successful bidder will be discharged when the bidder has signed the Agreement and furnished the required Performance Security.

16.6 The Bid Security may be forfeited

- (a) if the Bidder withdraws the Bid after Bid opening during the period of Bid validity;
- (b) if the Bidder does not accept the correction of the Bid Price, pursuant to Clause 27; or
- (c) in the case of a successful Bidder, if the Bidder fails within the specified time limit to
 - (i) sign the Agreement; or
 - (ii) furnish the required Performance Security.

17. Alternative Proposals by Bidders

17.1 Bidders shall submit offers that comply with the requirements of the bidding documents, including the basic technical design as indicated in the drawing and specifications. Alternatives will not be considered.

18. Format and Signing of Bid

18.1 The Bidder shall prepare one original and one copy of the documents comprising the bid as described in Clause 12 of these *Instructions to Bidders*, bound with the volume containing the Form of Bid, and clearly marked "**ORIGINAL**" and "**COPY**" as appropriate. In the event of discrepancy between them, the original shall prevail.

18.2 The original and copy of the Bid shall be typed or written in indelible ink and shall be signed by a person or persons duly authorized to sign on behalf of the Bidder, pursuant to Sub-Clauses 4.3. All pages of the bid where entries or amendments have been made shall be initialed by the person or persons signing the bid.

18.3 The Bid shall contain no alterations or additions, except those to comply with instructions issued by the Employer, or as necessary to correct errors made by the bidder, in which case such corrections shall be initialed by the person or persons signing the bid.

18.4 The Bidder shall furnish information as described in the Form of Bid on commissions or gratuities, if any, paid or to be paid to agents relating to this Bid, and to contract execution if the Bidder is awarded the contract.

D. Submission of Bids

19. Sealing and Marking of Bids

19.1 The Bidder shall seal the original and copy of the Bid in separate envelopes, duly marking the envelopes as "**ORIGINAL**" and "**COPY**". These envelopes (called as inner envelopes) shall then be put inside one outer envelope.

19.2 The **inner and outer** envelopes shall

- (a) be addressed to the Employer at the following address:

**The Commissioner, Salem City Municipal Corporation,
Room no: 2,
O/o Commissioner of Municipal Administration,
Ezhilagam Annex, 6th Floor,
Chepauk, Chennai - 600 005.**

and

- (b) bear the following identification:

Bid for : Supplying, Laying, Jointing Testing and Commissioning of Mild Steel (MS) / Ductile Iron (DI) Pipes for Feeder Mains, construction of sump cum pump house and installation & testing of electromechanical / instrumentation works for Dedicated Water Supply Scheme to Salem City Municipal Corporation.

- Bid Reference No. 17417/2010/SS2

19.3 In addition to the identification required in Sub-Clause 19.2, the inner envelopes shall indicate the name and address of the bidder to enable the bid to be returned unopened in case it is declared late, pursuant to Clause 21.

19.4 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 bid.

20. Deadline for Submission of the Bids

20.1 Bids must be received by the Employer at the address specified above no later than 15 Hrs on **03.-02-2012**. In the event of the specified date for the submission of bids declared a holiday for the Employer, the Bids will be received up to the appointed time on the next working day.

20.2 The Employer may extend the deadline for submission of bids by issuing an amendment in accordance with Clause 10, in which case all rights and obligations of the Employer and the bidders previously subject to the original deadline will then be subject to the new deadline.

21. Late Bids

21.1 Any Bid received by the Employer after the deadline prescribed in Clause 20 will be returned unopened to the bidder.

22. Modification and Withdrawal of Bids

22.1 Bidders may modify or withdraw their bids by giving notice in writing before the deadline prescribed in Clause 20.

22.2 Each Bidder's modification or withdrawal notice shall be prepared, sealed, marked, and delivered in accordance with Clause 18 & 19, with the outer and inner envelopes additionally marked "MODIFICATION" or "WITHDRAWAL", as appropriate.

22.3 No bid may be modified after the deadline for submission of Bids.

22.4 Withdrawal or modification of a Bid between the deadline for submission of bids and the expiration of the original period of bid validity specified in Clause 15.1 above or as extended pursuant to Clause 15.2 may result in the forfeiture of the Bid security pursuant to Clause 16.

22.5 Bidders may only offer discounts to, or otherwise modify the prices of their Bids by submitting Bid modifications in accordance with this clause, or included in the original Bid submission.

E. Bid Opening and Evaluation

23. Bid Opening

23.1 The Employer will open all the Bids received (except those received late), including modifications made pursuant to Clause 22, in the presence of the Bidders or their representatives who choose to attend at 15.15 hours on the date and the place specified in Clause 20. In the event of the specified date of Bid opening being declared a holiday for the Employer, the Bids will be opened at the appointed time and location on the next working day.

23.2 Envelopes marked "WITHDRAWAL" shall be opened and read out first. Bids for which an acceptable notice of withdrawal has been submitted pursuant to Clause 22 shall not be opened. Subsequently all envelopes marked "Modification" shall be opened and the submissions therein read out in appropriate detail.

23.3 The Bidders names, the Bid prices, the total amount of each Bid and of any alternative Bid (if alternatives have been requested or permitted), any discounts, Bid modifications and withdrawals, the presence or absence of Bid security, and such other details as the Employer may consider appropriate, will be announced by the Employer at the opening. No bid shall be rejected at bid opening except for the late bids pursuant to Clause 21. Bids [and modifications] sent pursuant to Clause 22 that are not opened and read out at bid opening will

not be considered for further evaluation regardless of the circumstances. Late and withdrawn bids will be returned un-opened to bidders.

23.4 The Employer shall prepare minutes of the Bid opening, including the information disclosed to those present in accordance with Sub-Clause 23.3.

24. Process to Be Confidential

24.1 Information relating to the examination, clarification, evaluation, and comparison of Bids and recommendations for the award of a contract shall not be disclosed to Bidders or any other persons not officially concerned with such process until the award to the successful Bidder has been announced. Any effort by a Bidder to influence the Employer's processing of Bids or award decisions may result in the rejection of his Bid.

25. Clarification of Bids

25.1 To assist in the examination, evaluation, and comparison of Bids, the Employer may, at his discretion, ask any Bidder for clarification of his Bid, including breakdowns of the 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 27.

25.2 Subject to sub-clause 25.1, no Bidder shall contact the Employer on any matter relating to its bid from the time of the bid opening to the time the contract is awarded. If the Bidder wishes to bring additional information to the notice of the Employer, it should do so in writing.

25.3 Any effort by the Bidder to influence the Employer in the Employer's bid evaluation, bid comparison or contract award decisions may result in the rejection of the Bidders' bid.

26. Examination of Bids and Determination of Responsiveness

26.1 Prior to the detailed evaluation of Bids, the Employer will determine whether each Bid (a) meets the eligibility criteria defined in Clause 3; (b) has been properly signed; (c) is accompanied by the required securities and; (d) is substantially responsive to the requirements of the Bidding documents.

26.2 A substantially responsive Bid is one which conforms to all the terms, conditions, and specifications of the Bidding documents, without material deviation or reservation. A material deviation or reservation is one (a) which affects in any substantial way the scope, quality, or performance of the Works; (b) which limits in any substantial way, inconsistent with the Bidding documents, the Employer's rights or the Bidder's obligations under the Contract; or (c) whose rectification would affect unfairly the competitive position of other Bidders presenting substantially responsive Bids.

26.3 If a Bid is not substantially responsive, it will be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the non-conforming deviation or reservation.

27. Correction of Errors

27.1 Bids 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 rates in figures and in words, the rate in words will govern; and
- (b) where there is a discrepancy between the unit and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will govern.

27.2 The amount stated in the Bid will be adjusted by the Employer in accordance with the above procedure for the correction of errors and, with the concurrence of the Bidder, shall be considered as binding upon the Bidder. If the Bidder does not accept the corrected amount the Bid will be rejected, and the Bid security may be forfeited in accordance with Sub-Clause 16.6 (b).

28. Deleted

29. Evaluation and Comparison of Bids

- 29.1** The Employer will evaluate and compare only the Bids determined to be substantially responsive in accordance with Clause 26.
- 29.2** In evaluating the Bids, the Employer will determine for each Bid the evaluated Bid Price by adjusting the Bid Price as follows:
- (a) making any correction for errors pursuant to Clause 27; or
 - (b) making an appropriate adjustments for any other acceptable variations, deviations; and
 - (c) making appropriate adjustments to reflect discounts or other price modifications offered in accordance with Sub Clause 22.5.
- 29.3** The Employer reserves the right to accept or reject any variation, deviation, or alternative offer. Variations, deviations, and alternative offers and other factors which are in excess of the requirements of the Bidding documents or otherwise result in unsolicited benefits for the Employer shall not be taken into account in Bid evaluation.
- 29.4** The estimated effect of the price adjustment conditions under Clause 47 of the *Conditions of Contract*, during the period of implementation of the Contract, will not be taken into account in Bid evaluation.
- 29.5** If the Bid of the successful Bidder is seriously unbalanced in relation to the Engineer's estimate of the cost of work to be performed under the contract, the Employer may require the Bidder to produce detailed price analyses for any or all items of the Bill of Quantities, to demonstrate the internal consistency of those prices with the construction methods and schedule proposed. After evaluation of the price analyses, the Employer may require that the amount of the performance security set forth in Clause 34 be increased at the expense of the successful Bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful Bidder under the Contract.

30. Deleted

F. Award of Contract

31. Award Criteria

- 31.1** Subject to Clause 32, the Employer will award the Contract to the Bidder whose Bid has been determined to be substantially responsive to the Bidding documents and who has offered the lowest evaluated Bid Price, provided that such Bidder has been determined to be (a) eligible in accordance with the provisions of Clause 3, and (b) qualified in accordance with the provisions of Clause 4.

31.2 Deleted

32. Employer's Right to Accept any Bid and to Reject any or all Bids

- 32.1** Notwithstanding Clause 31, the Employer reserves the right to accept or reject any Bid, and to cancel the Bidding process and reject all Bids, at any time prior to the award of Contract, without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds for the Employer's action.

33. Notification of Award and Signing of Agreement

- 33.1** The Bidder whose Bid has been accepted will be notified of the award by the Employer prior to expiration of the Bid validity period by cable, telex or facsimile confirmed by registered letter. This letter (hereinafter and in the *Conditions of Contract* called the "Letter of Acceptance") will state the sum that the Employer will pay the Contractor in consideration of the execution, completion, and maintenance of the Works by the Contractor as prescribed by the Contract (hereinafter and in the Contract called the "Contract Price").

- 33.2** The notification of award will constitute the formation of the Contract, subject only to the furnishing of a performance security in accordance with the provisions of Clause 34.
- 33.3** The Agreement will incorporate all agreements between the Employer and the successful Bidder. It will be signed by the Employer and sent to the successful Bidder, or kept ready for signature of the successful bidder in the office of employer within 28 days following the notification of award along with the Letter of Acceptance. Within 21 days of receipt, the successful Bidder will sign the Agreement and deliver it to the Employer.
- 33.4** Upon the furnishing by the successful Bidder of the Performance Security, the Employer will promptly notify the other Bidders that their Bids have been unsuccessful.

34. Performance Security

34.1 Within 21 days of receipt of the Letter of Acceptance, the successful Bidder shall deliver to the Employer a Performance Security in any of the forms given below for an amount equivalent to 5% of the Contract price plus additional security for unbalanced Bids in accordance with Clause 29.5 of ITB and Clause 52 of Conditions of Contract:

- a bank guarantee in the form given in Section 8; or
- Certified cheque/Bank draft, in favour of Commissioner, Salem City Municipal Corporation payable at SALEM

34.2 If the performance security is provided by the successful Bidder in the form of a Bank Guarantee, it shall be issued either (a) at the Bidder's option, by a Nationalized/Scheduled Indian bank or (b) by a foreign bank located in India and acceptable to the Employer or (c) by a foreign bank through a correspondent Bank in India [scheduled or nationalized].

34.3 Failure of the successful bidder to comply with the requirements of sub-clause 34.1 shall constitute a breach of contract, cause for annulment of the award, forfeiture of the bid security and any such other remedy the Employer may take under the contract, and the Employer may resort to awarding the contract to the next ranked bidder.

35. Advance Payment and Security

35.1 The Employer will provide an Advance Payment on the Contract Price as stipulated in the Conditions of Contract, subject to maximum amount, as stated in the Contract Data.

36. Adjudicator

36.1 The Employer proposes that Mr L.Viswanathan, Superintending Engineer (Retired), TWAD Board be appointed as Adjudicator under the Contract, at a daily fee of Rs 5000/-plus reimbursable expenses. If the Bidder disagrees with this proposal, the Bidder should so state in the Bid. If in the Letter of Acceptance, the Employer has not agreed on the appointment of the Adjudicator, the Adjudicator shall be appointed by The Chairman, Institution of Engineers (India) Tamilnadu State Centre, at the request of either party.

37. Corrupt or Fraudulent Practices

37.1It is the Bank's policy to require that Borrowers (including beneficiaries of Bank loans), as well as bidders, suppliers, and contractors and their sub contractors under Bank-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts¹. In pursuance of this policy, the Bank:

- (a) defines, for the purposes of this provision, the items set forth below as follows:
- (i) "Corrupt practice"² is the offering, giving, receiving or soliciting, directly or indirectly, to anything of value to influence improperly the actions of another party.
 - (ii) "fraudulent practice"³ is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;

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

...2 “another party” refers to a public official acting on relation to the procurement process or contract execution) In this context, “public official “– includes World Bank Staff and employees of other organizations taking or reviewing procurement decisions.

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

- (iii) “Collusive practice ”...⁴ is an arrangements between two or more parties designed to achieve an improper purpose, including to influence improperly the action of another party;
- (iv) “coercive practice”...⁵ is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the action of party;
- (v) “obstructive practice” is
 - a. deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigation in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or
 - b. acts intended to materially impede the exercise of the Bank’s inspection and audit rights provided for under sub-clause 37-1 (e) below.
- (b) will reject a proposal for award if it determines that the bidder recommended for award has, directly, or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for the contract in question,
- (c) will cancel the portion of the loan allocated to a contract if it determines at any time that representatives of the Borrower or of a beneficiary of the loan engaged in corrupt, fraudulent, collusive, or coercive practices during the procurement or the execution of that contract, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur.
- (d) will sanction a firm or individual, including declaring ineligible, either indefinitely or for a stated period of time, to be awarded a Bank-financed contract if it at any time determines that the firm has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for, or in executing, a Bank-financed contract, and
- (e) will have the right to require that a provision be included in bidding documents and in contracts financed by a Bank loan, requiring bidders, suppliers, and contractors and their sub-contractors to permit the Bank to inspect their accounts and records and other documents relating to the bid submission and contract performance and to have them audited by auditors appointed by the Bank.

37.2 Furthermore, Bidders shall be aware of the provision stated in Sub-Clause 23.2 and 59.2(h) of the Conditions of Contract.

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

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

SECTION 2
FORMS OF BID, QUALIFICATION INFORMATION AND LETTER OF ACCEPTANCE

Table of Forms:

- **CONTRACTOR'S BID**
- **QUALIFICATION INFORMATION**
- **LETTER OF ACCEPTANCE**
- **NOTICE TO PROCEED WITH THE WORK**
- **AGREEMENT FORM**

Contractor's Bid

Description of the Works: : Supplying, Laying, Jointing Testing and Commissioning of Mild Steel (MS) / Ductile Iron (DI) Pipes for Feeder Mains, construction of sump cum pump house and installation & testing of electromechanical / instrumentation works for Dedicated Water Supply Scheme to Salem City Municipal Corporation

To: **The Commissioner, Salem City Municipal Corporation, Salem.**
Address : **Room no :2,
O/o Commissionerate of Municipal Administration,
Ezhilagam Annex, 6th Floor,
Chepauk, Chennai - 600 005.**

GENTLEMEN,

Having examined the bidding documents including addendum, we offer to execute the Works described above in accordance with the Conditions of Contract, Specifications, Drawings and Bill of Quantities accompanying this Bid for the Contract Price of _____ [in figures] (_____ [in letters]¹

The advance Payment required is: Rupees _____.

We accept the appointment of _____ as the Adjudicator.
(OR)

We do not accept the appointment of _____ as the Adjudicator and propose instead that _____ be appointed as Adjudicator whose daily fees and biographical data are attached.

This Bid and your written acceptance of it shall constitute a binding contract between us. We understand that you are not bound to accept the lowest or any Bid you receive.

We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in India namely "Prevention of Corruption Act 1988".

Commissions or gratuities, if any, paid or to be paid by us to agents relating to this Bid, and to contract execution if we are awarded the contract, are listed below:

<u>Name and address of agent</u>	<u>Amount</u>	<u>Purpose of Commission or gratuity</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

(if none, state "none")

We hereby confirm that this Bid complies with the Bid Validity and Bid Security required by the Bidding documents.

Yours faithfully,

Authorized Signature:

Name & Title of Signatory: _____

Name of Bidder : _____

Address : _____

¹ To be filled by the Bidder, together with his particulars and date of submission at the bottom of the Form of Bid

Qualification Information

The information to be filled in by the Bidder in the following pages will be used for purposes of post qualification as provided for in Clause 4 of the Instructions to Bidders. This information will not be incorporated in the Contract.

1. For Individual Bidders

1.1 Constitution or legal status of Bidder
[Attach copy]

Place of registration: _____

Principal place of business: _____

Power of attorney of signatory of Bid
[Attach]

1.2 Total value of Civil Engineering construction work executed and payments received in the last five years** (in Rs. Million)

2006-2007	_____β
2007-2008	_____
2008-2009	_____
2009-2010	_____
2010-2011	_____

1.3.1 Work performed as prime contractor (in the same name) on works of a similar nature over the last five years.
**

<u>Project Name</u>	<u>Name of the Employer*</u>	<u>Description of work</u>	<u>Contract No.</u>	<u>Value of contract (Rs. Million)</u>	<u>Date of issue of work order</u>	<u>Stipulated period of completion</u>	<u>Actual date of completion*</u>	<u>Remarks explaining reasons for delay and work completed</u>
---------------------	------------------------------	----------------------------	---------------------	--	------------------------------------	--	-----------------------------------	--

1.3.2 Quantities of work executed as prime contractor (in the same name and style) in the last five years: **

<u>Year</u>	<u>Name of the Work</u>	<u>Name of the Employer*</u>	<u>Quantity of work performed (m) @</u>				<u>Remarks *</u>
			<u>Pumping material, Dia & length in meter</u>	<u>Capacity of RCC Sump</u>	<u>Pipe carrying Bridge: Pipe Dia and Span of bridge</u>	<u>Capacity Pump sets in HP</u>	
2006-2007							
2007-2008							
2008-2009							
2009-2010							
2010-2011							

*Attach certificate(s) from the Engineer(s)-in-Charge

@ The item of work for which data is requested should tally with that specified in ITB clause 4.5A(c).

** immediately preceding the financial year in which bids are received.

β Attach certificate from Chartered Accountant.

1.4 Information on Bid Capacity (works for which bids have been submitted and works which are yet to be completed) as on the date of this bid.

(A) Existing commitments and on-going works:

Description of Work	Place & State	Contract No. & Date	Name and Address of Employer	Value of Contract (Rs. million)	Stipulated period of completion	Value of works* remaining to be completed (Rs. million)	Anticipated date of completion
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

(B) Works for which bids already submitted:

Description of Work	Place & State	Name and Address of Employer	Estimated value of works (Rs. million)	Stipulated period of completion	Date when decision is expected	Remarks if any
(1)	(2)	(3)	(4)	(5)	(6)	(7)

* Attach certificate(s) from the Engineer(s)-in-Charge.

1.5 The following items of Contractor's Equipment are essential for carrying out the Works. The Bidder should list all the information requested below. Refer also to Sub Clause 4.3 (d) of the Instructions to Bidders.

Item of equipment	Requirement		Availability proposals			Remarks (From whom to be purchased)
	No.	Capacity	Owned/leased/ to be procured	Nos/ capacity	Age/ condition	
*	*	*	*	*	*	*
*	*	*	*	*	*	*

1.6 Qualifications and experience of key personnel proposed for administration and execution of the Contract. Attach biographical data. Refer also to Sub Clause 4.3 (e) and 4.5 (B) (b) of instructions to Bidders and Sub Clause 9.1 of the Conditions of Contract.

Position	Name	Qualifications	Years of experience (general)	Years of experience in the proposed position
Project Manager	*	*	*	*
*	*	*	*	*
*	*	*	*	*
*	*	*	*	*
etc.				

1.7 Proposed subcontracts and firms involved. [Refer ITB Clause 4.3 (j)]

Sections of the works	Value of Sub-contract	Sub-contractor (name and address)	Experience in similar work
*	*	*	*
*	*	*	*
*	*	*	*

1.8 Financial reports for the last five years: balance sheets, profit and loss statements, auditors' reports (in case of companies/corporation), etc. List them below and attach copies.

