



CITY & INDUSTRIAL DEVELOPMENT CORPORATION OF
MAHARASHTRA LIMITED

Name of Work : Providing Pumping arrangement along with Electrical power supply at holding pond near Dungi.

C.A.No. : 01/CIDCO/EE(Elect-AP)/2020-21

Due On : 12.05.2020 / 17.01 Hrs. to 13.05.2020 / 17.00 Hrs.
on website cidco.maharashtra.etenders.in

Price : Rs. 5900/- (Rupees Five Thousand and Nine Hundred only) (Including 18% GST) (Non-Refundable)

: OFFICE :

SUPERINTENDING ENGINEER (ELECT-PROJECT)

CIDCO OF MAHARASHTRA LIMITED,

6TH FLOOR, CIDCO BHAVAN,

CBD-BELAPUR, NAVI MUMBAI.

Name of Work : Providing Pumping arrangement along with Electrical power supply at holding pond near Dungi.

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Signature of Bidder

Date :

Superintending Engineer (Elect-Proj.)

Date :

NOTICE INVITING BID

Marathi Newspaper "PUNYANAGARI" dated 07-04-2020



बोली मागणी सूचना डुंगीजवळ होल्डिंग पॉण्ड येथे वीजपुरवठ्यासह पम्पिंग व्यवस्था पुरविणे

सिडको महाराष्ट्र लिमिटेड खालील नमूद कामासाठी ज्यांनी तत्सम स्वरूपाचे काम यशस्वीरीत्या पूर्ण केले आहे अशा सिडको लि., महाराष्ट्र राज्य पीडब्ल्यूडी किंवा सीपीडब्ल्यूडी आदींकडे 'ए' वर्गामध्ये नोंदणीकृत परवानाधारक विद्युत कंत्राटदारांकडून ई-टेंडरिंग प्रक्रियेद्वारे "ऑनलाइन" बाबदार शतमान निविदा मागवीत आहेत.

१) कामाचे नाव : डुंगीजवळ होल्डिंग पॉण्ड येथे वीजपुरवठ्यासह पम्पिंग व्यवस्था पुरविणे. २) सी.ए. क्र. : ०१/सिडको/ईई (इलेक्ट एपी)/२०२० २१. ३) इरटे : रु. ८१,३००, ४) नोंदणीचा वर्ग : 'ए', ५) पूर्तता कालावधी : ०२ (दोन) महिने (पावसाळा समाविष्ट), ६) रिक्त बोली दस्तावेज किंमत : रु. ५९००/- (रुपये पाच हजार नऊशे मात्र) (१८% जीएसटी समाविष्ट) (ना-परतावा)

बोली कार्यक्रम :

बोली कार्यक्रम संकेतस्थळ www.cidco.maharashtra.etenders.in वर ०८/०४/२०२० रोजी १७.०१ वा. पासून उपलब्ध होईल.

अधीक्षक अभियंता
(इलेक्ट प्रोज.)

CIN - U99999 MH 1970 SGC-014574

www.cidco.maharashtra.gov.in

सिडको/जनसंपर्क/००२/२०२०-२१

NOTICE INVITING BID

CIDCO of Maharashtra Limited through the process of e-tendering invites “**ON LINE**” item rate percentage tenders from license electrical contractors registered in Class ‘A’ with CIDCO Ltd., Maharashtra State PWD or with CPWD, etc. who have successfully completed work of similar nature for the work mentioned below:

Sr. No.	Description	Details
1.	Name of Work	Providing Pumping arrangement along with Electrical power supply at holding pond near Dungli.
2.	C.A.No.	01/CIDCO/EE(Elect-AP)/2020-21
3.	Estimated Cost	Rs. 80,70,724.82
4.	EMD	Rs. 81,300.00
5.	Registration Class	‘A’
6.	Completion Period	02 (Two) Months (Including Monsoon)
7.	Cost of Blank Bid document	Rs. 5900/- (Rupees Five Thousand Nine Hundred only) (Including 18% GST) (Non-Refundable)

MANDATORY ELIGIBILITY CRITERIA:

- 1) For Technical Pre-qualification “On-Line” submission shall be mandatory accompanied by attested copies of following documents.
 - i) Electrical Registration Certificate in Class-A with CIDCO/ PWD/ CPWD.
 - ii) Valid electrical contractor license
 - iii) Good & Service Tax (GST) Registration Certificate / GST No.
 - iv) Income Tax Permanent Account Number Certificate/Card
 - v) Valid Bank Solvency Certificate of Rs.9.00 Lakhs issued within twelve (12) months before the date of handover the prepared documents
- 2) The bidder should have experience of similar type and nature of works completed during the last 5 years. 50% valuation will be considered in case

of works completion certificate issued by organization other than Govt./ Govt. undertaking agencies.