1.9 Evidence of access to financial resources to meet the qualification requirements: cash in hand, lines of credit, etc. List them below and attach copies of support documents *[sample format attached]*.

1.10. Name, address, and telephone, telex, and fax numbers of the Bidders' bankers who may provide references if contacted by the Employer.

1.11 Information on litigation history in which the Bidder is involved.

<u>Other party(ies)</u>	<u>Employer</u>	<u>Cause of dispute</u>	<u>Amount involved</u>	<u>Remarks showing present status</u>

1.12 Statement of compliance under the requirements of Sub Clause 3.2 of the instructions to Bidders.

1.13 Proposed work method and schedule. The Bidder should attach descriptions, drawings and charts as necessary to comply with the requirements of the Bidding documents. [Refer ITB Clause 4.1 and 4.3 (k)].

2. Joint Venture - Deleted

3. Additional Requirements

3.1 Bidders should provide any additional information required to fulfill the requirements of Clause 4 of the Instructions to the Bidders, if applicable.

SAMPLE FORMAT FOR EVIDENCE OF ACCESS TO OR AVAILABILITY OF CREDIT FACILITIES –*
CLAUSE 4.5 [B] [c] OF ITB

BANK CERTIFICATE

This is to certify that M/s. is a reputed company with a good financial standing.

If the contract for the work, namely [funded by the World Bank] is awarded to the above firm, we shall be able to provide overdraft/credit facilities to the extent of Rs. to meet their working capital requirements for executing the above contract.

__ Sd. __

Name of Bank

Senior Bank Manager

Address of the Bank

(Name of the Project)

(Declaration regarding customs/excise duty exemption for materials/
construction equipment bought for the work)

(Bidder's Name and Address)

To:
(Name of the Employer)

Dear Sir:

Re: *[Name of Work]* -
Certificate for Import/Procurement of Goods/Construction Equipment

1. We confirm that we are solely responsible for obtaining customs/excise duty waivers which we have considered in our bid and in case of failure to receive such waivers for reasons whatsoever, the Employer will not compensate us.
2. We are furnishing below the information required by the Employer for issue of the necessary certificates in terms of the Government of India Central Excise Notification No. 108/95 and Customs Notification No. 85/99.
3. The goods/construction equipment for which certificates are required are as under:

Items	Make/ Brand Name	Capacity [where applicable]	Quantity	Value	State whether it will be procured locally or imported [if so from which country]	Remarks regarding justification for the quantity and their usage in works
Goods						
[a] Bitumen						
[b] Others						
Construction Equipment						
[a]						
[b]						
[c]						
[d]						

4. We agree that no modification to the above list is permitted after bids are opened.
5. We agree that the certificate will be issued only to the extent considered reasonable by the Employer for the work, based on the Bill of Quantities and the construction programme and methodology as furnished by us along with the bid.
6. We confirm that the above goods will be exclusively used for the construction of the above work and construction equipment will not be sold or otherwise disposed of in any manner for a period of five years from the date of acquisition.

Date: _____
Place: _____(Signature) _____
(Printed Name) _____
(Designation) _____
(Common Seal) _____**This certificate will be issued within 60 days of signing of contract and no subsequent change will be permitted.**

Letter of Acceptance
(letterhead paper of the Employer)

_____ [date]

To: _____ [name and address of the Contractor]

Dear Sirs,

This is to notify you that your Bid dated _____ for execution of the _____ [name of the contract and identification number, as given in the Instructions to Bidders] for the Contract Price of Rupees _____ (_____) [amount in words and figures], as corrected and modified in accordance with the Instructions to Bidders¹ is hereby accepted by our Agency.

We accept/do not accept that _____ be appointed as the Adjudicator².

We note that as per bid, you do not intend to subcontract any component of work.

[OR]

We note that as per bid, you propose to employ M/s. as sub-contractor for executing

[Delete whichever is not applicable]

You are hereby requested to furnish Performance Security, plus additional security for unbalanced bids in terms of ITB clause 29.5, in the form detailed in Para 34.1 of ITB for an amount of Rs. _____ within 21 days of the receipt of this letter of acceptance valid upto 28 days from the date of expiry of Defects Liability Period i.e. upto and sign the contract, failing which action as stated in Para 34.3 of ITB will be taken.

We have reviewed the construction methodology submitted by you along with the bid in response to ITB Clause 4.3[k] and our comments are given in the attachment. You are requested to submit a revised Program including environmental management plan as per Clause 27 of General Conditions of Contract within 14 days of receipt of this letter.

Yours faithfully,

Authorized Signature

Name and Title of Signatory

Name of Agency

1 Delete "corrected and" or "and modified" if only one of these actions applies. Delete "as corrected and modified in accordance with the Instructions to Bidders" if corrections or modifications have not been effected.

2 To be used only if the Contractor disagrees in his Bid with the Adjudicator proposed by the Employer in the "Instructions to Bidders."

Issue of Notice to proceed with the work

(letterhead of the Employer)

_____ (date)

To

_____ (name and address of the Contractor)

Dear Sirs:

Pursuant to your furnishing the requisite security as stipulated in ITB clause 34.1 and signing of the contract agreement for the construction of _____ @ a Bid Price of Rs. _____, you are hereby instructed to proceed with the execution of the said works in accordance with the contract documents.

Yours faithfully,

(Signature, name and title of
signatory authorized to sign on
behalf of Employer)

Agreement Form

Agreement

This agreement, made the _____ day of _____, 20_____,
between _____
_____ [name and address of Employer]
(hereinafter called “the Employer”) of the one part and _____

_____ [name and address of contractor] (hereinafter called “the
Contractor”) of the other part.

Whereas the Employer is desirous that the Contractor execute _____

_____ [name and
identification number of Contract] (hereinafter called “the Works”) and the Employer has accepted the Bid by the
Contractor for the execution and completion of such Works and the remedying of any defects therein, at a contract
price of Rs.....

NOW THIS AGREEMENT WITNESSETH as follows:

1. In this Agreement, words and expression shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to, and they shall be deemed to form and be read and construed as part of this Agreement.
2. 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 remedy any defects therein in conformity in all aspects with the provisions of the Contract.
3. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying the defects wherein 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.
4. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:
 - i) Letter of Acceptance;
 - ii) Notice to proceed with the works;
 - iii) Contractor’s Bid;
 - iv) Contract Data;
 - v) Conditions of contract (including Special Conditions of Contract);
 - vi) Specifications;
 - vii) Drawings;
 - viii) Bill of Quantities; and
 - ix) Any other document listed in the Contract Data as forming part of the contract.

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

The Common Seal of _____

was hereunto affixed in the presence of:

Signed, Sealed and Delivered by the said _____

in the presence of:

Binding Signature of Employer _____

Binding Signature of Contractor _____

SECTION 3
CONDITIONS OF CONTRACT

Conditions of Contract

Table of Contents

A. General	Page No.	C. Quality Control	Page No.
1. Definitions	36	33. Identifying Defects	43
2. Interpretation	37	34. Tests	43
3. Language and Law	37	35. Correction of Defects	43
4. Engineer's Decisions	38	36. Uncorrected Defects	43
5. Delegation	38		
6. Communications	38		
7. Subcontracting	38	D. Cost Control	
8. Other Contractors	38	37. Bill of Quantities	43
9. Personnel	38	38. Changes in the Quantities	43
10. Employer's & Contractor's Risks	38	39. Variations	44
11. Employer's Risks	38	40. Payments for Variations	44
12. Contractor's Risks	39	41. Cash Flow Forecasts	44
13. Insurance	39	42. Payment Certificates	44
14. Site Investigation Reports	39	43. Payments	45
15. Queries about the Contract		44. Compensation Events	45
Data	39	45. Tax	46
16. Contractor to Construct the		46. Currencies	46
Works	39	47. Price Adjustments	46
17. The Works to Be Completed by		48. Retention	46
the Intended Completion Date	40	49. Liquidated Damages	47
18. Approval by the Engineer	40	50. Bonus	47
19. Safety	40	51. Advance Payment	47
20. Discoveries	41	52. Securities	47
21. Possession of the Site	41	53. Day works	47
22. Access to the Site	41	54. Cost of Repairs	47
23. Instructions	41		
24. Disputes	41	E. Finishing the Contract	
25. Procedure for Disputes	41	55. Completion	48
26. Replacement of Adjudicator	41	56. Taking Over	48
		57. Final Account	48
B. Time Control		58. Operating and Maintenance Manuals	48
27. Program	42	59. Termination	48
28. Extension of the Intended		60. Payment upon Termination	49
Completion Date	42	61. Property	49
29. Acceleration	42	62. Release from Performance	49
30. Delays Ordered by the		63. Suspension of World Bank Loan	49
Engineer	42	or Credit	
31. Management Meetings	42	64. Fraud and corruption	50
32. Early Warning	42		
		F. Special Conditions of Contract	51

Conditions of Contract

A. General

1. Definitions

- 1.1** Terms which are defined in the Contract Data are not also defined in the Conditions of Contract but keep their defined meanings. Capital initials are used to identify defined terms.

The **Adjudicator** is the person appointed jointly by the Employer and the Contractor to resolve disputes in the first instance, as provided for in Clauses 24 and 25. The name of the Adjudicator is defined in the Contract Data.

Bill of Quantities means the priced and completed **Bill of Quantities** forming part of the Bid.

Compensation Events are those defined in Clause 44 hereunder.

The **Completion Date** is the date of completion of the Works as certified by the Engineer in accordance with Sub Clause 55.1.

The **Contract** is the contract between the Employer and the Contractor to execute, complete and maintain the Works. It consists of the documents listed in Clause 2.3 below.

The **Contract Data** defines the documents and other information which comprise the Contract.

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

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

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

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

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

The **Defects Liability Period** is the period named in the Contract Data and calculated from the Completion Date.

The **Employer** is the party who will employ the Contractor to carry out the Works.

The **Engineer** is the person named in the Contract Data (or any other competent person appointed and notified to the contractor to act in replacement of the Engineer) who is responsible for supervising the execution of the works and administering the Contract.

Equipment is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.

The **Initial Contract Price** is the Contract Price listed in the Employer's Letter of Acceptance.

The **Intended Completion Date** is the date on which it is intended that the Contractor shall complete the Works. The Intended Completion Date is specified in the Contract Data. The Intended Completion Date may be revised only by the Engineer by issuing an extension of time.

Materials are all supplies, including consumables, used by the contractor for incorporation in the Works.

Plant is any integral part of the Works which is to have a mechanical, electrical, electronic or chemical or biological function.

The **Site** is the area defined as such in the Contract Data.

Site Investigation Reports are those which were included in the Bidding documents and are factual interpretative reports about the surface and sub-surface conditions at the site.

Specification means the Specification of the Works included in the Contract and any modification or addition made or approved by the Engineer.

The **Start Date** is given in the Contract Data. It is the date when the Contractor shall commence execution of the works. It does not necessarily coincide with any of the Site Possession Dates.

A **Subcontractor** is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract which includes work on the Site.

Temporary Works are works designed, constructed, installed, and removed by the Contractor which are needed for construction or installation of the Works.

A **Variation** is an instruction given by the Engineer which varies the Works.

The **Works** are what the Contract requires the Contractor to construct, install, and turn over to the Employer, as defined in the Contract Data.

2. Interpretation

2.1 In interpreting these Conditions of Contract, singular also means plural, male also means female or neuter, and the other way around. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Engineer will provide instructions clarifying queries about the Conditions of Contract.

2.2 Deleted

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

- (1) Agreement
- (2) Letter of Acceptance, notice to proceed with the works
- (3) Contractor's Bid
- (4) Contract Data
- (5) Conditions of Contract including Special Conditions of Contract
- (6) Specifications
- (7) Drawings
- (8) Bill of Quantities and
- (9) any other document listed in the Contract Data as forming part of the Contract.

3. Language and Law

3.1 The language of the Contract and the law governing the Contract are stated in the Contract Data.

4. Engineer's Decisions

4.1 Except where otherwise specifically stated, the Engineer will decide contractual matters between the Employer and the Contractor in the role representing the Employer.

5. Delegation

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

6. Communications

6.1 Communications between parties which are referred to in the conditions are effective only when in writing. A notice shall be effective only when it is delivered (in terms of Indian Contract Act).

7. Subcontracting

7.1 The Contractor may subcontract with the approval of the Engineer but may not assign the Contract without the approval of the Employer in writing. Subcontracting does not alter the Contractor's obligations.

7.2 The contractor shall not be required to obtain any consent from the employer for:

- a) the sub-contracting of any part of the Works for which the Sub-contractor is named in the contract;
- b) the provision of labour; and
- c) the purchase of materials which are in accordance with the standards specified in the Contract.

8. Other Contractors

8.1 The Contractor shall cooperate and share the Site with other contractors, public authorities, utilities, and the Employer between the dates given in the Schedule of Other Contractors. The Contractor shall as referred to in the Contract Data, also provide facilities and services for them as described in the Schedule. The employer may modify the schedule of other contractors and shall notify the contractor of any such modification.

9. Personnel

9.1 The Contractor shall employ the key personnel named in the Schedule of Key Personnel as referred to in the Contract Data to carry out the functions stated in the Schedule or other personnel approved by the Engineer. The Engineer will approve any proposed replacement of key personnel only if their qualifications, abilities, and relevant experience are substantially equal to or better than those of the personnel listed in the Schedule.

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

10. Employer's and Contractor's Risks

10.1 The Employer carries the risks which this Contract states are Employer's risks, and the Contractor carries the risks which this Contract states are Contractor's risks.

11. Employer's Risks

11.1 The Employer is responsible for the excepted risks which are (a) in so far as they directly affect the execution of the Works in the Employer's country, the risks of war, hostilities, invasion, act of foreign enemies, rebellion, revolution, insurrection or military or usurped power, civil war, riot commotion or disorder (unless restricted to the Contractor's employees), and contamination from any nuclear fuel or nuclear waste or radioactive toxic explosive, or (b) a cause due solely to the design of the Works, other than the Contractor's design.

12. Contractor's Risks

12.1 All risks of loss of or damage to physical property and of personal injury and death which arise during and in consequence of the performance of the Contract other than the excepted risks are the responsibility of the Contractor.

13. Insurance

13.1 The Contractor shall provide, in the joint names of the Employer and the Contractor, insurance cover from the Start Date to the end of the Defects Liability Period, in the amounts and deductibles stated in the Contract Data for the following events which are due to the Contractor's risks:

- (a) loss of or damage to the Works, Plant and Materials;
- (b) loss of or damage to Equipment;
- (c) loss of or damage of property (except the Works, Plant, Materials and Equipment) in connection with the Contract; and
- (d) personal injury or death.

13.2 Policies and certificates for insurance shall be delivered by the Contractor to the Engineer for the Engineer's approval before the Start Date. All such insurance shall provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred.

13.3 If the Contractor does not provide any of the policies and certificates required, the Employer may effect the insurance which the Contractor should have provided and recover the premiums the Employer has paid from payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due.

13.4 Alterations to the terms of an insurance shall not be made without the approval of the Engineer.

13.5 Both parties shall comply with any conditions of the insurance policies.

14. Site Investigation Reports

14.1 The Contractor, in preparing the Bid, shall rely on any site Investigation Reports referred to in the Contract Data, supplemented by any information available to the Bidder.

15. Queries about the Contract Data

15.1 The Engineer will clarify queries on the Contract Data.

16. Contractor to Construct the Works

16.1 The Contractor shall construct and install the Works in accordance with the Specification and Drawings, and as per instructions of Engineer.

16.2 The contractor shall take all reasonable steps to protect the environment on and off the Site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of his methods of operation.

During continuance of the contract, the contractor and his sub-contractors shall abide at all times by all existing enactments on environmental protection and rules made thereunder, regulations, notifications and bye-laws of the State or Central Government, or local authorities and any other law, bye-law, regulations that may be passed or notification that may be issued in this respect in future by the State or Central Government or the local authority.

Salient features of some of the major laws that are applicable are given below:

The Water (Prevention and Control of Pollution) Act, 1974, This provides for the prevention and control of water pollution and the maintaining and restoring of wholesomeness of water. 'Pollution' means such contamination of water or such alteration of the physical, chemical or biological properties of water or such discharge of any sewage or trade effluent or of any other liquid, gaseous or solid substance into water (whether directly or indirectly) as may, or is likely to, create a nuisance or render such water harmful or injurious to public health or safety, or to domestic, commercial, industrial, agricultural or other legitimate uses, or to the life and health of animals or plants or of aquatic organisms.

The Air (Prevention and Control of Pollution) Act, 1981, This provides for prevention, control and abatement of air pollution. 'Air Pollution' means the presence in the atmosphere of any 'air pollutant', which means any solid, liquid or gaseous substance (including noise) present in the atmosphere in such concentration as may be or tend to be injurious to human beings or other living creatures or plants or property or environment.

The Environment (Protection) Act, 1986, This provides for the protection and improvement of environment and for matters connected therewith, and the prevention of hazards to human beings, other living creatures, plants and property. 'Environment' includes water, air and land and the inter-relationship which exists among and between water, air and land, and human beings, other living creatures, plants, micro-organism and property.

The Public Liability Insurance Act, 1991, This provides for public liability insurance for the purpose of providing immediate relief to the persons affected by accident occurring while handling hazardous substances and for matters connected herewith or incidental thereto. Hazardous substance means any substance or preparation which is defined as hazardous substance under the Environment (Protection) Act 1986, and exceeding such quantity as may be specified by notification by the Central Government.

[Employers should note that the Loan Agreement between IBRD and the borrowing country may establish specific measures to be taken during construction of the Works for the protection of the environment. Sub-clause 16.2 should be modified / expanded to take into account such specific measures or other measures considered appropriate by the Employer]

17. The Works to Be Completed by the Intended Completion Date

17.1 The Contractor may commence execution of the Works on the Start Date and shall carry out the Works in accordance with the program submitted by the Contractor, as updated with the approval of the Engineer, and complete them by the Intended Completion Date.

18. Approval by the Engineer

18.1 The Contractor shall submit Specifications and Drawings showing the proposed Temporary Works to the Engineer, who is to approve them if they comply with the Specifications and Drawings.

18.2 The Contractor shall be responsible for design of Temporary Works.

18.3 The Engineer's approval shall not alter the Contractor's responsibility for design of the Temporary Works.

18.4 The Contractor shall obtain approval of third parties to the design of the Temporary Works where required.

18.5 All Drawings prepared by the Contractor for the execution of the temporary or permanent Works, are subject to prior approval by the Engineer before their use.

19. Safety

19.1 The Contractor shall be responsible for the safety of all activities on the Site.

20. Discoveries

20.1 Anything of historical or other interest or of significant value unexpectedly discovered on the Site is the property of the Employer. The Contractor is to notify the Engineer of such discoveries and carry out the Engineer's instructions for dealing with them.

21. Possession of the Site

21.1 The Employer shall give possession of all parts of the Site to the Contractor. If possession of a part is not given by the date stated in the Contract Data the Employer is deemed to have delayed the start of the relevant activities and this will be Compensation Event.

22. Access to the Site

22.1 The Contractor shall allow the Engineer and any person authorized by the Engineer access to the Site, to any place where work in connection with the Contract is being carried out or is intended to be carried out and to any place where materials or plant are being manufactured / fabricated / assembled for the works.

23. Instructions

- 23.1** The Contractor shall carry out all instructions of the Engineer which comply with the applicable laws where the Site is located.
- 23.2** The Contractor shall permit the bank to inspect the Contractor's accounts and records relating to the performance of the Contractor and to have them audited by auditors appointed by the Bank, if so required by the Bank.

24. Disputes

- 24.1** If the Contractor believes that a decision taken by the Engineer was either outside the authority given to the Engineer by the Contract or that the decision was wrongly taken, the decision shall be referred to the Adjudicator within 14 days of the notification of the Engineer's decision.

25. Procedure for Disputes

- 25.1** The Adjudicator shall give a decision in writing within 28 days of receipt of a notification of a dispute.
- 25.2** The Adjudicator shall be paid daily at the rate specified in the Contract Data together with reimbursable expenses of the types specified in the Contract Data and the cost shall be divided equally between the Employer and the Contractor, whatever decision is reached by the Adjudicator. Either party may refer a decision of the Adjudicator to an Arbitrator within 28 days of the Adjudicator's written decision. If neither party refers the dispute to arbitration within the above 28 days, the Adjudicator's decision will be final and binding.
- 25.3** The arbitration shall be conducted in accordance with the arbitration procedure stated in the Special Conditions of Contract.

26. Replacement of Adjudicator

- 26.1** Should the Adjudicator resign or die, or should the Employer and the Contractor agree that the Adjudicator is not fulfilling his functions in accordance with the provisions of the Contract, a new Adjudicator will be jointly appointed by the Employer and the Contractor. In case of disagreement between the Employer and the Contractor, within 30 days, the Adjudicator shall be designated by the Appointing Authority designated in the Contract Data at the request of either party, within 14 days of receipt of such request.