- 3) Joint Venture/Consortium is not permitted.

NOTES :

- 1) **For** qualification, on-line submission shall be accompanied by attested copies of Registration, valid Bank solvency certificate **of minimum of Rs.9.00 Lakhs**, Good & Service Tax (GST) Registration Certificate / GST No., Income Tax Permanent Account No., list of technical staff, list of plant, machinery and equipments, list of works & it's magnitude, executed in last Five years along with work completion certificates, list of works in hand.
The applicant should also produce original documents for verification if called for. **Failure to attach requisite documents with application will render applicant not eligible for qualification of bid without any intimation.**
- 2) In case of damaged documents / non openable documents / relevant balance documents of already uploaded documents not found after opening of technical bids then the hard copies of that documents shall be accepted subjected to such documents shall be possess by the bidder before the date of e-hand over of prepared documents.
- 3) CIDCO reserves right to reject any or all Bids without assigning any reason and the same shall be at the entire discretion of CIDCO. CIDCO's decision in this respect shall be final and binding.
- 4) Conditional Bids shall be summarily rejected.
- 5) The offer shall remain valid for a period of one hundred twenty (120) days from the later date specified in the e-handover of the prepared document.
- 6) EMD to be paid via online Payment Gateway mode only. The information of E-Payment Gateway available on E-Bidding Website <http://cidco.maharashtra.etenders.in> The Bidder eligible on the basis of CIDCO's registration & having fixed EMD with CIDCO will have to upload EMD exemption Certificate / B.G. in the Technical Envelope. In case the agency who have fixed EMD for an amount less than required EMD, will have to pay the full amount of EMD (No part payment shall be allowed). The Bidders who are eligible for issue of Bid document on the basis of

registration other than CIDCO registration, shall be eligible for availing the facility of EMD Exemption as mentioned above.

- 7) Cost of Blank Bid Document of Rs.5900/- including GST @ 18% (non-refundable) to be paid via online Payment Gateway mode only. The information of E-Payment Gateway available on E-Bidding Website <http://cidco.maharashtra.etenders.in..>
- 8) For further details regarding the above, contact **Executive Engineer (ELECT-AP)**, CIDCO Ltd., 8th floor, Raigad Bhavan, CBD-Belapur, Navi Mumbai –. Tel. No.: 022-67121069.
- 9) For any details regarding e-Bidding system in CIDCO, please contact service provider M/s. Sify Nex Tenders (India) Pvt. Ltd., Mob. No.: 8879333690, 9167969615, Help-Desk Support No. 020 – 25315555, website www.nextenders.com, <https://cidco.maharashtra.etenders.in>
- 10) Bidders are required to pay professional fees / charges via on-line payment gateway mode as per the prevailing rate at the time of bid submission, the present rate is Rs. 1092/- (Inclusive of all taxes) to the service provider M/s. Sify Nex tenders(India) Pvt. Ltd. for uploading the documents and main Bid Document, etc.
- 11) All future communication like extension notices / Corrigendum / addendum with regards to above advertisement shall be published in our website <http://www.cidco.maharashtrgov.in> only and no press notification will be published.



Superintending Engineer (Elect-Proj.)
(CIDCO Ltd.)

BIDDING PROGRAMME

Name of Work : **Providing Pumping arrangement along with Electrical power supply at holding pond near Dungri.**

C.A. No. : 01/CIDCO/EE(Elect-AP)/2020-21

Sr. No.	CIDCO Stage	Vendor Stage	Start Date & Time (dd.mm.yy hh:mm)	Expiry Date & Time (dd.mm.yy hh:mm)
1	Main Bid preparation & Release		27-04-2020	28-04-2020
			10.01 Hrs.	17.00 Hrs.
2		Main Bid Document Purchase & Download	28-04-2020	11-05-2020
			17.01 Hrs.	15.00 Hrs.
3		Complete Technical Bid preparation for handover & Main Bid Schedule "A"	28-04-2020	11-05-2020
			17.01 Hrs.	15.00 Hrs.
4	Close New Entries (Financial & Technical)		11-05-2020	12-05-2020
			15.01 Hrs.	17.00 Hrs.
5		E-handover of the prepared document (e-confirmation of online transfer of document)	12-05-2020	13-05-2020
			17.01 Hrs.	17.00 Hrs.
6	Opening & scrutiny Original Bid Document		13-05-2020	19-05-2020
			17.01 Hrs.	15.00 Hrs.
7	Financial Bid Opening		19-05-2020	20-05-2020
			15.01 Hrs.	17.00 Hrs.

NOTE :

- 1) All Bidders required to submit Undertaking for submission of Bid and Original Bank Guarantee towards EMD (if uploaded) within 3 working days before the date of Financial Bid Opening in the office of **Executive Engineer (ELECT-AP)**, 8th floor, Raigad Bhavan, CBD Belapur, Navi Mumbai during office hours. The failure or omission to submit the original documents as said above shall disqualify the bidder for this bid and also debar the agency for issue of bids till further order.
- 2) Bidder may attend financial bid opening as mentioned above. No separate intimation will be given regarding Bid opening.

**Superintending Engineer (Elect-Proj.)
(CIDCO Ltd.)**

NOTICE OF BID AND INSTRUCTIONS TO BIDDERS

Name of Work : Providing Pumping arrangement along with Electrical power supply at holding pond near Dungi.

1.0 BID DOCUMENTS

The Bidder should attach scanned copies of attested documents in PDF format for "ON-LINE" submission.

2.0 COST OF BLANK BID DOCUMENT

Bidders are required to submit Cost of Blank Bid Document of Rs. 5900/- (Rupees Five Thousand and Nine Hundred only) (Including 18% GST) (Non-Refundable) to be paid via online Payment Gateway mode only. The information of E-Payment Gateway available on E-Tendering Website <http://cidco.maharashtra.etenders.in>

3.0 EARNEST MONEY

The Bidder shall deposit and keep deposited (for the period specified hereafter) with CIDCO a sum as shown in this Notice Inviting Bid as the Earnest money. The Earnest Money shall be deposited in one of the following forms.

- (i) By way of online Payment Gateway Mode.
- (ii) By an irrevocable and unconditional Bank Guarantee executed by a Nationalized / Scheduled Bank located either in Mumbai or Navi Mumbai in the form prescribed and valid for 180 days from the last date prescribed for submission of Bid. Original Bank Guarantee towards EMD (uploaded) should be submitted within 3 working days from the expiry date of Financial Bid Opening during office hours in the office of **Executive Engineer (ELECT-AP)**. The failure or omission to submit the original documents as said above

shall disqualify the bidder for this bid and also debar the agency for issue of bids for further one year.

E.M.D. in the form of irrevocable, unconditional Bank Guarantee will be accepted only if, E.M.D. amount payable is equal or more than Rs. 1.00 lakh i.e. in the cases where estimated cost put to Bid is equal or more than Rs. 100.00 lakhs.

- (iii) **By Fixed EMD** : The agencies who are eligible to quote the Bids based on CIDCO Registration and availing the facility of EMD Exemption by depositing requisite amount with CIDCO Ltd. can avail this facility within deposited amount. **In case the agency who have fixed EMD for an amount less than required EMD, will have to pay the full amount of EMD (No part payment shall be allowed)**

The Bidders who are eligible for issue of Bid document on the basis of registration other than CIDCO registration, shall be eligible for availing the facility of EMD Exemption as mentioned above.

In case of EMD uploaded in the form of B.G. / Exemption Certificate the relevant document shall be uploaded in the Technical Envelope accordingly.

- 3.1 The failure or omission to deposit or keep deposited the Earnest Money shall disqualify the Bidder for that Bid.
- 3.2 No interest shall be payable by CIDCO in respect of such deposited Earnest Money.
- 3.3 The Earnest Money of an unsuccessful Bidder shall be refunded after the final decision on the Bids or on expiry of the validity period whichever is earlier on presenting receipt thereof.
- 3.4 a) Invitation by CIDCO to submit the Bid shall be a proposal and the submission of a Bid by the Bidder shall be an acceptance of such proposal to win the contract. The Bidder shall not revoke his Bid or vary its terms and conditions without the consent of CIDCO during the period of 120 days counted from the last day appointed by CIDCO for submission of Bids on-line. If the Bidder shall revoke the Bid or vary its

terms or condition contrary to his promise to abide by this condition, the Earnest Money Deposited by him shall stand forfeited to CIDCO without prejudice to its other rights and remedies. Without prejudice to the foregoing clause, the Bidder shall be disentitled to submit a Bid to CIDCO for execution of any work for the period as may be decided by CIDCO effective from the date of such revocation or variations of the terms and conditions of the Bid.