B. Time Control

27. Program

- 27.1** Within the time stated in the Contract Data the Contractor shall submit to the Engineer for approval a Program including Environmental Management Plan showing the general methods, arrangements, order, and timing for all the activities in the Works along with monthly cash flow forecast.
- 27.2** An update of the Program shall be a program showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work including any changes to the sequence of the activities.
- 27.3** The Contractor shall submit to the Engineer, for approval, an updated Program at intervals no longer than the period stated in the Contract Data. If the Contractor does not submit an updated Program within this period, the Engineer may withhold the amount stated in the Contract Data from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program has been submitted.
- 27.4** The Engineer's approval of the Program shall not alter the Contractor's obligations. The Contractor may revise the Program and submit it to the Engineer again at any time. A revised Program is to show the effect of Variations and Compensation Events.

28. Extension of the Intended Completion Date

28.1 The Engineer shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work and which would cause the Contractor to incur additional cost.

28.2 The Engineer shall decide whether and by how much to extend the Intended Completion Date within 21 days of the Contractor asking the Engineer for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.

29. Deleted

30. Delays Ordered by the Engineer

30.1 The Engineer may instruct the Contractor to delay the start or progress of any activity within the Works.

31. Management Meetings

31.1 Either the Engineer or the Contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.

31.2 The Engineer shall record the business of management meetings and is to provide copies of his record to those attending the meeting and to the Employer. The responsibility of the parties for actions to be taken is to be decided by the Engineer either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.

32. Early Warning

32.1 The Contractor is to warn the Engineer at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, increase the Contract Price or delay the execution of works. The Engineer may require the Contractor to provide an estimate of the expected effect of the future event or circumstance on the Contract Price and Completion Date. The estimate is to be provided by the Contractor as soon as reasonably possible.

32.2 The Contractor shall cooperate with the Engineer in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Engineer.

C. Quality Control

33. Identifying Defects

33.1 The Engineer shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Engineer may instruct the Contractor to search for a Defect and to uncover and test any work that the Engineer considers may have a Defect.

33.2 The contractor shall permit the Employer's Technical auditor to check the contractor's work and notify the Engineer and Contractor of any defects that are found. Such a check shall not affect the Contractor's or the Engineer's responsibility as defined in the Contract Agreement.

34. Tests

34.1 If the Engineer instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no Defect the test shall be a Compensation Event.

35. Correction of Defects

35.1 The Engineer shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion and is defined in the Contract Data. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.

35.2 Every time notice of a Defect is given, the Contractor shall correct the notified Defect within the length of time specified by the Engineer's notice.

36. Uncorrected Defects

36.1 If the Contractor has not corrected a Defect within the time specified in the Engineer's notice, the Engineer will assess the cost of having the Defect corrected, and the Contractor will pay this amount.

Note: Where in certain cases, the technical specifications provide for acceptance of works within specified tolerance limits at reduced rates, Engineer will certify payments to Contractor accordingly.

D. Cost Control

37. Bill of Quantities

37.1 The Bill of Quantities shall contain items for the construction, installation, testing, and commissioning work to be done by the contractor.

37.2 The Bill of Quantities is used to calculate the Contract Price. The Contractor is paid for the actual quantity of the work done at the rate in the Bill of Quantities for each item.

38. Changes in the Quantities

38.1 If the final quantity of the work done differs from the quantity in the Bill of Quantities for the particular item by more than 25 percent, provided the change exceeds 1% of Initial Contract Price, the Engineer shall adjust the rate to allow for the change.

38.2 The Engineer shall not adjust rates from changes in quantities if thereby the Initial Contract Price is exceeded by more than 15 percent, except with the Prior approval of the Employer.

38.3 If requested by the Engineer, the Contractor shall provide the Engineer with a detailed cost breakdown of any rate in the Bill of Quantities.

39. Variations

39.1 All variation shall be underwritten directions / orders/ approvals of the engineers and All Variations shall be included in updated Programs produced by the Contractor.

40. Payments for Variations

40.1 The Contractor shall provide the Engineer with a quotation (with breakdown of unit rates) for carrying out the Variation when requested to do so by the Engineer. The Engineer shall assess the quotation, which shall be given within seven days of the request or within any longer period stated by the Engineer and before the Variation is ordered.

40.2 If the work in the Variation corresponds with an item description in the Bill of Quantities and if, in the opinion of the Engineer, the quantity of work above the limit stated in Sub Clause 38.1 or the timing of its execution do not cause the cost per unit of quantity to change, the rate in the bill of Quantities shall be used to calculate the value of the Variation. If the cost per unit of quantity changes, or if the nature or timing of the work in the Variation does not correspond with items in the Bill of Quantities, the quotation by the Contractor shall be in form of new rates for the relevant items of work.

40.3 If the Contractor's quotation is unreasonable (or if the contractor fails to provide the Engineer with a quotation within a reasonable time specified by the engineer in accordance with Clause 40.1), the Engineer may order the Variation and make a change to the Contract Price which shall be based on Engineer's own forecast of the effects of the Variation on the Contractor's costs.

- 40.4** If the Engineer decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the work, no quotation shall be given and the Variation shall be treated as a Compensation Event.
- 40.5** The Contractor shall not be entitled to additional payment for costs that could have been avoided by giving early warning.

41. Cash flow forecasts

- 41.1** When the Program is updated, the contractor is to provide the Engineer with an updated cash flow forecast.

42. Payment Certificates

- 42.1** The Contractor shall submit to the Engineer monthly statements of the estimated value of the work completed less the cumulative amount certified previously.
- 42.2** The Engineer shall check the Contractor's monthly statement and within 14 days certify the amount to be paid to the Contractor after taking into account any credit or debit for the month in question in respect of materials for the works in the relevant amounts and under conditions set forth in sub-clause 51(3) of the Contract Data (Secured Advance).
- 42.3** The value of work executed shall be determined by the Engineer.
- 42.4** The value of work executed shall comprise the value of the quantities of the items in the Bill of Quantities completed..
- 42.5** The value of work executed shall include the valuation of Variations and Compensation Events.
- 42.6** The Engineer may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

43. Payments

Payment terms for the work done as per the contract shall be as specified in the Contract Data

- 43.1** Payments shall be adjusted for deductions for advance payments, retention, other recoveries in terms of the contract and taxes, at source, as applicable under the law. The Employer shall pay the Contractor the amounts certified by the Engineer within 28 days of the date of each certificate. If the Employer makes a late payment, the Contractor shall be paid interest on the late payment in the next payment. Interest shall be calculated from the date by which the payment should have been made upto the date when the late payment is made at 8% per annum.
- 43.2** If an amount certified is increased in a later certificate or as a result of an award by the Adjudicator or an Arbitrator, the Contractor shall be paid interest upon the delayed payment as set out in this clause. Interest shall be calculated from the date upon which the increased amount would have been certified in the absence of dispute.
- 43.3** Items of the Works for which no rate or price has been entered in will not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract.

44. Compensation Events

- 44.1** The following are Compensation Events unless they are caused by the Contractor:
- (a) The Employer does not give access to a part of the Site by the Site Possession Date stated in the Contract Data.
 - (b) The Employer modifies the schedule of other contractors in a way which affects the work of the contractor under the contract.

- (c) The Engineer orders a delay or does not issue drawings, specifications or instructions required for execution of works on time.
- (d) The Engineer instructs the Contractor to uncover or to carry out additional tests upon work which is then found to have no Defects.
- (e) The Engineer unreasonably does not approve for a subcontract to be let.
- (f) Ground conditions are substantially more adverse than could reasonably have been assumed before issuance of Letter of Acceptance from the information issued to Bidders (including the Site Investigation Reports), from information available publicly and from a visual inspection of the Site.
- (g) The Engineer gives an instruction for dealing with an unforeseen condition, caused by the Employer, or additional work required for safety or other reasons.
- (h) Other contractors, public authorities, utilities or the Employer does not work within the dates and other constraints stated in the Contract, and they cause delay or extra cost to the Contractor.
- (i) The advance payment is delayed.
- (j) The effect on the Contractor of any of the Employer's Risks.
- (k) The Engineer unreasonably delays issuing a Certificate of Completion.
- (l) Other Compensation Events listed in the Contract Data or mentioned in the Contract.

44.2 If a Compensation Event would cause additional cost or would prevent the work being completed before the Intended Completion Date, the Contract Price shall be increased and/or the Intended Completion Date is extended. The Engineer shall decide whether and by how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended.

44.3 As soon as information demonstrating the effect of each Compensation Event upon the Contractor's forecast cost has been provided by the Contractor, it is to be assessed by the Engineer and the Contract Price shall be adjusted accordingly. If the Contractor's forecast is deemed unreasonable, the Engineer shall adjust the Contract Price based on Engineer's own forecast. The Engineer will assume that the Contractor will react competently and promptly to the event.

44.4 The Contractor shall not be entitled to compensation to the extent that the Employer's interests are adversely affected by the Contractor not having given early warning or not having cooperated with the Engineer.

45. Tax

45.1 The rates quoted by the Contractor shall be deemed to be inclusive of the sales and other taxes that the Contractor will have to pay for the performance of this Contract. The Employer will perform such duties in regard to the deduction of such taxes at source as per applicable law.

46. Currencies

46.1 All payments shall be made in Indian Rupees.

47. Price Adjustment

47.1 Contract price shall be adjusted for increase or decrease in rates and price of labour, materials, fuels and lubricants in accordance with the following principles and procedures and as per formula given in the contract data:

- (a) The price adjustment shall apply for the work done from the start date given in the contract data upto end of the initial intended completion date or extensions granted by the Engineer and shall not apply to the work carried out beyond the stipulated time for reasons attributable to the contractor.

- (b) The price adjustment shall be determined during each quarter from the formula given in the contract data.
- (c) Following expressions and meanings are assigned to the work done during each quarter:

R = Total value of work done during the quarter. It would include the amount of secured advance for materials paid for (if any) during the quarter, less the amount of the secured advance recovered, during the quarter. It will exclude value for works executed under variations for which price adjustment will be worked separately based on the terms mutually agreed.

47.2 To the extent that full compensation for any rise or fall in costs to the contractor is not covered by the provisions of this or other clauses in the contract, the unit rates and prices included in the contract shall be deemed to include amounts to cover the contingency of such other rise or fall in costs.

48. Retention

48.1 The Employer shall retain from each payment due to the Contractor the proportion stated in the Contract Data until Completion of the whole of the Works. This will be in addition to the recovery of advance payment, if any.

48.2 On Completion of the whole of the Works half the total amount retained is repaid to the Contractor and half when the Defects Liability Period has passed and the Engineer has certified that all Defects notified by the Engineer to the Contractor before the end of this period have been corrected.

48.3 On completion of the whole works, the contractor may substitute retention money with an “on demand” Bank guarantee.

49. Liquidated Damages

49.1 The Contractor shall pay liquidated damages to the Employer at the rate per day stated in the Contract Data for each day that the Completion Date is later than the Intended Completion Date (for the whole of the works or the milestone as stated in the contract data). The total amount of liquidated damages shall not exceed the amount defined in the Contract Data. The Employer may deduct liquidated damages from payments due to the Contractor. “Time is the essence of the contract and payment or deduction of liquidated damages shall not relieve the contractor from his obligation to complete the work as per agreed construction program and milestones or from any other of the contractor’s obligations and liabilities under the contract.”

49.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Engineer shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate. The Contractor shall be paid interest on the over payment calculated from the date of payment to the date of repayment at the rates specified in Sub Clause 43.1.

50. Deleted

51. Advance Payment

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

51.2 The Contractor is to use the advance payment only to pay for Equipment, Plant and Mobilization expenses required specifically for execution of the Works. The Contractor shall demonstrate that advance payment has been used in this way by supplying copies of invoices or other documents to the Engineer.

51.3 The advance payment shall be repaid by deducting proportionate amounts from payments otherwise due to the Contractor, following the schedule of completed percentages of the Works on a payment basis. No account shall be taken of the advance (mobilization and equipment only) payment or its repayment in assessing valuations of work done, Variations, price adjustments, Compensation Events, or Liquidated Damages.

51.4 Secured Advance:

The Engineer shall make advance payment in respect of materials intended for but not yet incorporated in the Works in accordance with conditions stipulated in the Contract Data.

52. Securities

52.1 The Performance Security (including additional security for unbalanced bids) shall be provided to the Employer no later than the date specified in the Letter of Acceptance and shall be issued in an amount and form and by a bank or surety acceptable to the Employer, and denominated in Indian Rupees. The Performance Security shall be valid until a date 28 days from the date of expiry of Defects Liability Period and the additional security for unbalanced bids shall be valid until a date 28 days from the date of issue of the certificate of completion.

53. Deleted

54. Cost of Repairs

54.1 Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods shall be remedied by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.

E. Finishing the Contract

55. Completion

55.1 The Contractor shall request the Engineer to issue a Certificate of Completion of the Works and the Engineer will do so upon deciding that the Work is completed.

56. Taking Over

56.1 The Employer shall take over the Site and the Works within seven days of the Engineer issuing a certificate of Completion.

57. Final Account

57.1 The Contractor shall supply to the Engineer a detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Engineer shall issue a Defect Liability Certificate and certify any final payment that is due to the Contractor within 56 days of receiving the Contractor's account if it is correct and complete. If it is not, the Engineer shall issue within 56 days a schedule that states the scope of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Engineer shall decide on the amount payable to the Contractor and issue a payment certificate, within 56 days of receiving the Contractor's revised account.

58. Operating and Maintenance Manuals

58.1 If "as built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the Contract Data.

58.2 If the Contractor does not supply the Drawings and/or manuals by the dates stated in the Contract Data, or they do not receive the Engineer's approval, the Engineer shall withhold the amount stated in the Contract Data from payments due to the Contractor.

59. Termination

59.1 The Employer or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract.

59.2 Fundamental breaches of Contract include, but shall not be limited to the following:

- (a) the Contractor stops work for 28 days when no stoppage of work is shown on the current program and the stoppage has not been authorized by the Engineer;
- (b) the Engineer instructs the Contractor to delay the progress of the Works and the instruction is not withdrawn within 28 days;
- (c) the Employer or the Contractor is made bankrupt or goes into liquidation other than for a reconstruction or amalgamation;
- (d) a payment certified by the Engineer is not paid by the Employer to the Contractor within 56 days of the date of the Engineer's certificate;
- (e) the Engineer gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Engineer;
- (f) the Contractor does not maintain a security which is required;
- (g) the Contractor has delayed the completion of works by the number of days for which the maximum amount of liquidated damages can be paid as defined in the Contract data; and
- (h) if the Contractor, in the judgment of the Employer has engaged in corrupt or fraudulent practices (as defined in GC clause 64) in competing for or in the executing the Contract.

59.3 When either party to the Contract gives notice of a breach of contract to the Engineer for a cause other than those listed under Sub Clause 59.2 above, the Engineer shall decide whether the breach is fundamental or not.

59.4 Notwithstanding the above, the Employer may terminate the Contract for convenience.

59.5 If the Contract is terminated the Contractor shall stop work immediately, make the Site safe and secure and leave the Site as soon as reasonably possible.

60. Payment upon Termination

60.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Engineer shall issue a certificate for the value of the work done less advance payments received up to the date of the issue of the certificate, less other recoveries due in terms of the contract, less taxes due to be deducted at source as per applicable law and less the percentage to apply to the work not completed as indicated in the Contract Data. Additional Liquidated Damages shall not apply. If the total amount due to the Employer exceeds any payment due to the Contractor the difference shall be a debt payable to the Employer.

60.2 If the Contract is terminated at the Employer's convenience or because of a fundamental breach of Contract by the Employer, the Engineer shall issue a certificate for the value of the work done, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works and less advance payments received up to the date of the certificate, less other recoveries due in terms of the contract and less taxes due to be deducted at source as per applicable law.

61. Property

61.1 All materials on the Site, Plant, Equipment, Temporary Works and Works are deemed to be the property of the Employer, if the Contract is terminated because of a Contractor's default.

62. Release from Performance

62.1 If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the Employer or the Contractor the Engineer shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which commitment was made.

63. Suspension of World Bank Loan or Credit

63.1 In the event that the World Bank suspends the Loan or Credit to the Employer, from which part of the payments to the Contractor are being made:

- (a) The Employer is obligated to notify the Contractor of such suspension within 7 days of having received the World Bank's suspension notice.
- (b) If the Contractor has not received sums due to it upon the expiration of the 28 days for payment provided for in Sub-Clause 43.1, the Contractor may immediately issue a 14-day termination notice.

64. Fraud and Corruption

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

- (a) defines, for the purposes of this provision, the terms set forth below as follows:
 - (i) "corrupt practice"¹ is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
 - (ii) "fraudulent practice"² is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
 - (iii) "collusive practice"³ is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
 - (iv) "coercive practice"⁴ is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
 - (v) "obstructive practice" is
 - (a) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or
 - (b) acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under sub-clause 64.1 (e) below.

¹ "another party" refers to a public official acting in relation to the procurement process or contract execution]. In this context, "public official" includes World Bank staff and employees of other organizations taking or reviewing procurement decisions.

² a "party" refers to a public official; the terms "benefit" and "obligation" relate to the procurement process or contract execution; and the "act or omission" is intended to influence the procurement process or contract execution.

³ "parties" refers to participants in the procurement process (including public officials) attempting to establish bid prices at artificial, non competitive levels.

⁴ a "party" refers to a participant in the procurement process or contract execution.

- (b) will cancel the portion of the loan allocated to a contract if it determines at any time that representatives of the Borrower or of a beneficiary of the loan engaged in corrupt, fraudulent, collusive or coercive practices during the procurement or the execution of that contract, without the Borrower having taken timely and appropriate action satisfactory to the Bank to remedy the situation;
- (d) will sanction a firm or individual, including declaring them ineligible, either indefinitely or for a stated period of time, to be awarded a Bank-financed contract if it at any time determines that they have, directly or through an agent, engaged, in corrupt, fraudulent, collusive or coercive practices in competing for, or in executing, a Bank-financed contract; and
- (e) will have the right to require that Contractors to permit the Bank to inspect their accounts and records and other documents relating to the bid submission and contract performance and to have them audited by auditors appointed by the Bank.

F. Special Conditions of Contract

1. LABOUR :

The Contractor shall, unless otherwise provided in the Contract, make his own arrangements for the engagement of all staff and labour, local or other, and for their payment, housing, feeding and transport.

The Contractor shall, if required by the Engineer, deliver to the Engineer a return in detail, in such form and at such intervals as the Engineer may prescribe, showing the staff and the numbers of the several classes of labour from time to time employed by the Contractor on the Site and such other information as the Engineer may require.

2. COMPLIANCE WITH LABOUR REGULATIONS :

During continuance of the contract, the Contractor and his sub contractors shall abide at all times by all existing labour enactments and rules made thereunder, regulations, notifications and bye laws of the State or Central Government or local authority and any other labour law (including rules), regulations, bye laws that may be passed or notification that may be issued under any labour law in future either by the State or the Central Government or the local authority. Salient features of some of the major labour laws that are applicable to construction industry are given below. The Contractor shall keep the Employer indemnified in case any action is taken against the Employer by the competent authority on account of contravention of any of the provisions of any Act or rules made thereunder, regulations or notifications including amendments. If the Employer is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated in the notifications/bye laws/Acts/Rules/regulations including amendments, if any, on the part of the Contractor, the Engineer/Employer shall have the right to deduct any money due to the Contractor including his amount of performance security. The Employer/Engineer shall also have right to recover from the Contractor any sum required or estimated to be required for making good the loss or damage suffered by the Employer.

The employees of the Contractor and the Sub-Contractor in no case shall be treated as the employees of the Employer at any point of time.

SALIENT FEATURES OF SOME MAJOR LABOUR LAWS APPLICABLE TO ESTABLISHMENTS ENGAGED IN BUILDING AND OTHER CONSTRUCTION WORK.

- a) Workmen Compensation Act 1923: The Act provides for compensation in case of injury by accident arising out of and during the course of employment.
- b) Payment of Gratuity Act 1972: Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed 5 years service or more or on death the rate of 15 days wages for every completed year of service. The Act is applicable to all establishments employing 10 or more employees.
- c) Employees P.F. and Miscellaneous Provision Act 1952: The Act Provides for monthly contributions by the employer plus workers @ 10% or 8.33%. The benefits payable under the Act are:
 - (i) Pension or family pension on retirement or death, as the case may be.
 - (ii) Deposit linked insurance on the death in harness of the worker.
 - (iii) payment of P.F. accumulation on retirement/death etc.
- d) Maternity Benefit Act 1951: The Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.
- e) Contract Labour (Regulation & Abolition) Act 1970: The Act provides for certain welfare measures to be provided by the Contractor to contract labour and in case the Contractor fails to provide, the same are required to be provided, by the Principal Employer by Law. The Principal Employer is required to take Certificate of Registration and the Contractor is required to take license from the designated Officer. The Act is applicable to the establishments or Contractor of Principal Employer if they employ 20 or more contract labour.