- b) The authorized signatory of the lowest Bidder shall duly sign with their company seal on each page of the hard copy of the Bid documents prepared, within 7 (Seven) working days after issue of Letter of Acceptance (LOA).

3.5 If CIDCO shall accept the Bid and signify such acceptance to the Bidder, the Earnest Money so deposited with CIDCO by way of online Payment shall be adjusted appropriately towards Performance Security payable by the contractor in accordance with Condition No.10.1 of the General Conditions of Contract.

3.6 If the Bidder has deposited the Earnest Money by a Bank Guarantee and he has been communicated the acceptance of his Bid by CIDCO and if he fails or omits to furnish the Contract Deposit within 15 days in accordance with condition No.10.1.1 of the General Conditions of contract, CIDCO shall be entitled to encash the Bank Guarantee.

3.7 In case of the successful Bidder, on payment of the required amount of the Contract Deposit, the Earnest Money Deposited in the form of Bank Guarantee/ By way of online Payment shall be refundable to the successful Bidder in the event of CIDCO deciding the award of the contract.

3.8 The E.M.D. of the successful Bidders shall be forfeited if:

3.8.1 The E.M.D. of the successful Bidder shall be forfeited if he withdraws/revokes his offer or modifies/changes the same during the validity of the Bid, or if after the acceptance of his Bid, the contractor fails or neglects to furnish the balance Contract Deposit within 15 days.

3.8.2 The E.M.D. of the successful Bidder shall be entitled for forfeiture if he fails to execute contract agreement within 30 days from the date of issue of Letter of Acceptance.

3.9 The Bidders may also be dis-qualified for Biding for further works in CIDCO as provided in foregoing **Clause No. 3.4 on Sl.Pg. No. 9.**

4.0 INTERPRETATION OF CONDITIONS OF CONTRACT

The Bidder shall be deemed to have studied all plans, specifications, terms & conditions of Bid and visited the site of work and made himself acquainted with the site conditions, availability of labour, basic materials, water, electricity, approach road to the site etc., before on-line submission of Bid, whether the Bidder inspect them or not.

The Bidder shall be deemed to have made independent enquiries about probable taxes leviable by the local civic authority or the Government. The ignorance about probable taxes to be paid either to the local civic authority or to the government shall not be considered as an excuse. The percentage quoted by Bidder shall be deemed to include all the Taxes **(Excluding Goods & Service Tax)**, duties, royalties, etc. payable under the rules to local civic authority, and / or Government / Statutory body.

On-line submission of Bid implies that Bidder has read these conditions and other contract documents of the Bid as well as the conditions of the Bid and as made himself aware of the same as also about the condition and other factors having bearing on the execution of the order.

In case of difference of opinion or dispute regarding the interpretation of Bid conditions, the interpretation of any of the conditions by **Chief Engineer (NMIA)** of CIDCO Limited shall be final and binding on the Bidder.

5.0 MAIN BID DOCUMENT :

Main Bid Document shall be downloaded from the website. Right to issue Bid Document is reserved with CIDCO.

6.0 METHOD OF SUBMISSION OF BID :

The complete Bid submission, “ON-LINE” on the website <http://cidco.maharashtra.etenders.in>, can be made only after payment of Cost of Blank Bid Document, EMD and requisite fees through payment gateway of the service provider by Bidders.

- 6.1 Bid should be submitted through website
<http://cidco.maharashtra.etenders.in> and ON-LINE only.

The scanned copy of the valid E.M.D. documents i.e. Bank Guarantee or Exemption Certificate for Fixed EMD of appropriate amount in PDF format shall be uploaded in the Technical Envelope along with submission of on-line Bid.

EMD documents i.e. Original Bank Guarantee / Attested copy of Exemption Certificate for Fixed EMD, Undertaking for submission of Bid shall be submitted in sealed Envelope as prescribed in the Bidding programme. In no case the Cost of Blank Bid Document should be clubbed with E.M.D. amount.

- 6.2 Late Bid offers : Bid’s grievance/ complaint on account of non submission of Bid due to problem in internet, electricity or any other reason will not be considered.

7.0 METHOD OF OPENING OF BID

- 7.1 On line Technical Preparation received will be opened and scrutinized on the date and time specified in the Bid programme.