- f) Minimum Wages Act 1948: The Employer is supposed to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the Act if the employment is a scheduled employment. Construction of Buildings, Roads, Run ways are scheduled employments.
- g) Payment of Wages Act 1936: It lays down as to by what date the wages are to be paid, when it will be paid and what deductions can be made from the wages of the workers.
- h) Equal Remuneration Act 1979: The Act provides for payment of equal wages for work of equal nature to Male and Female workers and for not making discrimination against Female employees in the matters of transfers, training and promotions etc.
- i) Payment of Bonus Act 1965: The Act is applicable to all establishments employing 20 or more employees. The Act provides for payments of annual bonus subject to a minimum of 8.33% of wages and maximum of 20% of wages to employees drawing Rs.3500/-per month or less. The bonus to be paid to employees getting Rs.2500/-per month or above upto Rs.3500/- per month shall be worked out by taking wages as Rs.2500/-per month only. The Act does not apply to certain establishments. The newly set-up establishments are exempted for five years in certain circumstances. Some of the State Governments have reduced the employment size from 20 to 10 for the purpose of applicability of this Act.
- j) Industrial Disputes Act 1947: The Act lays down the machinery and procedure for resolution of Industrial disputes, in what situations a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.
- k) Industrial Employment (Standing Orders) Act 1946: It is applicable to all establishments employing 100 or more workmen (employment size reduced by some of the States and Central Government to 50). The Act provides for laying down rules governing the conditions of employment by the Employer on matters provided in the Act and get the same certified by the designated Authority.
- l) Trade Unions Act 1926: The Act lays down the procedure for registration of trade unions of workmen and employers. The Trade Unions registered under the Act have been given certain immunities from civil and criminal liabilities.
- m) Child Labour (Prohibition & Regulation) Act 1986: The Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulation of employment of children in all other occupations and processes. Employment of Child Labour is prohibited in Building and Construction Industry.
- n) Inter-State Migrant workmen's (Regulation of Employment & Conditions of Service) Act 1979: The Act is applicable to an establishment which employs 5 or more inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another state). The Inter-State migrant workmen, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as housing, medical aid, travelling expenses from home upto the establishment and back, etc.
- o) The Building and Other Construction workers (Regulation of Employment and Conditions of Service) Act 1996 and the Cess Act of 1996: All the establishments who carry on any building or other construction work and employs 10 or more workers are covered under this Act. All such establishments are required to pay cess at the rate not exceeding 2% of the cost of construction as may be modified by the Government. The Employer of the establishment is required to provide safety measures at the Building or construction work and other welfare measures, such as Canteens, First-Aid facilities, Ambulance, Housing accommodations for workers near the work place etc. The Employer to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Government.
- p) Factories Act 1948: The Act lays down the procedure for approval at plans before setting up a factory, health and safety provisions, welfare provisions, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrences to designated authorities. It is applicable to premises employing 10 persons or more with aid of power or 20 or more persons without the aid of power engaged in manufacturing process.

3. SUB-CONTRACTING (GCC Clause 7)

Please add the following as Clause 7.2:

The contractor shall not be required to obtain any consent from the employer for:

- a) the sub-contracting of any part of the Works for which the Sub-contractor is named in the contract;
- b) the provision of labour; and
- c) the purchase of materials which are in accordance with the standards specified in the Contract.

Beyond this if the contractor proposes sub-contracting any part of the work during execution of works, because of some unforeseen circumstances to enable him to complete the work as per terms of the contract, the Engineer will consider the following before according approval:

- The contractor shall not sub-contract the whole of the Works.
- The contractor shall not sub-contract any part of the Work without prior consent of the Engineer. Any such consent shall not relieve the contractor from any liability or obligations under the contract and he shall be responsible for the acts, defaults and neglects of any sub-contractor, his agents or workmen as fully as if they were the acts, defaults or neglects of the contractor, his agents or workmen.
- The Engineer should satisfy whether (a) the circumstances warrant such sub-contracting; and (b) the sub-contractors so proposed for the Work possess the experience, qualifications and equipment necessary for the job proposed to be entrusted to them in proportion to the quantum of work to be sub-contracted.
- If payments are proposed to be made directly to that sub-contractor, this should be subject to specific authorization by the prime contractor so that this arrangement does not alter the contractor's liability or obligations under the contract.

Note:

1. All bidders are expected to indicate clearly in the bid, if they proposed sub-contracting elements of the works amounting to more than 20 percent of the Bid Price. For each such proposal the qualification and the experience of the identified sub-contractor in the relevant field should be furnished along with the bid to enable the employer to satisfy himself about their qualifications before agreeing for such sub-contracting and include it in the contract. In view of the above, normally no additional sub-contracting should arise during execution of the contract.
2. However [a] sub contracting for certain specialized elements of the work is not unusual and acceptable for carrying out the works more effectively; but vertical splitting of the works for subcontracting is not acceptable [b] In any case, proposal for sub-contracting in addition to what was specified in bid and stated in contract agreement will not be acceptable if the value of such additional sub-contracting exceeds 25% of value of work which was to be executed by Contractor without sub-contracting.
3. Assignment of the contract may be acceptable only under exceptional circumstances such as insolvencies /liquidation or merger of companies etc.

4. ARBITRATION (GCC Clause 25.3)

The procedure for arbitration will be as follows:

- 25.3 (a) In case of Dispute or difference arising between the Employer and a domestic contractor relating to any matter arising out of or connected with this agreement, such disputes or difference shall be settled in accordance with the Arbitration and Conciliation Act, 1996. The arbitral tribunal shall consist of 3 arbitrators one each to be appointed by the Employer and the Contractor. The third Arbitrator shall be chosen by the two Arbitrators so appointed by the Parties and shall act as Presiding arbitrator. In case of failure of the two arbitrators appointed by the parties to reach upon a consensus within a period of 30 days from the appointment of the arbitrator appointed subsequently, the Presiding Arbitrator shall be appointed by the President of the Institution of Engineers (India), Tamil Nadu Chapter.

- (b) In the case of dispute with a Foreign contractor the dispute shall be settled in accordance with provisions of UNCITRAL Arbitration Rules. The Arbitral Tribunal shall consist of three Arbitrators one each to be appointed by the Employer and the Contractor. The third Arbitrator shall be chosen by the two Arbitrators so appointed by the Parties, and shall act a presiding arbitrator. In case of failure of the two arbitrators appointed by the parties to reach upon a consensus within a period of 30 days from the appointment of the arbitrator appointed subsequently, the Presiding arbitrator shall be appointed by the President of the Institution of Engineers (India), Tamil Nadu Chapter.
- (c) If one of the parties fails to appoint its arbitrator in pursuance of sub-clause (a) and (b) above within 30 days after receipt of the notice of the appointment of its arbitrator by the other party, then the President of the Institution of Engineers (India) Tamil Nadu Chapter both in cases of the Foreign Contractor as well as Indian Contractor, shall appoint the arbitrator. A certified copy of the order of the President of the Institution of Engineers (India), Tamil Nadu Chapter making such an appointment shall be furnished to each of the parties.
- (d) Arbitration proceedings shall be held at Salem, Tamilnadu, India, and the language of the arbitration proceedings and that of all documents and communications between the parties shall be English.
- (e) The decision of the majority of arbitrators shall be final and binding upon both parties. The cost and expenses of Arbitration proceedings will be paid as determined by the arbitral tribunal. However, the expenses incurred by each party in connection with the preparation, presentation, etc. of its proceedings as also the fees and expenses paid to the arbitrator appointed by such party or on its behalf shall be borne by each party itself.
- (f) Where the value of the contract is Rs.50 millions and below, the disputes or differences arising shall be referred to the Sole Arbitrator. The Sole Arbitrator should be appointed by agreement between the parties; failing such agreement, by the appointing authority, namely the President of the Institution of Engineers (India), Tamil Nadu Chapter.
- (g) Performance under the contract shall continue during the arbitration proceedings and payments due to the contractor by the owners shall not be withheld, unless they are the subject matter of the arbitration proceedings.

5. PROTECTION OF ENVIRONMENT:

Add the following as GCC Clause 16.2:

The contractor shall take all reasonable steps to protect the environment on and off the Site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of his methods of operation.

During continuance of the contract, the contractor and his sub-contractors shall abide at all times by all existing enactments on environmental protection and rules made thereunder, regulations, notifications and bye-laws of the State or Central Government, or local authorities and any other law, bye-law, regulations that may be passed or notification that may be issued in this respect in future by the State or Central Government or the local authority.

Salient features of some of the major laws that are applicable are given below:

The Water (Prevention and Control of Pollution) Act, 1974, This provides for the prevention and control of water pollution and the maintaining and restoring of wholesomeness of water. 'Pollution' means such contamination of water or such alteration of the physical, chemical or biological properties of water or such discharge of any sewage or trade effluent or of any other liquid, gaseous or solid substance into water (whether directly or indirectly) as may, or is likely to, create a nuisance or render such water harmful or injurious to public health or safety, or to domestic, commercial, industrial, agricultural or other legitimate uses, or to the life and health of animals or plants or of aquatic organisms.

The Air (Prevention and Control of Pollution) Act, 1981, This provides for prevention, control and abatement of air pollution. 'Air Pollution' means the presence in the atmosphere of any 'air pollutant', which means any solid, liquid or gaseous substance (including noise) present in the atmosphere in such concentration as may be or tend to be injurious to human beings or other living creatures or plants or property or environment.

The Environment (Protection) Act, 1986, This provides for the protection and improvement of environment and for matters connected therewith, and the prevention of hazards to human beings, other living creatures, plants and property. 'Environment' includes water, air and land and the inter-relationship which exists among and between water, air and land, and human beings, other living creatures, plants, micro-organism and property.

The Public Liability Insurance Act, 1991, This provides for public liability insurance for the purpose of providing immediate relief to the persons affected by accident occurring while handling hazardous substances and for matters connected herewith or incidental thereto. Hazardous substance means any substance or preparation which is defined as hazardous substance under the Environment (Protection) Act 1986, and exceeding such quantity as may be specified by notification by the Central Government.

6. LIQUIDATED DAMAGES:

Sub-clause 49.1:

Please substitute the last sentence with the following:

“Time is the essence of the contract and payment or deduction of liquidated damages shall not relieve the contractor from his obligation to complete the work as per agreed construction program and milestones or from any other of the contractor’s obligations and liabilities under the contract.”

7. Third Party Inspection

Tentatively third party inspection is required for following materials.

- All pipes and specials, all valves, flow meters, pump sets, Panel Board, Starters, Transformers etc. .

However, actual list of materials to be inspected by the third party shall be issued to the Contractor after signing of the agreement.

The third party inspection charges will be borne by the employer .

**SECTION 4
CONTRACT DATA**

Contract Data

Items marked "N/A" do not apply in this Contract.

The following documents are also part of the Contract: **Clause Reference**

· The Schedule of Operating and Maintenance Manuals [58]

· The Schedule of Other Contractors [8]

· The Schedule of Key Personnel [9]

· The Methodology and Program of Construction & Environmental Management Plan [27]

The Contractor shall submit the detailed program for the Methodology and schedule of Construction and Environmental Management Plan Within fifteen days from the date of letter of acceptance of Contract.

An updated program shall be submitted by the Contractor for the approval of the Engineer within 30 days on completion of each activity incorporating any changes and effect of the progress on the timing of the remaining works.

· The Schedule of Key and Critical equipment to be deployed on the work as per agreed program of construction. [27]

· Site Investigation reports [14]

The soil investigation report as available is furnished in the document. However the Contractor has to make his own assessment of the soil condition at the time of execution of the works.

The Borrower is Government of India/ Government of Tamilnadu/Salem City Municipal Corporation [1.1]

The World Bank means International Bank for Reconstruction and Development (IBRD) and loan refers to an IBRD Loan [1.1]

The employer is
Name: The Commissioner [1.1]

Address: Kottai main road, Salem City Municipal Corporation, SALEM-636 001

Name of authorized Representative: The Assistant Commissioner, Salem City Municipal Corporation, Salem.

The Engineer is [1.1]

Name: The Superintending Engineer,

Address: Kottai main road, Salem City Municipal Corporation, SALEM - 636 001.

Name of Authorized Representative: The Executive Engineer,
Salem City Municipal Corporation, SALEM - 636 001.

The Adjudicator appointed jointly by the employer and Contractor is:

Name : L.Viswanathan, Rtd SE / TWAD Board Dept.

Address: 24/1 BHARATHI NAGAR,
SWAMI SIVANANDHA SALAI,
RASIPURAM (PO) – Namakkal (Dt).

The name and identification number of the Contract is. . 17417/2010/SS2

Supplying, Laying, Jointing Testing and Commissioning of Mild Steel (MS) / Ductile Iron (DI) Pipes for Feeder Mains, construction of sump cum pump house and installation & testing of electromechanical / instrumentation works for Dedicated Water Supply Scheme to Salem City Municipal Corporation.

The work consists of:

[1.1]

- 1) Supplying, laying, testing and commissioning of clear water transmission main of 700 to 1100 mm dia mild steel pipes for a length of 13200 m
- 2) Supplying, laying, testing and commissioning of clear water transmission main of 150 to 600 mm dia DI pipes for a length of 54185 m
- 3) Construction of pipe carrying bridge – 3 nos.
- 4) Construction of ground level sump 2 Nos. (10 Lakh Liters and 3 Lakh Liters) and Pump House – 1No.
- 5) Supplying, erecting, testing and commissioning of 12 Nos pumps varying from 5 HP to 145 HP
- 6) Supplying, laying, testing and commissioning of clear water pumping main from ground level sump to ELSR's of 150 to 200mm dia DI pipe for a length of 4920m
- 7) Supply & Installation of Flow meter and Pressure reducing valve & flow control valves.

The Start Date shall be the date of issue of notice to proceed with the work.

(1.1)

The Intended Completion Date for the whole of the Works is 18 months from the start date with the following milestones:

[17, 28]

Sl. No.	Activities	Period from the Start date			
		Milestone I	Milestone II	Milestone III	Milestone IV
		(6 months)	(12 months)	(17 months)	(18 months)
1	Supplying, Laying, jointing and testing of MS pipes of 700 to 1100 mm dia including fixing of valves, and specials for a total length of 13200 meters	4000 M	9000 M	13200M	
2	Supplying, Laying, jointing and testing of DI pipes of 150 to 600 mm dia including fixing of valves, and specials for a total length of 54185 meters	20000 M	40000 M	54185 M	
3	Construction of Pipe Carrying Bridges – 3 Nos	40%	100%		
4	Construction of ground level sump 2 Nos. (10LL and 3 LL)	30%	100%		
5	Supplying, erecting, testing and commissioning of pump sets varying from 5 HP to 145 HP – 12 Nos			100%	
6	Supplying, laying, testing and commissioning of clear water pumping main from ground level sump to ELSR's of 150 to			4290 M	

Sl. No.	Activities	Period from the Start date			
		Milestone I	Milestone II	Milestone III	Milestone IV
		(6 months)	(12 months)	(17 months)	(18 months)
	200mm dia DI pipe for a length of 4920m				
7	Supply & Installing Flow meter and Pressure reducing valve & flow control valves.			100%	
8	Commissioning and Trial run.				100 %

The following documents also form part of the Contract: [2.3]
Detailed work plan and methodology including Environmental Management Plan.

The Contractor shall submit a revised Program including Environmental Management Plan for the Works (in such form and detail as the engineer shall reasonably prescribe) within 15 days of delivery of the Letter of Acceptance. [27]

[This program should be in adequate detail and generally conform to the program submitted along with bid in response to ITB Clause 4.3 (k). Deviations if any from that should be clearly explained and should be satisfactory to the Engineer]

The Site Possession Dates shall be: with in 7 days from the date of issue of notice to proceed with the work [21]

The pipes should be laid along the roads with in Salem City Municipal Corporation and is defined in drawings enclosed. [1]

The Defects Liability Period for instrumentation and control systems related to SCADA is 5 years. The Defects Liability Period for all other components of work is 1 year. [35]

Insurance requirements are as under: [13]

Sl.No	Description	Minimum Cover for Insurance	Maximum deductible for Insurance as per insurance company/institution	
(i)	Works, Plant and Materials	Rs. 42,43,00,000	5% of Claim amount subject to Minimum of	
			Normal – Rs. 3,000	Act of God (natural calamities)– Rs.10,000
(ii)	Loss or damage to Equipment	Rs 25,00,000	5% of Claim amount subject to Minimum of	
			Normal – Rs. 3,000	Act of God (natural calamities)– Rs.10,000
(iii)	Other Property	Rs 25, 00,000	5% of Claim amount subject to Minimum of	
			Normal – Rs. 3,000	Act of God (natural calamities)– Rs.10,000
(iv)	Personal injury or death insurance:	Rs 20,00,000(For 4 occurrence each of Rs 5,00,000)	Nil	
a) for other people;				
	b) for Contractor's Employees	In accordance with the statutory requirements applicable to India		

The following events shall also be Compensation Events: [44]

The compensation Events are as stated in the Clause 44.1 of general conditions of Contract.

The period between Program updates shall be 30 days. [27]

The amount to be withheld for late submission of an updated Program shall be Rs. Five lakhs [27]

The language of the Contract documents is English [3]

The law which applies to the Contract is the laws of Union of India [3]

The currency of the Contract is Indian Rupees. [46]

Fees and types of reimbursable expenses to be paid to the Adjudicator Rs.5,000/- per day plus boarding & lodging and transport charges as per actual. [25]

Appointing Authority for the Adjudicator: [26]

Should the Adjudicator resign or die, or should the Employer and the Contractor agree that the Adjudicator is not fulfilling his functions in accordance with the provisions of the Contract, a new Adjudicator will be jointly appointed by the Employer and the Contractor. In case of disagreement between the Employer and the Contractor, within 30 days, the Adjudicator shall be designated by the Chairman, Institution of Engineers India, Tamilnadu State Centre.

The formula(e) for adjustment of prices are: [47]

R = Value of work as defined in Clause 47.1 of Conditions of Contract.

Adjustment for labour component

- (i) Price adjustment for increase or decrease in the cost due to labour shall be paid in accordance with the following formula:

$$V_L = 0.85 \times P_1/100 \times R \times (L_i - L_o)/L_o$$

V_L = increase or decrease in the cost of work during the quarter under consideration due to changes in rates for local labour.

L_o = the average consumer price index for industrial workers for Salem centre for the quarter preceding the date of opening of Bids as published by Labour Bureau, Ministry of Labour, Government of India.

L_i = The average consumer price index for industrial workers for Salem centre for the quarter under consideration as published by Labour Bureau, Ministry of Labour, Government of India.

P_1 = Percentage of labour component of the work.

Adjustment for cement component

- (ii) Price adjustment for increase or decrease in the cost of cement procured by the contractor shall be paid in accordance with the following formula.

$$V_c = 0.85 \times P_c/100 \times R \times (C_i - C_o)/C_o$$

V_c = Increase or decrease in the cost of work during the quarter under consideration due to changes in the rates for cement

C_0 = The all India average wholesale price index for cement for the quarter preceding the date of opening of Bids as published by the Ministry of Industrial Development, Government of India, New Delhi

C_1 = The all India average wholesale price index for cement for the quarter under consideration as published by Ministry of Industrial Development, Government of India, New Delhi

P_c = Percentage of cement component of the work

Adjustment for steel component

- (iii) Price adjustment for increase or decrease in the cost of steel procured by the Contractor shall be paid in accordance with the following formula:

$$V_s = 0.85 \times P_s / 100 \times R \times (S_1 - S_0) / S_0$$

V_s = Increase or decrease in the cost of work during the quarter under consideration due to changes in the rates for steel

S_0 = The all India average wholesale price index for steel (steel plates) for the quarter preceding the date of opening of Bids as published by the Ministry of Industrial Development, Government of India, New Delhi

S_1 = The all India average wholesale price index for steel (steel plates) for the quarter under consideration as published by Ministry of Industrial Development, New Delhi

P_s = Percentage of steel component of the work

Note: For the application of this clause, index of steel plates and bars & rods has been chosen to represent steel group.

Adjustment of Bitumen component

- (iv) Price adjustment for increase or decrease in the cost of bitumen shall be paid in accordance with the following formula:

$$V_b = 0.85 \times P_b / 100 \times R \times (B_1 - B_0) / B_0$$

V_b = Increase or decrease in the cost of work during the quarter under consideration due to changes in the rate for bitumen.

B_0 = The average official retail price of bitumen at the IOC depot at Salem on the day 30 days prior to date of opening of Bids.