- 7.2 Financial Bid of those Bidders who have fulfilled Eligibility Criteria will only be opened on the date and time specified in the Bid programme, the Bids will be opened in the presence of Bidders / their representative through e-tendering procedure at SAP Office, 6th Floor, CIDCO Bhavan, CBD Belapur, Navi Mumbai.

- 7.3 CIDCO reserves the right to reject any or all offers. CIDCO is not bound to give any reason for not considering such offers.

8.0 VALIDITY OF BID

Validity of Bid shall be 120 days from the specified date of receipt of Bid by CIDCO & thereafter until it is withdrawn by notice in writing duly addressed to the authority opening the Bid. Such withdrawal by CIDCO will be effective from the date of receipt of notice by the Bid opening authority.

9.0 IMPORTANT POINTS TO BE NOTED BY THE BIDDER

- a) The ON-LINE submission of Bid document should be done on website by the eligible contractors as per Bid programme. The Bidder has to quote only the percentage in figures. The percentage in words as also the total quoted amount in figures is worked out automatically on the web page.
- b) The price-bid (percentage) shall be inclusive of all taxes (**Excluding GST**), levies, duties etc. to be paid by the Bidder for the work and claim for extra payment on any such account shall not be entertained.
- c) Bidder shall deemed to have studied all plans, specifications, terms and made himself/themselves acquainted with the site and availability of materials, Power supply, water supply etc. before submitting the Bid.
- d) At any time prior to the deadline for sale of Bid, the Employer may amend the Bid documents by issuing Corrigendum.
- e) Any corrigendum as well as clarification thus issued shall be a part of the Bid documents and it will be assumed that the information contained in the amendment have been taken into account by the Bidder while submitting the Bid.
- f) To give prospective Bidders reasonable time in which to take the amendment into account in preparing their Bids, the Employer shall extend, at its discretion, the deadline for submission of Bids, in which

case, the Employers will notify all Bidders by placing it on website of the extended deadline and the same will be binding on them.

- g) The Employer is not bound to accept the lowest or any Bid. The Employer reserves the right to reject any or all Bids received without assigning any reasons whatsoever.
- h) This detailed Notice Inviting Bid shall form part of Bid documents.
- i) Income Tax as applicable on gross bill at percentage that will be in force from time to time will be recovered from the contractor's bills, for all payment including advances.
- j) The successful Bidder is required to execute an agreement on stamp paper of appropriate value in duplicate in the proforma attached with the Bid documents. The agreement shall be signed within a period of 30 days from date of acceptance of the Bid.

10.0 ACCEPTANCE OF BID

Acceptance of Bid on behalf of the Employer shall be done by an officer to whom the powers are delegated by the employer.

11.0 EXECUTION OF CONTRACT AGREEMENT :

The successful Bidder is required to execute a contract agreement in duplicate in the form attached with the Bid documents on stamp paper of appropriate value as per Maharashtra Stamp Act, 1958 (as amended from time to time. The contract agreement should be executed within 30 days from the date of receipt of Acceptance Letter.

- 12.0 The successful Bidder will be required to produce a valid contract labour license issued in his favour under the provision of the contract labour (Regulation and Abolition) Act, 1970, before starting the work. On failure to do so, the acceptance of the Bid is liable to be withdrawn and also the earnest money is liable to be forfeited.

- 13.0 The Contractor shall pay the **Goods & Service Tax** directly to the Government. CIDCO shall not take any responsibility for any kind of tax payment to the Government at any point of time.
- 14.0 Under Inter-state Migrant Workmen Act and/or Contract Labour Act, the Contractor should obtain requisite license / registration Certificate under the Act while engaging the migrant labour from other State.
- 15.0 The contractors quoting for the work in NMMC area must have the valid NMMC Registration Certificate under Cess Act.
- 16.0 Wherever the Bid is silent about the specifications, the work shall be executed as per the Standard Specifications from PWD, Indian Standard Specifications (Latest Version) for relevant items and specifications of the Ministry of Road Transport & Highways and all specifications of materials and workmanship.
- 17.0 **SPLITTING OF WORK**
- CIDCO reserves the right to suitably increase/reduce the scope of work put to this Bid. The right to split up the work in two or more parts is reserved by the Employer and also the right to award the work to more than one agency is reserved. The contractor shall have no claims whatsoever on this account.
- 18.0 The Bidder shall furnish truly & faithfully the foregoing information by an Affidavit on a Non-Judicial stamp paper of appropriate value. If any information so furnished shall be found to be untrue or false, the Bid shall be liable to be dis-qualified and the Earnest Money/ Performance Security as the case may be accompanying such Bid shall stand forfeited to CIDCO. If the information so furnished shall be found to untrue or false during the currency of the contract, the Bidder shall be held to be in default and the contract if any awarded to him shall be liable to be terminated with its consequences.

- 19.0 The Bidders intending to bid for the work are requested to independently verify the applicable tax structure prevailing at the time of Bidding in view of new GST regime implemented by Govt. of India from 1st July, 2017, subsequent amendments from time to time and quote their offer taking into consideration of applicable taxes Excluding GST. Any claim in this account will not be entertained in future.
- 20.0 Notice of Bid and these instructions shall form part of the contract.

Signature of Bidder
Date :



Superintending Engineer (Elect-Proj.)
Date :

UNDERTAKING BY THE BIDDER WHILE

SUBMISSION OF BID

(on Stamp Paper Rs.100/-)

From : _____

To,

Executive Engineer (ELECT-AP)
CIDCO of Maharashtra Limited,
8th Floor, Raigad Bhavan,
CBD Belapur, Navi Mumbai.

Name of Work : Providing Pumping arrangement along with Electrical power supply at holding pond near Dungi.

C.A. No. : 01/CIDCO/EE(Elect-AP)/2020-21
Sir,

- 1) I/We _____ hereby Bid for
"Providing Pumping arrangement along with Electrical power supply at holding pond near Dungi" at a total cost which is quoted in the financial bid on-line at the rate contained in the aforesaid Schedule of rates and quantities (Schedule - A) including adding to item rate or deducting the item rate therefrom in case of item rate Bid.
- 2) I/We agree to execute this work at the above stated offer in accordance with design, drawings, specifications, instructions/directions, special conditions of contract & general conditions of contract supplied by CIDCO which I/We have read carefully and agree to abide by such conditions.
- 3) I/We agree to keep this Bid offer open and available to you for acceptance for a period of 120 (One Hundred Twenty) days from the last date appointed by CIDCO for submission of Bid and further agree not to revoke the Bid or vary its terms and conditions. I/We agree to the

Employer that if I/we revoke the Bid or vary its conditions at any time during such period, the earnest money deposited by us in cash or by way of bank guarantee shall stand forfeited to you without prejudice to Employers other rights and remedies.

- 4) I/We have satisfied myself/ourselves as to the location of the site and working conditions, examined the requirements of CIDCO, and have obtained all the information necessary for the successful timely completion of the work.
- 5) I/We bind myself/ourselves to deposit the Contract Deposit by way of cash or as per CIDCO rules, as prescribed in Clause 10.1.1 of General Conditions of Contract and/or special conditions of contract within 15 days after receiving your notice that the contract has been awarded to me/us, failing which I/We shall have no objection to the forfeiture of the earnest money in full, or also the said earnest money shall be retained by the Employer towards the Performance Security as specified in the conditions. I/We further bind myself/ourselves to execute the contract document and to commence work within stipulated period as mentioned in General Conditions of Contract, failing which I/We agree to the Employer forfeiting the earnest money and Performance Security. The said Employer shall also be at liberty to cancel the notice of acceptance of Bid if I/We fail to deposit the Performance Security as specified or to execute an agreement or to start work as stipulated in the Bid documents.
- 6) I/We hereby pay the Earnest Money of Rs. _____ in the form of online Payment Gateway mode / Fixed EMD Exemption Certificate / Bank Guarantee No. _____ issued by _____ for the said amount is attached.
- 7) I/We understand that you are not bound to accept the lowest Bid or bound to assign any reason for rejecting our Bid.

- 8) I/We agree that the CIDCO shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money as per Clause No.3.8 of Notice of Bid & Instructions to Bidders.

Yours faithfully,

(Signature of Bidder with seal of the firm)*

Signature of Witness

Date :

Name : _____

Address : _____

Occupation: _____

- * Power of attorney must be enclosed in case the bid is signed by the authorized nominees.

SPECIAL CONDITIONS OF CONTRACT

1.0 GENERAL

The special conditions of contract are to be read in conjunction with General conditions of contract. If there are any variations or discrepancies on conflicting provision, the provisions in Special Conditions shall take precedence over the provisions in the General Conditions of Contract.

2.0 SCOPE OF WORK

The bid is for the work of **“Providing Pumping arrangement along with Electrical power supply at holding pond near Dungi”** The work to be carried out under the contract shall except as otherwise provided in this conditions include all labour, material, tools, plants, equipment & transport which may be required in preparation and completion of the works.