B_1 = The average official retail price of bitumen at IOC depot at Salem for the 15th day of the middle calendar month of the quarter under consideration.

P_b = Percentage of bitumen component of the work.

Adjustment of POL (fuel and lubricant) component

- (v) Price adjustment for increase or decrease in cost POL (fuel and lubricant) shall be paid in accordance with the following formula:

$$V_f = 0.85 \times P_f / 100 \times R \times (F_1 - F_0) / F_0$$

V_f = Increase or decrease in the cost of work during the quarter under consideration due to changes in rates for fuel and lubricants.

F_0 = The average official retail price of High Speed Diesel (HSD) at the existing consumer pumps of IOC at Salem on the day thirty days prior to the date of opening of Bids.

F_i = The average official retail price of HSD at the existing consumer pumps of IOC at Salem for the 15th day of the middle calendar month of the quarter under consideration.

P_f = Percentage of fuel and lubricants component of the work.

Note: For the application of this clause, the price of High Speed Diesel oil has been chosen to represent fuel and lubricants group.

Adjustment for Plant and Machinery Spares component

- (vi) Price adjustment for increase or decrease in the cost of plant and machinery spares procured by the Contractor shall be paid in accordance with the following formula:

$$V_p = 0.85 \times P_p / 100 \times R \times (P_i - P_o) / P_o$$

V_p = Increase or decrease in the cost of work during the quarter under consideration due to changes in the rates for plant and machinery spares

P_o = The all India average wholesale price index for heavy machinery and parts for the quarter preceding the date of opening of Bids as published by the Ministry of Industrial Development, Government of India, New Delhi

P_i = The all India average wholesale price index for heavy machinery and parts for the quarter under consideration as published by Ministry of Industrial Development, New Delhi

P_p = Percentage of plant and machinery spares component of the work

Note: For the application of this clause, index of Heavy Machinery and Parts has been chosen to represent the Plant and Machinery Spares group.

Adjustment of Local materials

- (vii) Price adjustment for increase or decrease in cost of local materials other than cement, steel, bitumen and POL procured by the contractor shall be paid in accordance with the following formula:

$$V_m = 0.85 \times P_m / 100 \times R \times (M_i - M_o) / M_o$$

V_m = Increase or decrease in the cost of work during the quarter under consideration due to changes in rates for local materials other than cement, steel, bitumen and POL.

M_o = The all India average wholesale price index (all commodities) for the quarter preceding the date of opening of Bids, as published by the Ministry of Industrial Development, Government of India, New Delhi.

M_i = The all India average wholesale price index (all commodities) for the quarter under consideration as published by Ministry of Industrial Development, Government of India, New Delhi.

P_m = Percentage of local material component (other than cement, steel, bitumen and POL) of the work.

The following percentages will govern the price adjustment for the entire contract:

1.	Labour - P_l	15%
2.	Cement - P_c	5 %
3.	Steel - P_s	63.5 %
4.	Bitumen - P_b	1.5 %
5.	POL - P_f	3 %
6.	Plant & Machinery Spares - P_p	7 %
7.	Other materials - P_m	5 %
	Total	100%

The proportion of payments retained (retention money) shall be 6% from each bill subject to a maximum of 5% of final contract price

[48]

The liquidated damages for the whole of the works are Rs.2, 13,000/- per day and that for the milestone are as under :

[49]

For milestone I	Rs. 65,000/-per day
For milestone II	Rs. 86,000/-per day
For milestone III	Rs. 51,000/-per day
For milestone IV	Rs. 11,000/-per day

The maximum amount of liquidated damages for the whole of the works is ten percent of final contract price.

[49]

The amounts of the advance payment are:

[51]

<u>Nature of Advance</u>	<u>Amount (Rs.)</u>	<u>Conditions to be fulfilled</u>
1. Mobilization	10% of the Contract price	On submission of un-conditional Bank Guarantee. (to be drawn before end of 20% of Contract period)
2. Equipment	Nil	Nil
3. Secured advance for non-perishable materials brought to site. (for electro mechanical equipment, pipes and valves only and not for Labour, Cement & Steel)	75 % of contract value or market value or invoice value, whichever is less.	<ul style="list-style-type: none"> a) The materials are in-accordance with the specification for Works; b) Such materials have been delivered to site, and are properly stored and protected against damage or deterioration to the satisfaction of the Engineer. The contractor shall store the bulk material in measurable stacks.; c) The Contractor's records of the requirements, orders, receipt and use of materials are kept in a form approved by the Engineer and such records shall be available for inspection by the Engineer; d) The contractor has submitted with his monthly statement the estimated value of the materials on site together with such documents as may be required by the Engineer for the purpose of valuation of the materials and providing evidence of ownership and payment thereof; e) Ownership of such materials shall be deemed to vest in the Employer for which the Contractor has submitted an Indemnity Bond in an acceptable format; and f) The quantity of materials are not excessive and shall be used within a reasonable time as determined by the Engineer.

(The advance payment will be paid to the Contractor no later than 15 days after fulfillment of the above conditions).

Repayment of advance payment for mobilization.

[51]

The advance shall be repaid with percentage deductions from the interim payments certified by the Engineer under the Contract. Deductions shall commence in the next Interim Payment Certificate following that in which the total of all such payments to the Contractor has reached not less than 15 percent of the Contract Price or Two months from the date of payment of first installment of advance, whichever period concludes earlier, and shall be made at the rate of 15 percent of the amounts of all Interim Payment Certificates until such time as the advance has been repaid, always provided that the advance shall be completely repaid prior to the expiry of the original time for completion pursuant to Clauses 17 and 28.

The Securities shall be for the following minimum amounts equivalent as a percentage of the Contract Price: [52]

Performance Security for 5 per cent of contract price plus Rs. as additional security for unbalanced bids [*in terms of ITB Clause 29.5*].

The standard form of Performance Security acceptable to the Employer shall be an unconditional Bank Guarantee of the type as presented in Section 8 of the Bidding Documents.

The date by which operating and maintenance manuals are required is within 28 days of issue of certificate of completion of whole or section of the work, as the case may be. [58]

The date by which “as-built” drawings in appropriate scale in 5 sets in both hard and soft copies are required is within 28 days of issue of certificate of completion of whole or section of the work, as the case may be. [58]

The amount to be withheld for failing to supply “as built” drawings and/or operating and maintenance manuals by the date required is Rs. 10.00 lakhs. [58]

The following events shall also be fundamental breach of contract: [59.2]

1. The Contractor has contravened Sub-clause 7 of GCC read with SCC and Clause 9.0 of GCC
2. The contractor does not adhere to the agreed construction program (Clause 27 of GCC) and also fails to take satisfactory remedial action as per agreements reached in the management meetings (Clause 31) for a period of 60 days.
3. The contractor fails to carry out of the instructions of Engineer within a reasonable time determined by the Engineer in accordance with GCC Clause 16.1 and 23.1.

The percentage to apply to the value of the work not completed representing the Employer's additional cost for completing the Works shall be 20 percent. [60]

All payments will be subjected to deduction of retention money as stated in Clause 48 of GCC

SECTION 5
SPECIFICATIONS
(Please refer to Volume II)

SECTION 6

DRAWINGS

(Please refer to Volume III)

SECTION 7
BILL OF QUANTITIES
(Please refer to Volume IV)

NAME OF WORK: Supplying, Laying, Jointing Testing and Commissioning of Mild Steel (MS) / Ductile Iron (DI) Pipes for Feeder Mains, construction of sump cum pump house and installation & testing of electromechanical / instrumentation works for Dedicated Water Supply Scheme to Salem City Municipal Corporation.

Bill of Quantities

Notes:

- 1 Item for which no rate has been entered in, 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 (refer ITB Clause 13.2 and GCC Clause 43.3)
- 2 Unit rates and prices shall be quoted by the bidder in Indian Rupee (ITB Clause 14.1)
- 3 Where there is a discrepancy between the rate in figures and words, the rates in words will govern (ITB Clause 27.1(a))
- 4 Where there is a discrepancy between the unit rate and the item total resulting from multiplying the unit rate by quantity, the unit rate quoted shall govern (ITB Clause 27.1 (b))
- 5 On completion of entire work any excess pipes, specials and other material shall be removed from the site by the contractor.

NAME OF WORK: Supplying, Laying, Jointing Testing and Commissioning of Mild Steel (MS) / Ductile Iron (DI) Pipes for Feeder Mains, construction of sump cum pump house and installation & testing of electromechanical / instrumentation works for Dedicated Water Supply Scheme to Salem City Municipal Corporation.

General Abstract			
Schedule	Description	In Figures	In words
A	Project Insurance		
B	Feeder Main		
C	Pipe Carrying Bridge		
D	Pumping Main		
E	Ammapet Pump House & Pipe connections		
F	Other PH E&M		
G	Sump & Pipe Connections		
H	Flow Meter / Pressure Reducing Valve		
I	Environmental Management Plan		
	TOTAL of Package VI		

Bill No: A - Insurance Requirement						
NAME OF WORK: Supplying, Laying, Jointing Testing and Commissioning of Mild Steel (MS) / Ductile Iron (DI) Pipes for Feeder Mains, construction of sump cum pump house and installation & testing of electromechanical / instrumentation works for Dedicated Water Supply Scheme to Salem City Municipal Corporation.						
Sl.No	Description of Items	Qty.	Unit Rate (Rs)		Amount (Rs)	
			Unit	In Figures		In words
1	Providing insurance, covering the following items (i) Works, plant, & materials for Rs 42,43,00,000/- (ii) Loss or damage to equipment for Rs 25,00,000/- (iii) Other property for Rs 25,00,000/- (iv) Personal injury or death insurance for other people for Rs 20,00,000 (For 4 occurrences each of Rs 5,00,000/-) Payment will be made at actuals based on production of original premium receipt	1	Each			
	Total of VI - A					

Bill No : B Feeder Main

NAME OF WORK: Supplying, Laying, Jointing Testing and Commissioning of Mild Steel (MS) / Ductile Iron (DI) Pipes for Feeder Mains, construction of sump cum pump house and installation & testing of electromechanical / instrumentation works for Dedicated Water Supply Scheme to Salem City Municipal Corporation.

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
I. Cost of Materials.							
1	Supply and delivery of the following dia of DI pipes of class K7 conforming to IS:8329/2000, as specified in the Technical specifications in standard length including labour charges for loading, unloading and stacking at site etc., complete as per standard specifications and as directed by the Departmental Engineers.	Special					
a)	150 mm dia		6465	m			
b)	200 mm dia		20100	m			
c)	250 mm dia		6890	m			
d)	300 mm dia		5670	m			
e)	350 mm dia		840	m			
f)	400 mm dia		9920	m			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
g)	500 mm dia		3310	m			
h)	600 mm dia		1000	m			
2	Supply and delivery of the following dia of spirally welded MS pipes, manufactured conforming to IS 5504/1997 and IS 3589/2001 with 6mm thick mild steel HR coils Grade 3 conforming to IS 10748 suitable for butt weld joint, including shop applied lining of inside 12.50 mm thick and outside 25 mm thick with cement mortar (the Cement Mortar shall have minimum cement content of 1000 kg/m ³) etc., complete as per standard specification. The cost shall be inclusive of all other taxes and transporting the pipes from the place of manufacture to the work spot, unloading, stacking at site etc., complete as directed by the Departmental Engineers. The Inner diameter of Pipe shall be after lining.	Special					
a)	700 mm dia		1160	m			
b)	800 mm dia		1290	m			
c)	900 mm dia		4760	m			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
d)	1100 mm dia		5990	m			
3	Supply and delivery of the following dia of RCC NON pressure spun pipe NP3 class with socket and spigot ends as per IS:458/2003 with rubber ring joints, as specified in Technical specifications in standard length including labour charges for loading, unloading and stacking at site etc., complete as per standard specifications and as directed by the Departmental Engineers.	Special					
a)	200 mm dia		70	m			
b)	250 mm dia		70	m			
c)	300 mm dia		70	m			
d)	350 mm dia		70	m			
e)	400 mm dia		25	m			
f)	450 mm dia		50	m			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
g)	500 mm dia		20	m			
h)	600 mm dia		45	m			
i)	700 mm dia		20	m			
j)	800 mm dia		20	m			
k)	900 mm dia		20	m			
l)	1100 mm dia		20	m			
m)	1400 mm dia		20	m			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
4	Supply and delivery of the following DI K7 D/F specials of conforming to IS 9523/2000 specifications at site of work including all taxes, duties, loading, transportation, unloading and stacking etc., complete as directed by the Departmental Engineers.	Special					
I	DI - K7 Pipes - Bends						
i)	150 mm dia						
a)	22.5 deg (26 Kg)		122	kg			
b)	45 deg (60 Kg)						
c)	90 Deg (36 Kg)						
ii)	200 mm dia		769	kg			
a)	22.5 deg (100 Kg)						
b)	45 deg (390 Kg)						
c)	90 Deg (279 Kg)						
iii)	250 mm dia		854	kg			
a)	22.5 deg (522 Kg)						
b)	45 deg (68 Kg)						
c)	90 deg (264 Kg)						
iv)	300 mm dia		454	kg			
a)	22.5 deg (320 Kg)						
b)	90 deg (134 Kg)						
v)	400 mm dia		82	kg			
a)	45 deg (82Kg)						
vi)	500 mm dia		416	kg			
a)	22.5 deg (103 Kg)						
b)	45 deg (130Kg)						
c)	90 deg (183 Kg)						

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
vii)	600 mm dia		546	kg			
a)	90 deg (546 Kg)						
II	Tees		341	kg			
a)	400 x 150 (157 Kg)						
b)	400 (184 Kg)						
III	Tapers						
a)	200x150		23	kg			
b)	400X150		98	kg			
c)	400X250		95	kg			
d)	250X200		32	kg			
e)	250X200		32	kg			
f)	500x250		167	kg			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
5	Supply and delivery of MS specials with inside C.M 12.5mm thick lining and outside coating with C.M 25mm thick guniting conforming to IS 7322 specifications at site of work including all taxes, duties, loading, transportation, unloading, stacking and insurance etc., complete as per standard specification and as directed by Departmental Engineers.	Special					
I	Tees						
a)	1100 x 250		433	kg			
II	Taper						
a)	750 x 300		136	kg			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
6	Supply and delivery of MS specials with inside lining/epoxy coating and outside coating with cement mortar 25 mm thick guniting conforming to IS 7322 specifications at site of work including all taxes, duties, loading, transportation, unloading, stacking and insurance etc., complete as per standard specification and as directed by Departmental Engineers.	Special					
I	700 mm dia		11551	Kg			
a)	22.5 deg (301 Kg)						
II	900 mm dia						
a)	22.5 deg (830 Kg)						
III	1100 mm dia						
a)	22.5 deg (2938 Kg)						
b)	45 deg (630 Kg)						
c)	90 deg (884 Kg)						
IV	Tees						
a)	700X250 (207 Kg)						
b)	700X200 (202 Kg)						
c)	600x 600 (196 Kg)						
d)	500X250 (137 Kg)						
e)	1100X500 (459 Kg)						
f)	1100X900 (563 Kg)						
g)	1100 (1196 Kg)						
h)	1500x1100 (857 Kg)						
V	Tapers						
a)	1100X500 (255 Kg)						
b)	1500x1100 (543 Kg)						
VI	Adaptor						
a)	500 (188 Kg)						

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
b)	900 (222 Kg)						
c)	1100 (385 Kg)						
d)	1500 (558 Kg)						
7	Supply, delivery to site, fixing & Commissioning of the following size of CI Sluice valve to pressure rating PN 1.6 with ISI mark, for isolation conforming to IS 14846/2000 with necessary rubber insertions, bolts & nuts including loading & unloading, transporting charges taxes & duties etc., complete at site as per standard specification and as directed by the Departmental Engineers.	Special					
a)	200 mm dia valve		6	No.			
b)	250 mm dia valve		1	No.			
c)	300 mm dia valve		4	No.			
d)	350 mm dia valve		1	No.			
e)	600 mm dia valve		2	No.			
f)	800 mm dia valve		3	No.			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
8	Supply, delivery to site, fixing & Commissioning of the following size of Scour valve PN 1.6 with ISI mark for scouring, conforming to IS 14846/2000 & 2906 with necessary rubber insertions, bolts & nuts etc. complete including all taxes duties, loading, unloading transporting charges & stacking at site etc., complete at site as per standard specification and as directed by the Departmental Engineers.	Special					
a)	100 mm dia valve		1	No.			
b)	150 mm dia valve		15	No.			
c)	200 mm dia valve		5	No.			
d)	250 mm dia valve		7	No.			
e)	300 mm dia valve		3	No.			
f)	350 mm dia valve		2	No.			
g)	400 mm dia valve		2	No.			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
h)	450 mm dia valve		4	No.			
i)	500 mm dia valve		2	No.			
j)	600 mm dia valve		4	No.			
9	Supply, delivery to site, fixing & Commissioning of the following size of single chamber DI air valves with body and cover in ductile iron of grade GGG 40. All internal parts such as float, shell, etc, all cover bolts of austenitic alloy steel, DN 50 Float of HOSTAFILON and gaskets and seals of EDPM. Epoxy powder coating (EP-P) inside and outside colour blue RAL 5005 as directed by the Departmental Engineers.	Special					
a)	50 mm dia valve		10	No.			
b)	80 mm dia valve		13	No.			
c)	100 mm dia valve		6	No.			
d)	150 mm dia valve		4	No.			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
e)	200 mm dia valve		12	No.			
II. Cost of Civil Works							
1	Earthwork - excavating and depositing on bank with in initial lead of 10 m and initial lift of 2 m including bailing out water including guarding and lighting in trenches for laying of pipes in Hard stiff clay, stiff black cotton, hard red earth, shales, murrum gravel, stoney earth and earth mixed with small boulders and hard gravelly soil (Ordinary soil) etc SS20 B. all complete as per standard specifications and as directed by the Departmental Engineers.	23 & 24	68084	cum			
2	Earthwork - excavating and depositing on bank with an initial lead of 10 m including bailing out water with lifts indicated below including guarding and lighting in trenches for laying of pipes in Soft disintegrated rock, laterite, soft rock, kankar etc., complete as per standard specifications and as directed by the Departmental Engineers.	23 & 24					
a)	0 - 2 m below GL		48598	cum			
b)	2-3m below GL		5682	cum			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
3	Earthwork - excavating and depositing on bank with in initial lead of 10 m and in all lifts including bailing out water including guarding and lighting in trenches for laying of pipes in Medium rock and dense medium rock not requiring blasting etc., complete as per standard specifications and as directed by the Departmental Engineers.	23 & 24	500	cum			
4	Removing hard Rock by wedging, chiselling and trimming to proper shape where blasting is prohibited and stacking as directed by the Departmental Engineers.	23 & 24	500	cum			
5	Removing hard rock by controlled blasting and trimming the site to proper shape including stacking, bailing out water, guarding lighting, fencing the trenches and pits for laying Various size of Pipes and specials etc complete as per standard specifications and as directed by the Departmental Engineers.	Special	500	cum			
6	Bedding the trenches with granular earth of 300mm thick from excavated soil or conveyed/ borrowed earth with in 100m radius, including watering and consolidation conforming to the relevant specification for pipe laying work etc., complete as per standard specification and as directed by Departmental Engineers.	Special	20426	cum			
7	Lowering the following DI K7 pipes and specials into trench and laying to proper grade and alignment etc., complete as per standard specifications and as directed by the Departmental Engineers.	Special					

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
	DI K7 pipe						
a)	150 mm dia		6465	m			
b)	200 mm dia		20100	m			
c)	250 mm dia		6890	m			
d)	300 mm dia		5670	m			
e)	350 mm dia		840	m			
f)	400 mm dia		9920	m			
g)	500 mm dia		3300	m			
h)	600 mm dia		1000	m			
8	Lowering the following MS pipes and specials into trench and laying to proper grade and alignment etc., complete as per standard specifications and as directed by the Departmental Engineer.	Special					