The description given in the schedule of works/items/quantities, and the Bills of Quantities shall, unless otherwise stated, be held to include waste on materials, carriage & cartage carrying in, return of empties, hoisting, setting, fitting & fixing in position and all other labour necessary in & for the full and entire execution & completion as aforesaid in accordance with good practice & recognized principles.

2.1 The scope of work is as described in detail in schedule “A”. Items of work to be executed are described in detail to enable the Bidder to work out rate of each element.

2.2 The exact methodology and quality/quantity audit of various items under Schedule “A” and parts shall be incorporated in the Q.A.M. and such shall be based on/referred as per the approved Q.A.M. of

CIDCO Limited Engineering Department (2006) and further approved by Engineer.

- 2.3 The various items under Schedule "A" will be comprehensively undertaken as directed by Engineer and laid out programme in the Quality Assurance Manual (QAM).

3.0 TESTING OF MATERIALS IN CIDCO LABORATORY:

CIDCO has a well equipped testing laboratory for carrying out tests on soil, cement, sand, aggregate, brick and concrete etc. as prescribed in I.S. The Engineer may direct the Contractors to get the samples of materials tested etc. in CIDCO laboratory. The results of the tests are normally binding on the Contractor and CIDCO. The Engineer is also empowered to take action to reject or approve materials based on the test results.

The Contractor shall pay the stipulated charges for carrying out the tests as per CIDCO rules. In case the Contractor disputes the results of tests, it is open for him to ask for re-testing in which case the cost shall be borne by the Contractor. The decision of the Chief Engineer on acceptability or otherwise of CIDCO test results, re-testing by CIDCO or testing again independently in V.J.T.I or I.I.T or Govt . Engineering college A'bad will be binding on both the parties to the contract.

4.0 ADJUSTMENT OF ERRORS IN SCHEDULE OF RATES & QUANTITIES

The several documents forming the contract are to be taken as mutually explanatory of one another, detailed drawings being followed in preference to small scale drawings and figured dimensions in preference to scaled dimensions.

The Contractors shall be deemed to have calculated his own unit rates from the descriptions of items in Schedule 'A' and based on the drawings, specifications and other information furnished to him and arrived at prices for each item of work as given in Schedule "A", The

price shall be worked out by him independently of the prices or rates mentioned by CIDCO in the bid and irrespective of any errors or inaccuracies therein. The item rate to be mentioned by the Contractor above or below the cost mentioned by CIDCO, shall be derived by him from the amount bid by him as compared to the amount mentioned by CIDCO.

The bided amount shall be deemed to include for the full and entire completion of the work and the contractor shall have no claims on account of any errors in the unit rates/prices mentioned by CIDCO

Any errors in description, quantity or rate in Schedule 'A' or any omissions there from, shall not vitiate the contract or release the Contractor from the execution of the whole or any part of the works comprised therein according to drawing and specifications or from any of his obligations under the contract. Any error in quantity, rate or amount in Schedule 'A' and General Summary shall be adjusted in accordance with the following rules contained hereinafter :

- a) In the event of an error occurring in the amount column of Schedule 'A' as a result of wrong extension of unit rate and quantity, the unit rate inserted by CIDCO shall be regarded as firm and the extension shall be amended on the basis of the rate.
- b) All errors in totaling in the amount column and in carrying forward totals shall be corrected.
- c) Any omission to include in the totals or to carry forward the provisional sums shall be corrected.
- d) The bided sum so altered shall for the purpose of the bid be substituted for sum originally bided and considered for acceptance instead of the original sum quoted by the Contractor. Any rounding off of total in various sections of Schedule 'A' or in General Summary by the Bidder shall be ignored.

- e) In the event of discrepancy occurring between the rates quoted below the item description and the rates taken for working out amount as per quantity given in Schedule 'A'. The lowest of the two rates shall be considered and the amount shall be corrected accordingly.

5.0 BREAK-DOWN/SHUT DOWN:

In case of (Break down/shut down) it will be the responsibility of the agency to inform all the concern consumers and MSEDCL as well as to restore power supply on war footing basis. The vehicles kept at site by agency shall be provided for this purpose along with operation and maintenance staff in case of requirements as per direction of Engineer in charge or his representative without any claims.

6.0 SAFETY OF THE CONTRACTOR'S STAFF & LOSS TO CONTRACTOR BY TERRORIST:

The work under this contract are in the proximity of Mumbai, where the activities of terrorist is increasing day-by-day. The safety of his staff is sole responsibility of contractor and any loss due to above, if occur to contractor, that will not be entertained by CIDCO as Security Guards are deployed by Contractor's & it is his responsibility for protection of CIDCO assets and for uninterrupted protected Electrical supply.