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
a)	700 mm dia		1160	m			
b)	800 mm dia		1290	m			
c)	900 mm dia		4760	m			
d)	1100 mm dia		5990	m			
9	Jointing the DI S/S pipes and specials with rubber gaskets (tyton joint) including cost of lubricants, cost of jointing materials and testing to the required pressure with water etc., complete as per standard specifications and as directed by the Departmental Engineers.	Special					
	DI K7 pipe						
a)	150 mm dia		1293	No.			
b)	200 mm dia		4020	No.			
c)	250 mm dia		1378	No.			
d)	300 mm dia		1134	No.			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
e)	350 mm dia		168	No.			
f)	400 mm dia		1984	No.			
g)	500 mm dia		660	No.			
h)	600 mm dia		200	No.			
10	Jointing MS Pipes by welding, coating with CM 12.5 mm thick lining inside, placing weld mesh outside & coating with Cement Mortar guniting of 25 mm thick as per standard specifications and as directed by the Departmental Engineer.	Special					
a)	700 mm dia		145	No.			
b)	800 mm dia		165	No.			
c)	900 mm dia		595	No.			
d)	1100 mm dia		540	No.			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
11	Labour for cutting the following type of roads for laying the pipes and specials etc., complete as per standard specifications and as directed by the Departmental Engineers.	Special					
a)	BT Roads		4675	cum			
b)	CC Roads		219	cum			
12	Road restoration work after pipes are laid with WMM of 250mm compacted thickness and tack coat 10kg/10sqm over the WMM surface over that providing and laying premix carpet with seal coat type- A for 20mm thickness including cost of all at site etc., complete as per standard specifications and as directed by the Departmental Engineer.	Special					
a)	BT Roads		47408	sqm			
b)	CC Road with plain CC 1:2:4 using 20 mm metal etc complete as per standard specification.		219	sqm			
13	Providing and laying RCC M20 mix using 20 mm ISS HB metal for thrust blocks and anchor blocks of size 3.0mX3.5m for pipeline, specials etc. complete as per standard specification and as directed by Departmental Engineers	30					

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
	DI K7 pipe						
i)	150 mm dia						
a)	22.5 deg		2	No.			
b)	45 deg		4	No.			
c)	90 deg		2	No.			
ii)	200 mm dia						
a)	22.5 deg		5	No.			
b)	45 deg		15	No.			
c)	90 deg		9	No.			
ii)	250 mm dia						
a)	22.5 deg		18	No.			
b)	45 deg		2	No.			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
c)	90 deg		6	No.			
iv)	300 mm dia						
a)	22.5 deg		8	No.			
b)	90 deg		2	No.			
v)	400 mm dia						
a)	45 deg		1	No.			
vi)	500 mm dia						
a)	22.5 deg		1	No.			
b)	45 deg		1	No.			
c)	90 deg		1	No.			
vii)	600 mm dia						
a)	90 deg		2	No.			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
viii)	700 mm dia						
a)	22.5 deg		2	No.			
ix)	900 mm dia						
a)	22.5 deg		3	No.			
x)	1100 mm dia						
a)	22.5 deg		7	No.			
b)	45 deg		1	No.			
c)	90 deg		1	No.			
14	Refilling trenches with selected excavated granular soil in layers not exceeding 20 cm in depth, ramming and consolidation of each layer, watering etc. complete as per standard specifications and as directed by the Departmental Engineers.	24&25	69831	cum			
15	Disposal of surplus earth including loading & unloading, conveyance within a distance of 5 Km and spreading as directed by the Departmental Engineers.	Special	11949	cum			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
16	Construction of chamber for Sluice valve using second class chamber burnt bricks of size 9"x4 3/8"x2 3/4" in cement mortar 1:4 including necessary plastering with cement mortar 1:3 for 12 mm thick both inside and outside, precast concrete covers etc., as per drawing, as per IS specifications and as directed by the Engineers for following sizes in metres.	23 & 24, 25, 30, 31,31C, V,VI,VI I, 61 V, VI (S4)3, 63, 64, 66 & 66A, 86 & 86A V, VI, (S3)(S6), VII, 30(S) & 108					
i)	1.20x0.90x1.20 m	23	3	No.			
ii)	1.20x0.90x1.40 m		1	No.			
iii)	1.50x1.20x1.80 m		1	No.			
iv)	1.50x1.20x1.50 m		4	No.			
v)	2.00x1.80x2.50 m		2	No.			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
vi)	2.00x1.80x2.80 m		3	No.			
17	Construction of chamber for Scour valve using second class chamber burnt bricks of size 9"x4 3/8"x2 3/4" in cement mortar 1:4 and necessary plastering with cement mortar 1:3 for 12 mm both inside and outside, precast concrete covers as per drawing, as per IS specifications and as directed by the engineers for the following sizes in metres, as per drawing.	23 & 24, 25, 30, 31,31C, V,VI,VI I, 61 V, VI (S4)3, 63, 64, 66 & 66A, 86 & 86A V, VI, (S3)(S6), VII, 30(S) & 108					
i)	1.20x0.90x1.20 m		12	No.			
ii)	1.20x0.90x1.40 m		6	No.			
iii)	1.50x1.20x1.50 m		3	No.			
iv)	1.50x1.20x1.80 m		2	No.			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
v)	1.50x1.50x1.80 m		2	No.			
vi)	2.00x1.50x2.00 m		3	No.			
vii)	2.00x1.80x2.50 m		4	No.			
18	Construction of chamber for Air valve using second class chamber burnt bricks of size 9"x4 3/8"x2 3/4" in cement mortar 1:4 and necessary plastering with cement mortar 1:3 for both inside and outside 12 mm thick, precast concrete covers as per drawing , as per IS specifications and as directed by the engineers.	23 & 24, 25, 30, 31,31C, V,VI,VI I, 61 V, VI (S4)3, 63, 64, 66 & 66A, 86 & 86A V, VI, (S3)(S6), VII, 30(S) & 108					
i)	1.00x1.00x1.20 m		9	No.			
ii)	1.20x1.20x1.20 m		11	No.			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
iii)	1.20x1.40x1.50 m		6	No.			
iv)	1.50x1.80x2.00 m		3	No.			
v)	1.50x2.20x2.40 m		8	No.			
19	Construction of chamber for valves of RCC M20 using 20mm metal including cost of reinforcement, cantering and other materials, precast concrete covers as per drawing , as per the following sizes, IS specifications and as directed by the engineers.(Air Valve / Scour Valve / Sluice Valve)	23 & 24, 25, 30, 31,31C, V,VI,VI I, 61 V, VI (S4)3, 63, 64, 66 & 66A, 86 & 86A V, VI, (S3)(S6), VII, 30(S) & 108					
i)	1.20x0.90x1.20 m		13	No.			
ii)	1.20x1.20x1.20 m		8	No.			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
iii)	1.50x1.20x1.50 m		1	No.			
20	Supply of 2500 mm RCC encasing pipe with the wall thickness of 200 - 250 mm and laying the same below National Highway NHAI (NH7) by trench less (Pipe Pushing) method with the earth cushion of 1200 mm in the medium rock formation which require controlled blasting to take 1100 mm MS carrier pipe as directed by the Departmental Engineers.	Special	140	m			
21	Design and Construction of thrust wall/bed/chamber with RCC or fabricated structure to the required size for pushing the pipe to NH7, as per drawing and as directed by the Departmental Engineers.	Special	2	No.			
22	Supply, delivery and joining the following specials for protecting the distribution connection, PFs (if they cross the water line) where ever necessary and as directed by the Departmental Engineers.	Special					
a)	50mm dia HDPE PIPE for PF		1500	m			
b)	25mm dia GI PIPE for PF		1500	m			
c)	110mm dia HDPE PIPE for distribution system		3000	m			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
d)	110mm dia PVC PIPE for distribution system		3000	m			
e)	20mm dia GI PIPE for HSC		1500	m			
f)	15mm dia GI PIPE for HSC		1500	m			
23	Bailing out of water from the trench line and fuel charges for dewatering pump sets including transportation and crew charges as directed by the Departmental Engineers.		3000	Hr.			
Nangavalli Isolation							
I.Cost of Civil Works							
24	Construction of chamber for CI Sluice valve using second class chamber burnt bricks of size 9"x4 3/8"x2 3/4" in cement mortar 1:4 and necessary plastering with cement mortar 1:3 for both inside and outside 12 mm thick, precast concrete covers as per drawing, as per IS specifications and as directed by the Departmental Engineers, as per drawing.	Special					
	1.50x1.20x1.50 m		2	No.			
	1.50x1.20x1.80 m		1	No.			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
	Cost of Materials						
25	Supply and delivery of CI Pipes & specials conforming to IS Specifications at site of work including all taxes, duties, loading, transportation, unloading, etc., complete and as directed by the Departmental Engineers.	Special					
a)	300 mm dia		260	kg			
b)	350 mm dia		280	kg			
26	Supply & delivery of sluice valve D/F with cap as per IS 14846/2000 PN1 with ISI marking as per standard specification and as directed by the Departmental Engineers.	Special					
a)	300 mm dia		2	No.			
b)	350 mm dia		2	No.			
	Total of VI - B						

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
Bill No : C Pipe Carrying Bridge							
1	Earthwork - excavating and depositing on bank with in initial lead of 10 m including bailing out water with lifts indicated below including guarding and lighting in trenches for laying of pipes in Hard stiff clay, stiff black cotton, hard red earth, shale, Murram etc., Gravel, Stoney earth and earth mixed with small sized boulders and Hard gravelly soil etc., complete as directed by the Departmental Engineers.	23&24					
a)	0 - 2 m Depth below GL		48	cum			
b)	2-4m Depth below GL		19	cum			
c)	4-6m Depth below GL		68	cum			
d)	6-7m below GL		32	cum			
2	Earthwork - excavating and depositing on bank with an initial lead of 10 m including bailing out water with lifts indicated below including guarding and lighting in trenches for laying of pipes in Soft disintegrated rock, laterite, soft rock, kankar etc., complete as per standard specifications and as directed by the Departmental Engineers.	23&24					

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
a)	0 - 2m Depth below GL		48	cum			
b)	2- 4m Depth below GL		34	cum			
c)	4-5m Depth below GL		19	cum			
3	Removing Medium Rock and Dense Medium Rock by wedging, chiselling and trimming to proper shape where blasting is prohibited etc., complete as per standard specifications and as directed by the Departmental Engineers.	23 & 24					
a)	5-6m Depth below GL		8	cum			
b)	6-7m Depth below GL		20	cum			
c)	7-8m Depth below GL		9	cum			
4	Removing hard rock with wedging chipping & chiselling and as directed by the Departmental Engineers.	23&24					
a)	6-7 m Depth below GL		79	cum			

b)	7-8 m Depth below GL		49	cum			
Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
c)	8-9 m Depth below GL		5	cum			
5	Laying PCC M10 (1:3:6) grade, using 40 mm HBG stone aggregate including cost and conveyance of all materials, mixing, placing, ramming, curing, finishing etc to site and handling charges, levelling, compacting, curing, finishing etc. complete and as directed by the Departmental Engineers.	28V,VI S 25,8					
a)	0-1.5m below GL		2	cum			
b)	1.5- 4.50 m below GL		2	cum			
c)	4.5- 9 m below GL		5	cum			
6	Providing RCC M25 grade using 20 mm hard broken blue granite aggregate including cost of material and conveyance of all materials to site, including mixing, placing in position, lifting, vibrating, finishing, curing, labour charges and other incidental charges, etc., but excluding the cost of cantering, shuttering and reinforcements for Raft,side wall & Columns as per standard specification and as directed by the Departmental Engineers.	30					

a)	1.5 - 4.5m below GL		45	cum			
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Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
b)	0-1.5m below GL		90	cum			
c)	4.5-9m below GL		13	cum			
7	Refilling trenches with selected excavated granular soil in layers not exceeding 20 cm in depth, ramming and consolidation of each layer, watering etc. all complete as per standard specifications and as directed by the Departmental Engineer.	24&25	404	cum			
8	Dewatering the placement site by required capacity of Diesel Engine with pumps inclusive of hire charges fuel charges etc., complete and as directed by the Departmental Engineers.	Special	300	hr.			
9	Supplying and erecting of steel cantering, shuttering for soffits and sides including necessary supports and strutting for all RCC works using MS sheets of suitable size of BG 10 stiffened with MS angle of size 25 X 25 X 3mm for ring laid over Silver Oak joists of size 10cm X 6.5cm space at 10cm c/c and supported by Casurina Props 10cm - 13cm spaced at 75cm c/c in various levels etc., complete and as directed by the Departmental Engineers.	30(S)86, 86AV,V I(S3)VII					
a)	Plain Surface						

	Column footings, beams, slab (0-3.3m below GL)		446	sqm			
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Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
b) i	Circular column (0-3.3m below GL)		65	sqm			
ii)	Circular column (3.3-4.3m below GL)		12	sqm			
iii)	Circular column (4.3-5.3m below GL)		10	sqm			
iv)	Middle columns 0-3.3m above GL		25	sqm			
v)	Middle columns 3.3m-4.30m above GL		5	sqm			
vi)	Middle columns 4.3m-5.30m above GL		3	sqm			
10	Supplying fabricating and placing in position of RTS grills at all heights for reinforcement including cost of steel for all works and labour charges including cost of binding wire etc., complete for all RCC works and as directed by the Departmental Engineer.	86 & 86A V, VI, (S3)(S6), VII	209	Qtl.			
11	Disposal of surplus earth including loading & unloading, conveyance within a distance of 5 Km and spreading as directed by the Engineer-	Special	31	cum			

	In-Charge.						
	Total of VI - C						

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
Bill No : D Pumping Main							
I. Cost of Material							
1	Supply and delivery of the following dia of DI pipes of class K7 conforming to IS:8329/2000, as specified in Technical specifications in standard length including labour charges for loading, unloading and stacking at site etc., complete as per standard specifications and as directed by the Departmental Engineers.	Special					
a)	300 mm dia		1410	m			
b)	250 mm dia		140	m			
c)	200mm Dia		7310	m			
d)	150mm Dia		1820	m			

2	Supply, delivery and fixing of RCC NON pressure spun pipe NP3 class with socket and spigot ends as per IS:458/2003 with rubber ring joints, as specified in Technical specifications in standard length including labour charges for loading, unloading and stacking at site etc., complete as per standard specifications and as directed by the Departmental Engineers.	Special					
a)	200 mm dia		30	m			
Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
b)	250 mm dia		90	m			
c)	350 mm dia		30	m			
3	Supply, delivery to site, fixing & Commissioning of the following size of CI valve to pressure rating PN 1.6 with ISI mark, for isolation conforming to IS 14846/2000 with necessary rubber insertions, bolts & nuts including loading & unloading ,transporting charges taxes & duties etc., complete at site as per standard specification and as directed by the Departmental Engineers.	Special					
a)	Sluice Valve 300mm dia on 300mm main		1	No.			

b)	Sluice Valve 250mm dia on 250mm main		4	No.			
c)	Sluice Valve 200mm dia		4	No.			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
d)	Sluice Valve 150mm dia		3	No.			
e)	Scour valve 200mm dia on 300mm main		1	No.			
f)	Scour valve 150 mm dia		8	No.			
g)	Scour valve 100mm dia on 150mm main		3	No.			

h)	Air valve 80mm dia on 300mm main		3	No.			
i)	Air valve 50 mm dia		10	No.			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
4	Supply and delivery of following DI K7 D/F specials of conforming to IS 9523/2000 specifications at site of work including all taxes, duties, loading, transportation, unloading, insurance etc., complete and as directed by the Departmental Engineers.	Special	4053	Kg			
a)	Specials for Sluice Valve 300mm Dia on 300mm dia Main (84 Kg)						
b)	Specials for Sluice Valve 250mm Dia on 250mm dia Main (240 Kg)						
c)	Specials for Sluice Valve 200mm Dia on 200mm dia Main (161 Kg)						
d)	Specials for Sluice Valve 150mm Dia on 150mm dia Main (90 Kg)						
e)	Specials for Scour valve on 200 mm Dia on 300mm Dia main (387 Kg)						
f)	Scour valve on 150 mm Dia on 200mm Dia main (394 Kg)						
g)	Specials for Scour valve on 150 mm Dia on						

	250mm Dia main (274 Kg)						
h)	Specials for Scour valve on 100 mm Dia on 150mm Dia main (488 Kg)						
i)	Specials for 50mm Air valve on 200mm main (468 Kg)						
j)	Specials for 80mm Air valve on 250mm main (240 Kg)						
k)	Specials for 50mm Air valve on 150mm main (144 Kg)						
l)	200mm 90 Deg bend (192 Kg)						
m)	200mm 45 Deg bend (186 Kg)						
n)	200mm 22.5 deg bend (186 Kg)						
o)	150mm dia 90 Deg DI bend(s/s) (88 Kg)						
p)	150mm dia 90 Deg (D/F) bend (100 Kg)						
Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
q)	200mm dia x 150 mm dia (s/s) Tee (70 Kg)						
r)	300mm dia x 250mm dia DI Tee (60 Kg)						
s)	200mm dia x 150 mm dia DI Taper (34 Kg)						
t)	300mm dia x 150mm dia DI Taper (47 Kg)						
u)	Specials for 80mm Air valve on 300mm main (120 Kg)						
II. Cost of Civil Works							
1	Earthwork - excavating and depositing on bank with in initial lead of 10 m and initial lift of 2m including bailing out water, guarding and lighting in trenches for laying of pipes in Hard stiff clay, stiff black cotton, hard red earth, shales, murrum, gravel, stoney earth and earth mixed with small boulders and hard gravelly soil (Ordinary soil) etc SS20 B. all complete as per standard specifications and as directed by the Departmental Engineer.	23&24	12759	cum			

2	Earthwork - excavating and depositing on bank with an initial lead of 10 m and initial lift of 2 m including bailing out water, guarding and lighting in trenches for laying of pipes in SDR not requiring blasting. all complete as per standard specifications and as directed by the Departmental Engineer.	23&24	6264	cum			
3	Bedding with granular earth ,excavated soil or conveyed borrow earth within 100m radius including watering and consolidation conforming to relevant specification for pipe laying works etc complete as per standard specification and as directed by Engineers.	Special					
a)	For 200mm dia & 150mm dia		1484	cum			
Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
4	Disposal of surplus earth including loading & unloading, conveyance within a distance of 5 Km and spreading as directed by the Departmental Engineer.	Special	742	cum			
5	Lowering the following dia of DI K7 pipes and specials into trench and laying to proper grade and alignment complete as per standard specifications and as directed by the Departmental Engineer.	Special					
a)	300 mm dia		1410	m			
b)	250 mm dia		140	m			

c)	200 mm dia		7310	m			
d)	150 mm dia		3560	m			
6	Jointing the following dia of DI S/S pipes and specials with rubber gaskets (tyton joint) including cost of lubricants, cost of jointing materials and testing to the required pressure with water etc., complete as per standard specifications and as directed by the Departmental Engineer.	Special					
a)	300 mm dia		282	No.			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
b)	250 mm dia		28	No.			
c)	200 mm dia		1437	No.			
d)	150 mm dia		347	No.			
7	Jointing the following size of DI D/F pipes and specials with rubber insertion to the required specification with M.S bolts and nuts, complete and testing the pipes to the required pressure with water (including cost of jointing materials) as directed by the Departmental	Special					

	Engineers.						
a)	150 mm dia		633	No.			
8	Labour for cutting B.T or Macadam roads for laying the pipes and specials etc., complete as per standard specifications and as directed by the Departmental Engineer.	Special	742	cum			
9	Road restoration work after pipes are laid with WMM of 250mm compacted thickness and tack coat 10kg/10sqm over the WMM surface over that providing and laying premix carpet with seal coat type- A for 20mm thickness including cost of all at site etc., complete as per standard specifications and as directed by the Departmental Engineer.	Special	9906	sqm			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		

10	Construction of Masonry valve pit for fixing the following sizes of valves as per the type design. The foundation shall be in PCC M10 and brick work in CM 1:4 plastering in CM 1:3, 12mm thick and the pit provided with 100mm thick RCC 1:1 1/2:3, cover slab. The rate should include earth work excavation in various soils met with at the site of work, refilling the pit after the construction of the pit, providing cut stone set, cost of steel reinforcement fabrication charges complete and excluding the cost of valves, pipes and specials etc. complete as per drawing and as directed by the Departmental Engineers.	23 & 24, 25, 30, 31,31C, V,VI,VI I, 61 V, VI (S4)3, 63, 64, 66 & 66A, 86 & 86A V, VI, (S3)(S6), VII, 30(S) & 108					
	for 200 mm dia Pumping main						
i)	Sluice Valve pit						
	1.20x0.90x1.20 m		5.00	No			
	1.20x0.90x1.40 m		4.00	No			
	1.50x1.20x1.50 m		1.00	No			
	1.00x0.75x1.00m		2.00	No			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		

ii)	Scour valve pit						
	1.00x0.75x1.00 m		12.00	No			
iii)	Air valve pit						
	1.00x1.20x1.00 m		8.00	No			
	1.00x1.20x0.90 m		3.00	No			
11	Refilling trenches with selected excavated granular soil in layers not exceeding 20 cm in depth, ramming and consolidation of each layer, watering etc. all complete as per standard specifications and as directed by the Departmental Engineers.	24&25	17538	cum			
12	Providing and laying in position of M20 grade reinforced cement concrete including the cost of centring, shuttering, finishing and reinforcement for all work upto plinth level for construction of Thrust block for 200 mm dia pipe for 22.5 Deg bend as per drawing and directed by Departmental Engineers.	30	3	No.			
13	Providing and laying in position of M20 grade reinforced cement concrete including the cost of centring, shuttering, finishing and reinforcement for all work upto plinth level for construction of Thrust blocks for 200 mm dia pipe for 90 Deg bends as per drawing and directed by Departmental Engineers.	30	3	No.			
Total of VI - D							

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		

Bill No : E Ammapet Pump House & Pipe Connections							
I.Cost of Civil Works							
1	Earthwork excavation and depositing on bank with an initial lead of 10 meters and initial lift of 2 meters in hard stiff clay, stiff black cotton, hard red earth,,shales, murrum, gravel, stoney earth and earth mixed with small size boulders and hard gravelly soil SS 20 B etc and as directed by Departmental Engineers.	23&24	24	Cum			
2	Earthwork excavation and depositing on bank with an initial lead of 10 meters and initial lift of 2 meters in Soft disintegrated rock, laterite, soft rock, kankar, not requiring blasting etc and as directed by the Departmental Engineers.	23&24	18	Cum			
3	Earthwork excavation and depositing on bank with an initial lead of 10 meters and with 2m-3m lift in Medium rock and dense medium rock not requiring blasting. etc., complete as per standard specifications and as directed by the Departmental Engineers.	23&24	16	Cum			
4	Removing hard Rock by wedging, chiselling and trimming to proper shape where blasting is prohibited etc., complete as per standard specifications and as directed by the Departmental Engineers..	23&24	14	Cum			
5	Supplying and filling of river sand including watering, ramming and consolidating in layers of 15 cm thick, cost and conveyance of materials at site etc., complete as per standard specification and as directed by the Departmental Engineers.	Special	21	Cum			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		

6	Laying PCC M7.5 (1:4:8) grade, using 40 mm HBG stone aggregate including cost and conveyance of all materials, mixing, placing, ramming, curing, finishing conveyance to site and handling charges, levelling, compacting etc. complete as per standard specifications and as directed by the Departmental Engineers.	28	20	Cum			
7	Random rubble masonry with CM 1:5 (One cement and five sand) using Rough stone for masonry and bond stone including curing, finishing, cost and conveyance of all materials etc., complete as per standard specification and as directed by the Departmental Engineers.	35	42	Cum			
8	Brick work in CM 1:5 using Second class ground mould chamber burnt bricks of size 9"x4 3/8"x2 3/4" including cost of all materials, labour charges, curing etc., complete and as directed by the Departmental Engineers.	23 & 24, 25, 30, 31,31C, V,VI,VI I, 61 V, VI (S4)3, 63, 64, 66 & 66A, 86 & 86A V, VI, (S3)(S6) , VII, 30(S) & 108	46	Cum			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		

9	Providing RCC 1:1 1/2:3 using 20 mm hard broken blue granite aggregate including cost of material and conveyance of all materials to site, including mixing, placing in position, lifting, vibrating, finishing, curing, labour charges and other incidental charges, etc., but excluding the cost of centring, shuttering and reinforcements for Raft,side wall & Columns as per standard specifications and as directed by the Departmental Engineers.	30	19	Cum			
10	Supplying and erecting of steel centring, shuttering for soffits and sides including necessary supports and strutting for all RCC works using MS sheets of suitable size of BG 10 stiffened with MS angle of size 25 X 25 X 3mm for ring laid over Silver Oak joists of size 10cm X 6.5cm space at 10cm c/c and supported by Casurina Props 10cm - 13cm spaced at 75cm c/c in various levels etc., complete and as directed by the Departmental Engineers. - Upto 3.30m	30(S)86, 86AV,V I(S3)VII	156	Sqm			
11	Supplying fabricating and placing in position of RTS grills of all size at all heights for reinforcement including cost of steel for all works and labour charges including cost of binding wire etc., complete for all RCC works and as directed by Departmental Engineers.	86 & 86A V, VI, (S3)(S6), VII	19	Qtl			
12	Plastering with Cement mortar 1:5 using 12mm thick including cost of all materials, labour charges, curing etc., complete and as directed by the Departmental Engineers.	56 & 57	422	Sqm			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)	In words	Amount (Rs)
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				Unit	In Figures		
13	Flush pointing the exposed surface of the RR masonry with CM 1:3 (One cement and three sand) including finishing, curing, cost and conveyance of all materials etc., complete and as directed by Departmental Engineers.	56 & 57	39	Sqm			
14	Special ceiling plastering with CM 1:3 (one cement and three sand) 10 mm thick including labour charges for mixing, finishing, curing etc., complete and as directed by Departmental Engineers.	56 & 57	89	Sqm			
15	Floor finishing with Ellis Pattern type in CC 1:3 (one cement and three stone chips) 25 mm thick including labour charges for mixing, finishing, curing etc., complete and as directed by Departmental Engineers.	39-G	73	Sqm			
16	Whitewashing two coats with fine screened shell lime for newly plastered surface for inner and outer side including labour charges and cost and conveyance of all materials etc., complete as per standard specification and as directed by the Departmental Engineers.	63	284	Sqm			
17	Snowcem Cement painting of two coats with approved colour and quality over one coats of white washing including the cost of materials, labour charges, cleaning and preparation of the surface and curing etc., complete and as directed by Departmental Engineers.	61 V, VI (S4)3	262	Sqm			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)	In words	Amount (Rs)
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Contractor

				Unit	In Figures		
18	Supplying and fixing pull and push type Rolling shutter with ISI make approved size and section using 18 gauge GI sheet & hand gear arrangements including all cost, with fitting painting one coat of approved red oxide primer, hood cover, transportation charges etc complete as directed by Departmental Engineers.	84-A	17	Sqm			
19	Supply, delivery and fixing in position of MS steel doors of size 1.00 x 2.50m including all fixtures and appliances complying with standard specification etc., complete, as directed by the Departmental Engineers.	81	1	No			
20	Supply, delivery and fixing in position of MS steel Windows of size 0.90 x 1.20m including all fixtures and appliances complying with standard specification etc., complete, as directed by Departmental Engineers.	81	8	No.			
21	Supply, delivery and fixing in position of MS steel Ventilators of size 0.45 x 0.60m including all fixtures and appliances complying with standard specification etc., complete, as directed by Departmental Engineers.	81	8	No,			
22	Painting the Doors, Windows & Ventilators on both sides with ready mixed enamel paint two coats over priming coat of approved quality and colour including thorough scrapping clean removal of dirt etc. complete complying with standard specification including cost of paint and brushes, labour charges etc., and as directed by Departmental Engineers.. The colour and quality has to be approved by the Departmental Engineers.	66	52	Sqm			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)	In words	Amount (Rs)
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Contractor

Sl.No	Description of Items	TNBP	Qty.	Unit	In Figures	In words	Amount (Rs)
23	Weathering course with broken Brick Jelly of 20 mm size in pure slaked lime (no sand to be used) over RCC Roof slab with proportion of 32:12 1/2 for required depth of 80mm thickness over the roof slab as required well beaten with wooden beaters for giving required slope complying with standard specification etc., complete and as directed by Departmental Engineers.		7	Cum			
24	Finishing the top of weathering course with one course of pressed tiles of size 20cm x 20cm x 2cm of approved quality using CM 1:3, mixed with crude oil 10% by weight of cement and pointed with same oiled mortar including cost of all materials, labour charges, curing etc., complete and as directed by the Departmental Engineers.	44-H	92	Sqm			
25	Refilling the foundation with suitable excavated earth (other than sand) available in layers of not more than 20 cm thick , watering, ramming and consolidating etc., complete as per standard specifications and as directed by the Departmental Engineers.	24 & 25	86	Cum			
26	Supply, delivery and fixing of 2T capacity hand operated overhead travelling (HOT) crane suitable for a span upto 10Mtrs and travel length upto 10Mtrs with clear lift upto 6 Mtrs, including gear type chain pulley block and geared travelling trolley etc., complete with all accessories as directed by the Departmental Engineers.	Special	1	No			
27	Providing rain water pipes of 110mm OD 4Ksc PVC pipes with bends, shoes, Clamps etc as directed by the Departmental Engineers.	Special	42	m			

			Unit	In Figures		
Cost of Electro Mechanical Works						
1	Supply and installation of 22KV/433V Iron core oil cooled transformer with copper winding conforming to IS 2026 including cost of all at site etc., complete as per specification as directed by the Departmental Engineers.	1	No			
2	Supply and erection of 4P/6P structure material with suitable size RSJ along with all structure materials for mounting AB switch LA .Drop out fuse and erection of steel structure etc for 11 KV substation including cost of all at site etc complete as per specification as directed by Departmental Engineers.	1	No			
3	supply and erection of chain link fencing with gate including TNEB 2 poles spreading of materials as per CEIG requirements including cost of all at site etc., complete as per standard specification as directed by the Departmental Engineers.	1	No			
4	Transformer yard earthing upto 250 KVA substation including cost of all at site etc., complete as per specification as directed by the Departmental Engineers.	1	No			
5	Construction of transformer plinth including cost of all at site etc., complete as per specification as directed by the Departmental Engineers.	1	No			
6	Erection of Transformer substation charges etc., complete as per specification as directed by the Departmental Engineers.	1	No.			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)	In words	Amount (Rs)
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Contractor

				Unit	In Figures		
7	Supply, delivery and installation of Horizontal split casing, bronze impeller conforming to IS 220 to suit the site condition, coupled with squirrel cage induction motor suitable for operation on AC 3Ph 415V+0r - 10%. Safety system complete with mounting arrangements guide rail etc for following duty including cost of all at site etc., complete as per specification as directed by the Departmental Engineers.						
a	1413 lpm x 65m Head (To pump to ELSR-55)		2	Nos			
b	5710 lpm x 86m Head (To pump to ELSR-51)		2	Nos			
8a	Supply and installation of fully automatic air break auto transformer starter with single phasing preventory with ammeter with auto restart facility for 30HP pumps for LT 136 to 160 KW including cost of all at site etc., complete as per specification as directed by the Departmental Engineers.		2	Nos			
8b	Supply and Installation of Flex compensated magnetic amplifier soft starter panel complete with all electrical equipments for 143 HP pump for LT squirrel cage motor 136 to 160 KW including cost of all at site etc., complete as per specification as directed by the Departmental Engineers.		2	Nos			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)	In words	Amount (Rs)
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Contractor

			Unit	In Figures		
9	Supply and installation of LT Control Panel floor mounted cubicle type made of 14SWG sheet steel fabrication consisting of the following including cost of all at site etc., complete as per specification as directed by the Departmental Engineers.		1	No		
a	MCCB TPN -600Amp-1					
b	MCCB TPN -400Amp for motor 165 HP/capacitor-4					
c	MCCB TPN -100Amp-1 for motor 40 HP 63A-2					
d	MCCB TPN -63 Amp for capacitor-4					
e	Ammeter-5					
f	Voltmeter-3					
g	Power factor meter-1					
h	Pilot Lamp, Bus bar etc					
10	Supply and erection of capacitor panel consisting of 30 KVAR capacity for 143 HP motor, with protection relay for capacitor equipped with automatic power factor control unit complete with cable switches etc including cost of all at site etc., complete as per specification as directed by the Departmental Engineers.		2	sets		
11	Supply and laying of following cables on earth from Transformer secondary to LT Panel in the control room and from motor control starter panel to pumps including cost of all at site etc., complete as per specification as directed by the Departmental Engineers.					

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)	In words	Amount (Rs)
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Contractor

			Unit	In Figures		
a	2Rx4Cx120Sqmm PVC insulated /PVC sheathed cables armoured with aluminium conductor from Transformer to LT Panel (704 + 704)		40	m		
b	3Cx120Sqmm cable from starter panel to motor - 143 HP		40	m		
c	3Cx35 Sq m cable from starter panel to motor - 30 HP		40	m		
d	Control cable 4Cx2.5 Sq mm with copper conductor from motor junction boxes		60	m		
12	Supply and provision of cable terminal lugs on the following cable including cost of all at site etc., complete as per specification as directed by the Departmental Engineers.					
a	3C x120 Sq mm cable Aluminium conductor		6	Nos		
b	4C x185 Sq mm cable Aluminium conductor		8	Nos		
c	3C x35 Sq mm cable Aluminium conductor		6	Nos		
d	4C x2.5 Sq mm cable Aluminium conductor		8	Nos		

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)	In words	Amount (Rs)
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Contractor

				Unit	In Figures		
13	Safety equipments to be kept in the pumping station including cost of all at site etc., complete as per specification as directed by the Departmental Engineers.						
a	Electrical 22KV Gloves		1	No			
b	Dry chemical powder Fire Extinguisher		2	Nos			
c	Fire bucket 3 hooked to MS stand		1	No			
d	Laminated shock treatment chart		1	No			
e	First aid box		1	No			
f	Wooden ladder 3m height		1	No			
g	Earth discharge rod		1	No			
14	Supply delivery and fixing in position of LT TNEB metering Board for HT supply (above 150 HP below 200 HP) 112-150 KW including cost of all at site etc., complete as per specification as directed by the Departmental Engineers.		1	No			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)	In words	Amount (Rs)
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Contractor

				Unit	In Figures		
15	Designing and preparation of CEIG drawings, obtaining approval and safety certificate including submission of completion report and rectification including cost of all at site etc., complete as per specification as directed by the Departmental Engineers.		1	No			
16	providing lighting wiring using MS conduit pipes and specials with 2 runs 1.5 sq.mm PVC copper wire and 1 run 12 swg GI wire for earthing for light, fans and 5A plug points including switch box 5A switch sockets, ceiling rose and consumables etc., complete as per specification as directed by the Departmental Engineers..		15	Nos			
17	Supply of portable hand lamp with 100w bulb, lamp guard and wooden handle and 25M long flexible cable etc., complete as per specification as directed by the Departmental Engineers.		5	Nos			
18	Supply delivery and fixing of industrial type Fluorescent fitting stove enamelled with copper choke and condenser (HPF) 4'40W, single type suitable for 1No.tube etc., complete as per specification as directed by the Departmental Engineers.		10	Nos			
19	Supply, delivery and fixing of box type single fluorescent fitting with copper choke and condenser complete with ISI mark.4FT 40 watt box type with Ballast etc., complete as per specification as directed by the Departmental Engineers.		3	Nos			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)	In words	Amount (Rs)
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Contractor

			Unit	In Figures		
20	Supply of pedestal fan etc., complete as per specification as directed by the Departmental Engineers.		5	Nos		
Total of Bill-E						
Bill No : F Other PH E&M						
1	Supply and delivery of DI K7 D/F specials of conforming to IS 9523/2000 specifications at site of work including all taxes, duties, loading, transportation, unloading, insurance etc., complete as per specification as directed by the Departmental Engineers.	Special				
	D.I Bend (D/F) 90°		2588	kg		
a)	D.I 150mm dia Non std pipe		1180	kg		
b)	D.I 150x200 Taper		46	kg		
c)	D.I 150x100 Taper		44	kg		
d)	D.I. 150 dia Tee		64	kg		
e)	D.I. 150mm dia Non std with 1.5m length		406	kg		

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)	In words	Amount (Rs)
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Contractor

				Unit	In Figures		
f)	D.I. 150mm dia Non std with 1m length		180	kg			
g)	150mm dia 30° Bend		220	kg			
h)	150x150x150 D/F Tee		64	kg			
2	Supply, delivery to site, fixing & Commissioning of the following size of CI sluice valves Non raising spindle types to pressure rating 1.6 PN with ISI mark, conforming to IS 14846/2000 & 2906 with necessary rubber insertions, bolts & nuts etc. complete including all taxes duties, loading, unloading transporting charges & stacking at site etc. complete at site as per standard specification and as directed by the Departmental Engineers.	Special					
a)	150mm dia Sluice Valve		12	No.			
b)	200mm dia Sluice Valve D/F		2	No.			
c)	300mm dia Sluice Valve D/F		2	No.			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)	In words	Amount (Rs)
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Contractor

			Unit	In Figures		
3	Supply, delivery to site, fixing & Commissioning of following size of CI D/F Reflux valve to pressure rating 1.1 PN with ISI mark, for isolation confirming to IS 5312 with necessary rubber insertions, bolts & nuts including loading & unloading ,transporting charges taxes complete at site as per standard specification and as directed by the Departmental Engineers.	Special				
a)	150mm dia		16	No.		
b)	200mm Dia		1	No.		
c)	300 mm dia		2	No.		
4	Jointing the following dia of DI D/F pipes and specials with rubber insertion to the required specification with M.S bolts and nuts, complete and testing the pipes to the required pressure with water (including cost of jointing materials) as p-er standard specification and as directed by the Departmental Engineers.	Special				
a)	D.I 150mm dia Bend (D/F) 90°		12	No.		
b)	D.I 150mm dia Non std pipe		52	No.		

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)	In words	Amount (Rs)
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Contractor

				Unit	In Figures		
c)	D.I 150x200 Taper		4	No.			
d)	D.I 150x100 Taper		8	No.			
e)	DI. 150 dia Tee		6	No.			
f)	D.I. 150mm did Non std with 1.5m length		4	No.			
g)	D.I. 150mm dia Non std with 1m length		8	No.			
h)	D.I. 200mmdia Taper		4	No.			
i)	100dia Taper		2	No.			
j)	150mm dia 30° Bend		20	No.			
k)	150x150x150 D/F Tee		6	No.			
l)	150mm Dia		25	No.			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)	In words	Amount (Rs)
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Contractor

				Unit	In Figures		
m)	200mm Dia		14	No.			
n)	300mm Dia		10	No.			
5	Supply & Delivery of Gantry Girder		33	m			
6	3T capacity hand operated overhead travelling crane (HOT)with clear lift of up to 6m including gear type chain pulley block and geared Travelling trolley complete with all accessories as per standard specification and as directed by the Departmental Engineers.	Special	1	No.			
Electrical Works							
1	Supply, Delivery and Fixing of dynamically, and hydraulically balanced open well Vertical submersible pumps with all standard accessories of following capacities due to all causes with C.I. casing, bronze impeller conforming to I.S.14220 and as amended as on date with accessories to suit the site condition coupled with squirrel cage induction motor suitable for operation, A.C., 3phase(50 Hz+/-5%), 415 volt +/- 10%, 1500 rpm , complete with all mountings and necessary concrete beddings etc., to pump as per standard specification and as directed by the Departmental Engineers..	Special					
a)	266lpm x 50 m head		2	No.			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)	In words	Amount (Rs)
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Contractor

Sl.No	Description of Items	TNBP	Qty.	Unit	In Figures	In words	Amount (Rs)
	b) 1453 LPM X 45M head		2	No.			
	c) 1385 lpm x 33 m head		2	No.			
	d) 2160 lpm x 65 m head		2	No.			
2	Supply and delivery of fully automatic Air break Star Delta starter for the following rating with single phasing preventor with Ammeter conforming to IS 13947 with Auto restart facility etc., complete as per standard specification and as directed by the Departmental Engineers..	Special					
	a) 20 HP 15 KW rating - pump		2	No.			
	b) 12.5 HP 2 Nos		2	No.			
	c) 40 HP Rating		2	No.			
3	Supply and installation of following switch gears in the existing LT - Control panel [] after removing the existing equities as per standard specification and as directed by the Departmental Engineers.	Special					
	a) 100 A - MCCB TPN for		3	No.			

			Unit	In Figures		
b)	63 A - MCCB TPN for pump starter		5	No.		
c)	96A - MCB for capacitor & space		2	No.		
d)	32 A - MCCB - 2		4	No.		
e)	16A - MCCB - 1		1	No.		
4	Supply and deliver of DOL [] starter for the following rating with single phasing preventor with Ammeter conforming to IS 13947 WITH COMPLETE as per standard specification and as directed by the Departmental Engineers.	Special				
a)	5 HP Auto Starting		2	No.		
5	Supply and installation of following switch gears in the existing LT - Control panel [] after removing the existing equities as per standard specification and as directed by the Departmental Engineers.					
a)	63 A - MCCB-TPN1 - 1		1	No.		
b)	32 A - MCCB - TPN - 3		3	No.		

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)	In words	Amount (Rs)
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Contractor

				Unit	In Figures		
6	Supply and delivery of 150mm dial reputed make pressure and Vacuum gauge of range 0-20 kg/cm ² with G.M. cock brass adopter copper impulse tubing etc., for suction and delivery side (On delivery side 1 no each to be fixed before the valve and 1 no to be fixed after the common main). The pressure gauge should be mounted on a teak wood board to be fixed on the wall as per standard specification and as directed by the Departmental Engineers.	Special	16	No.			
7.a	Supply and delivery of 1.1 KV grade 3 core one run of 10 sq mm PVC insulated steel armoured Aluminium cable as per IS 1554 to connect Control panel to Capacitor bank in Pump room as per standard specification and as directed by the Departmental Engineers.	Special	30	m			
b	Supply and installation of capacitor complete with fuse clamp of 2KVAR capacity		8	No.			
c	Supply and installation of capacitor complete with fuse clamp of 5KVAR capacity		2	No.			
d	Supply and installation of capacitor complete with fuse clamp of 6KVAR capacity		2	No.			
E	Laying the above cable By Clamping		28	m			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
8	a. Supply and delivery of 1.1 KV grade 3 core one run of 16 sq mm PVC insulated steel armoured Aluminium cable as per IS 1554 to connect Control panel to Capacitor bank in Pump room as per standard specification and as directed by the Departmental Engineers..	Special	20	m			
9	Supply and [] of 10 KVAR capacitor for each motor to complete with repay fuses etc.	Special	2	No.			
14	Laying the above cable by clamping	Special	10	m			
15	Supply and delivery of 1.1 KV grade 3 core single run 10 sq mm PVC insulated steel armoured Aluminium cable as per IS 1554 to be laid in between panel board to the motors of rating 5 HP nos given under item no 3 (i) through starters as per standard specification and as directed by the Departmental Engineers.	Special	70	m			
16	Supply and delivery of 1.1 KV grade 3 core single run 16 sq mm PVC insulated steel armoured Aluminium cable as per IS 1554 to be laid in between panel board to the motors of rating 20 HP 2 nos given under item no 3 (i) through starters as per standard specification and as directed by the Departmental Engineers.	Special	40	m			
17	Supply and delivery of 1.1 KV grade 3 core single run 50 sq mm PVC insulated steel armoured Aluminium cable as per IS 1554 to be laid in between panel board to the motors of rating 40 HP 1 nos given under item no 3 (i) through starters as per standard specification and as directed by the Departmental Engineers.	Special	40	m			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
18	Laying the above cable as per I.E. rules below G.L. as per standard specification and as directed by the Departmental Engineers.	Special	150	m			
19	Jointing the above cable with jointing materials such as lugs cable clamps etc. complete as per standard specification and as directed by the Departmental Engineers..	Special	16				
20	Providing G.L earthing for the pump sets panel board and all equipment etc in the pump room etc., complete and as directed by the Departmental Engineer by providing suitable electrode (Upto 25 HP Installation) as per standard specification and as directed by the Departmental Engineers.	Special	5	set			
21	Providing G.L earthing for the pump sets panel board and all equipment etc in the pump room etc., complete and as directed by the Departmental Engineer by providing suitable electrode (Above 25-60 HP Installation) as per standard specification and as directed by the Departmental Engineers.	Special	1	set			
22	Labour charges for erection of following submersible pump sets in sump including fixing and jointing submersible cable with proper clamps upto the starter to the required depth, valves, erection, clamps, pressure gauge upto the exterior wall of pump room and erection of panel boards consisting of TPICN switches, starter, volt meter, ammeter, 3 pilot (indicating) lamps, single phasing preventer, water level guard and as per IE rules, testing, trial run for 10 days etc., complete and as directed by the Departmental Engineers.	Special	5	No.			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
23	Supply of 3 sets of completion plan, wiring diagram performance curves for the pump sets of which one set has to be laminated. Operation and maintenance manual for pumps/ motors/ starters as per standard specification and as directed by the Departmental Engineers..	Special	1	set			
Total of VI - F							
Bill No : G Sump & Pipe Connections							
I.Cost of civil works							
1	Earthwork excavation and depositing on bank with an initial lead of 10 meters and initial lift of 2 meters in hard stiff clay, stiff black cotton, hard red earth, shales, murrum, gravel, stoney earth and earth mixed with small size boulders and hard gravelly soil SS 20 B etc and as directed by the Departmental Engineers.	23&24	253	cum			
2	Earthwork excavation and depositing on bank with an initial lead of 10 meters and initial lift of 2 meters in Soft disintegrated rock, laterite, soft rock, kankar, not requiring blasting etc and as directed by the Departmental Engineers.	23&24	253	cum			
3	Earthwork excavation and depositing on bank with an initial lead of 10 meters and with initial lift of 2m in Medium rock and dense medium rock not requiring blasting. etc., complete as per standard specifications and as directed by the Departmental Engineers.	23&24	109	cum			
4	Plain Cement Concrete 1: 4 : 8 (One cement, Four Sand and eight hard broken granite stone of size 40 mm) for levelling course for foundation including curing, finishing etc., complete complying with standard specification and as directed by the Departmental Engineers.	28	63	cum			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
5	Providing RCC M30 grade using 20 mm hard broken blue granite aggregate including cost of material and conveyance of all materials to site, including mixing, placing in position, lifting, vibrating, finishing, curing, labour charges and other incidental charges, etc., but excluding the cost of centering, shuttering and reinforcements as per standard specification and as directed by the Departmental Engineers.	30					
a	Upto 1.50 m depth below G.L.		107	cum			
b	Above 1.50 m upto 4.50 m depth below G.L.		16	cum			
c	Above 1.50 m upto 4.50 m depth above G.L.		186	cum			
d	Above 4.50 m height above G.L.		2	cum			
6	Supply and erection of steel centering, shuttering for soffits and sides including necessary supports and strutting for all RCC works using MS sheets of suitable size supported by Casurina Props / Steel pipe of required size at 75cm c/c etc., complete and as directed by the Departmental Engineers.	30(S)86.8 6AV,VI(S 3)VII					

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
a	Upto 3.30 m below G.L. & above G.L. - Plane surface		417	sqm			
b	From 3.30 m to 4.30 m above floor slab - Plane surface		279	sqm			
c	Upto 3.30 m below G.L. & above G.L. - Curved surface		256	sqm			
d	Upto 3.30 m to 4.3 m above G.L. - curved surface		52	sqm			
e	Upto 4.30 m to 5.3 m above G.L. - curved surface		52	sqm			
f	Upto 5.30 m to 6.3 m above G.L. - curved surface		52	sqm			
g	Upto 3.30 m - 4.3 m Floor - plane surface		6	sqm			
7	Painting two coats with approved cement paint over the exposed surface (above G.L.) including cleaning, preparing surface and curing etc., complete complying with standard specification and as directed by the Departmental Engineers.	66	362	sqm			
8	Supplying, fabricating and placing in position of MS & HSD grills of all size for reinforcement for various members for all R.C.C. works including cost of steel, binding wire etc. complete complying with standard specification and as directed by the Engineer	86 & 86A V, VI, (S3)(S6), VII	358	Qtl			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
9	R.C.C. ladder should be made of two ribs of size 0.075 x 0.075 at 30mm c/c. The concrete should be of M20, 8mm RTS rod 4 nos. For ribs with 8mm RTS stirrups at 30cm c/c and 8mm RTS 2 nos. For steps with 4 Nos. Rods as distribution including cost all materials etc. complete complying with standard specification and as directed by the Departmental Engineers.	30, 86 & 86A V, VI, (S3)(S6), VII, 30(S) & 108	4	No.			
10	Supply and fixing of RCC Manhole cover of size 0.60mx0.60m as per standard specification and as directed by the Departmental Engineers.	special	4	No.			
11	Supplying and fixing in position of enamel coated water level indicator with ball floating arrangements on side wall of sump including the cost men & materials complying with special specification and as directed by the Departmental Engineers.		2	No.			
12	Reinforced Cement Concrete 1 : 1 1/2 : 3 mix (one Cement one and half sand and three hard broken granite stone of 20mm size hard broken granite stone) for ventilator of dia. 0.45 m with 0.05m thick including the cost of men & materials complying with all specification etc., complete and as directed by the Departmental Engineers.	30	12	No.			
13	Refilling the foundation with excavated earth (other than sand) in layers not exceeding 20cm thick including watering, ramming, consolidating etc. complete complying with standard specification and as directed by the Departmental Engineers.	24 & 25	103	cum			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
14	Providing cut stone 0.45X0.45 X 0.15 m set in CM 1:3 mix below inlet pipe including the cost of men & materials complying with standard specification and as directed by the Departmental Engineers.	35-A	0.061	cum			
II. Sump : Pipe Connection Works							
	Pipe connection work to sump including cost labour, materials etc. (Alagapuram Pudur & Ammapet)						
1	Earth work excavation and depositing on bank with initial lead of 10m and initial lift of 2m in all soils and sub soils including refilling the foundation with excavated earth etc., complete and as directed by the Departmental Engineers.	24 & 25					
a	300mm dia.DI pipe		9	m			
b	250mm dia.DI pipe		9	m			
2	Pipe connection work to sump including cost labour, materials etc. complete complying with standard specification and as directed by the Departmental Engineers	98					
a	D.I. D/F NON - STANDARD PIPE		956	kg			
b	D.I. D/F NON - STANDARD SPLS.		338	kg			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
c	D.I. D/F STANDARD SPLS.		650	kg			
d	D.I. D/F NON - STANDARD PIPE		539	kg			
e	D.I. D/F NON - STANDARD SPLS.		188	kg			
f	D.I. D/F STANDARD SPLS.		344	kg			
3	Conveying of D.I. Pipes and specials to the trenches within 200 m lead lowering into the trenches and laying to the proper grade and alignment for depth upto 2.00 m as directed by the Departmental Engineers.	Special					
a	300 mm dia		15	kg			
b	250 mm dia		15	kg			
4	Jointing the D.I. D/F pipes and specials with rubber insertion to the required specifications with MS bolts and nuts complete and testing the pipes to the required pressure with water conveyed within 1km lead as directed by the Departmental Engineers..	98					

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
a	300 mm dia		13	No.			
b	250 mm dia		13	No.			
5	Jointing the D.I. S/S pipes and specials with neat cement or cement mortar and spun yarn including caulking the joints, curing and testing the pipes to the required pressure with water (including cost of jointing materials) as directed by the Departmental Engineers.	98					
a	300 mm dia		2	No.			
b	250 mm dia		2	No.			
Total of VI –G							

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
Bill No : H Flow Meter/Pressure Reducing Valve							
1	Sump						
a	Design, supply, installation & commissioning of Remote RTU/PLC panel for the TRANSMISSION MAIN /OVER HEAD TANK/SUMP monitoring and control, panel made of CRCA sheet, powder coated type with filters, louvers, redundant exhaust fans, panel space heater, measurement of level, pressure, flow and control of valve actuators with 5.7 inch touch screen, control switch gear, battery charger, 24 hour battery back-up for the entire RTU/PLC panel and filed instrument, valve actuators, controller with required numbers of input, output of analogue and digital modules, surge arrester, signal isolator, Door open/close limit switch, panel electrical switch gear status monitoring logic, panel temperature and humidity sensor, individual valves operation logic, valve actuator drives, valve position feedback and end limit unit, Redundant GSM-GPRS communication interface unit, suitable antenna, connectivity to the solar panel, control transformer of suitable rating, 24VDC control power supply unit, mains MPCB, control MCB's, control & power cable, all control & power terminals terminated to the panel bottom for field wiring as per specifications.	Special	4	No			
b	Installation and commissioning of Remote RTU/PLC panel for the TRANSMISSION MIAN /OVER HEAD WATER TANK/SUMP monitoring and control with suitable accessories	special	4	No			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
c	Supply of Ultrasonic Level sensor with suitable mounting accessories	special	4	No			
d	Installation and commissioning of Ultrasonic Level sensor with suitable mounting accessories	special	4	No			
e	Supply of pressure sensor, signal transmitter as per technical specification.	special	4	No			
f	Installation and commissioning of Pressure Sensor with suitable mounting arrangement, along with commissioning accessories as per the specification.	special	4	No			
g	Supply of mechanical type/vertical turbine woltman type water meter suitable for the water pipe line size with provision to generate signals 4-20mA and process display meter as per technical specifications. The above water meter shall be suitable for remote sensing & SCADA operation.(Telemetry) of following sizes.	special					
	400 mm		1	No			
	300 mm		1	No			
	250 mm		4	No			
	200 mm		3	No			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
F	Installation and commissioning of mechanical type/vertical turbine woltman type water meter suitable mounting arrangements, along with commissioning accessories as per specification.	special					
	400 mm		1	No			
	300 mm		1	No			
	250 mm		4	No			
	200 mm		3	No			
g	Supply of Universal Flange Adaptor set to mount the mechanical type / vertical turbine Woltman-Type water meter in the water pipe line with suitable bolt & nut	special					
	400 mm		1	No			
	300 mm		1	No			
	250 mm		4	No			
	200 mm		3	No			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
H	Supply of Butterfly valve actuator consists of Valve, AC motor, suitable gear box arrangement, valve position feedback unit, end limit switch feedback unit, torque limit feedback unit, suitable for battery operation with as per the technical specification.	special					
	300 mm		1	No			
	250 mm		2	No			
	200 mm		1	No			
i	Installation and commissioning of Valve Actuator along with commissioning accessories as per technical specification	special					
	300 mm		1	No			
	250 mm		2	No			
	200 mm		1	No			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
j	Supply, installation and commissioning of Pressure Reducing Valve (PRV) including suitable all necessary special, fixture and accessories for mount into the water pipe line size with provision to generate signals 4-20mA and process display meter as per technical specifications.	special					
	300 mm		1	No			
	250 mm		2	No			
	200 mm		1	No			
k	Supply of control, power, signal, antenna and communication cable suitable for the filed instruments like, level transducer, pressure transducer, electromagnetic flow meter, valve actuators, GSM-GPRS communication unit etc.,	special	4	No			
l	Laying of field control, power, signal, antenna and communication Cable for the filed instruments like, level transducer, pressure transducer, electromagnetic flow meter, valve actuators, solar panel etc., with suitable lugs, ferrules, tags, glands along with mounting accessories.	special	4	No			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
m	Construction of Chamber for housing the flow meter & PRV using second class brick in cement mortar 1:4 and necessary plastering with cement mortar 1:3 for 12mm both inside and outside, precast concrete covers etc. as per IS Specification and drawing as directed by the departmental Engineers.(Feeder main/Pump House)	23 & 24, 25, 30, 31,31C,V, VI,VII, 61 V, VI (S4)3, 63, 64, 66 & 66A, 86 & 86A V, VI, (S3)(S6), VII, 30(S) & 108	4	Nos			
n	Supply and delivery, fixing and commissioning of the following size DI D/F Butterfly Valves with GGG 400/12 or equivalent grade as per IS 3896 (Part 2) 1985 and subsequent revisions double eccentrically disc with renewable soft seal on the disc and body seat face or stainless steel/Nickel weld overly micro finished with powder or liquid epoxy coating with minimum thickness of 250 Microns applied on both body and disc inside and outside face to face dimensions as per Awwa C 504 or BS 5155 or IS 13095	special					
	1100 mm		3	Nos			
	900 mm		1	Nos			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
	800 mm		1	Nos			
	750 mm		1	Nos			
	700 mm		1	Nos			
	500 mm		3	Nos			
	400 mm		2	Nos			
o	Supply and delivery, fixing and commissioning of the following size Butterfly Valves with top and bottom of SS 410 shaft, water liner/with reduction gear unit including all Taxes, Duties and handling charges (confirming to BS 5155 & IS)	special					
	300 mm		1	Nos			
	250 mm		4	Nos			

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
p	Construction of Chamber of following size for housing the manual gear operated Butterfly valves using second class Brick in Cement mortar 1:4 and necessary plastering with Cement Mortar 1:3, 12 mm thick both inside and outside, precast concrete covers etc., as per IS Specification (Pump House)	23 & 24, 25, 30, 31,31C,V, VI,VII, 61 V, VI (S4)3, 63, 64, 66 & 66A, 86 & 86A V, VI, (S3)(S6), VII, 30(S) & 108					
	2.00 M X 1.80 M X 2.50 M		10	Nos			
	2.00 M X 1.80 M X 2.50 M		5	Nos			
Total of VI -H							

Sl.No	Description of Items	TNBP	Qty.	Unit Rate (Rs)		In words	Amount (Rs)
				Unit	In Figures		
Bill No : I Enviromental Management Plan							
1	Dust Suppression by water sprinkling where the work in progress (Minimum capacity of Tanker is 6000lts per trip) and as directed by the Departmental Engineers.	Special	110	trips			
2	Air Quality monitoring Sample to be taken where the work is under progress and as directed by the Departmental Engineers.	Special	18	No.			
3	Barricading work for laying the pipe line with casurina posts at 1.52 m c/c (8-10 cm dia and 1.52 m height) verticals and tied with coir rope including watching during night fixing danger flags, danger lights/reflectors and painting in different colours as directed by the Departmental Engineers.	Special	67000	RM			
Total of VI - I							

SECTION 8
FORMS OF SECURITIES

Forms of Securities

Acceptable forms of securities are annexed. Bidders should not complete the Performance and Advance Payment Security forms at this time. Only the successful Bidder will be required to provide Performance and Advance Payment Securities in accordance with one of the forms, or in a similar form acceptable to the Employer.

Annex A:	Bid Security (Bank Guarantee)
Annex B:	Performance Bank Guarantee
Annex B1:	Performance Bank Guarantee for Unbalanced Items
Annex C:	Deleted
Annex D:	Bank Guarantee for Advance Payment

BID SECURITY (BANK GUARANTEE)

WHEREAS, _____ [name of Bidder] (hereinafter called "the Bidder") has submitted his Bid dated _____ [date] for the construction of _____ [name of Contract] (hereinafter called "the Bid").

KNOW ALL PEOPLE by these presents that We _____ [name of bank] of _____ [name of country] having our registered office at _____ (hereinafter called "the Bank") are bound unto _____ [name of Employer] (hereinafter called "the Employer") in the sum of _____¹ for which payment well and truly to be made to the said Employer the Bank binds itself, his successors and assigns by these presents.

SEALED with the Common Seal of the said Bank this _____ day of _____ 20_____.

THE CONDITIONS of this obligation are:

- (1) If after Bid opening the Bidder withdraws his bid during the period of Bid validity specified in the Form of Bid;
- or
- (2) If the Bidder having been notified of the acceptance of his bid by the Employer during the period of Bid validity:
 - (a) fails or refuses to execute the Form of Agreement in accordance with the Instructions to Bidders, if required; or
 - (b) fails or refuses to furnish the Performance Security, in accordance with the Instruction to Bidders; or
 - (c) does not accept the correction of the Bid Price pursuant to Clause 27;

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 any of the three conditions, specifying the occurred condition or conditions.

This Guarantee will remain in force up to and including the date _____² days after the deadline for submission of Bids as such deadline is stated in the Instructions to Bidders 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 THE BANK _____

WITNESS _____ SEAL _____

[signature, name, and address]

1 The Bidder should insert the amount of the guarantee in words and figures denominated in Indian Rupees. This figure should be the same as shown in Clause 16.1 of the Instructions to Bidders.

245 days after the end of the validity period of the Bid.

PERFORMANCE BANK GUARANTEE

To: _____ [name of Employer]
_____ [address of Employer]

WHEREAS _____ [name and address of Contractor] (hereinafter called "the Contractor") has undertaken, in pursuance of Contract No. _____ dated _____ to execute _____ [name of Contract and brief description of 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 _____ [amount of guarantee] ¹ _____ [in words], such sum being payable in the types and proportions of currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____ [amount of guarantee] ¹ as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby 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 (i.e.) 28 days from the date of expiry of the Defects Liability Period.

Signature and seal of the guarantor _____
Name of Bank _____
Address _____
Date _____

1 An amount shall be inserted by the Guarantor, representing the percentage of the Contract Price specified in the Contract and denominated in Indian Rupees.

PERFORMANCE BANK GUARANTEE (for unbalanced items)

To: _____ [name of Employer]
_____ [address of Employer]

WHEREAS _____ [name and address of Contractor] (hereinafter called "the Contractor") has undertaken, in pursuance of Contract No. _____ dated _____ to execute _____ [name of Contract and brief description of 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 _____ [amount of guarantee] ¹ _____ [in words], such sum being payable in the types and proportions of currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____ [amount of guarantee]¹ as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby 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 (i.e.) 28 days from the date of issue of the certificate of completion of works.

Signature and seal of the guarantor _____
Name of Bank _____
Address _____
Date _____

1 An amount shall be inserted by the Guarantor, representing additional security for unbalanced Bids, if any and denominated in Indian Rupees.

BANK GUARANTEE FOR ADVANCE PAYMENT

To: _____ [name of Employer]
_____ [address of Employer]
_____ [name of Contract]

Gentlemen:

In accordance with the provisions of the Conditions of Contract, sub clause 51.1 ("Advance Payment") of the above-mentioned Contract, _____ [name and address of Contractor] (hereinafter called "the Contractor") shall deposit with _____ [name of Employer] a bank guarantee to guarantee his proper and faithful performance under the said Clause of the Contract in an amount of _____ [amount of guarantee]¹ _____ [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 _____ [name of 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 _____ [amount of guarantee]¹ _____ [in words].

We further agree that no change or addition to or other modification of the terms of the Contract or of Works to be performed thereunder or of any of the Contract documents which may be made between _____ [name of Employer] 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 remain valid and in full effect from the date of the advance payment under the Contract until _____ [name of Employer] receives full repayment of the same amount from the Contractor.

Yours truly,

Signature and seal: _____
Name of Bank/Financial Institution: _____
Address: _____
Date: _____

1 An amount shall be inserted by the bank representing the amount of the Advance Payment, and denominated in Indian Rupees.