7.0 SPECIAL ATTENTION:

- i) If there happens any local problems in this area, it is the responsibility of the contractor to solve these problems and if required the help of police shall be taken by contractor with due information to department for further action, if required.
- ii) **The duration of the contract is 02 months.** If extension is granted then the contractor has to continue the contract during extended period with the same terms and conditions without any extra claims.

- iii) There may be other agencies working for CIDCO in the same area, necessary co-operation should be given by contractor without any reservation especially during the period of shut-down etc. as per directives of Engineer.
- iv) The nature of work, involved in the scope of tender specifications, is being for essential services contractor has to attend all the works stipulated in the tender immediately after happening of the event. If the fails to attend any work/ repairs/ rectification within 24 (Twenty Four) hours of its, same will be carried out at his risk and cost and the expenses incurred will be recovered from the contractor as per actual expenditure.

8.0 It is also mandatory on the part of contractor to keep the earlier labours engaged for this work by earlier contractor, even after award of this work in the present contract.

9.0 DOCUMENTATION

The contractors are required to submit three copies of as built drawings with layout of electrical installation and detailed single line diagram, load statement in Auto Cad formats with all relevant details on reproducible tracing (one copy of tracing and three copies of blue prints and all data on CD) along with the final statement in neat folders.

10.0 QUALITY ASSURANCE SYSTEM :

The contractor will prepare detailed working programme with the help of professional consultant who should be associated with the work. He shall also ensure the quality of the work.

10.1 Quality Assurance Manual :- A Quality Assurance manual constituting a base document outlining policy, procedures, compliance, acceptance criteria and documentation etc. shall be prepared by the successful Bidder and should submit for approval within 15 days from

the date of receipt of Acceptance Letter. The document shall generally cover aspects listed below, but is not limited to the same.

- i) Identification of all parties involved in Q.A. and their inter-relationship.
- ii) Internal Q.A. system of each party.
- iii) Organization of personnel, responsibilities and lines of reporting for Q.A. purpose.
- iv) Criteria for acceptance / rejection, including identification of proper authorities for such decisions.
- v) Inspection at the end and during defect liability period/ maintenance period.

11.0 SAP

CIDCO Ltd. has implemented Enterprise Resource Planning (ERP) software SAP in the organization for its various processes. The contractor will furnish all the project related data, if & when required by the Engineer, in the manner & format which is compatible to Enterprise Resource Planning software SAP R/3.

Apart from the above, the contractor will make a detailed work program on MS project in soft & hard copy and submit the same to Engineer for approval before commencement of work. All monitoring will be done on SAP R/3 as well as MS project, if applicable.

12.0 DEDUCTION OF CESS TOWARDS WELFARE OF BUILDING & CONSTRUCTION WORKERS

As per the construction workers welfare Cess Act 1996, a cess of 1% of contract value towards the welfare of construction workers will be deducted from the monthly payments.

13.0 REGISTRATION WITH E.S.I.C.

The contractor to get registered with E.S.I.C. under Contract Labour Act, within 15 days from the date of work order. In absence of getting

registration from E.S.I.C. and not payment of ESIC contribution (share of Contractor & Contract Labour) and other statutory compliances and till furnishing the compliance, the bill shall not be processed for payments.

14.0 TRANSPORTATION :

The agency shall provide a good vehicle for site visit as & when required by the department at a cost of the contractors.

15.0 LOCATION

The right to change the location and site of work is reserved with Employer. In this legend, tenderer is not entitled to claim for such change of Site/Location.

16.0 INDEMNITY BOND

The contractor shall require to execute an Indemnity Bond for satisfactory performance of the entire project on Stamp paper of Rs.300/- in the format available in the Bid Document. This Indemnity Bond shall remain in force for a period of 5 (Five) Years after certified date of completion of the project.

17.0 WASHOUT AND SINKAGE :

No extra and / or compensation is payable separately due to tidal effort, washout, submergence and sinkage. The Contractor's quoted percentage should be inclusive of all such factors.

18.0 PROVISION OF E.P.F. ACT, 1952

The Contractor shall be liable to pay the due date his contribution, employee's contribution and other administrative charges as per provisions of the above act as amended for time to time, in respect of all staff and labour employed by him for the execution of the contract.

19.0 GOODS & SERVICE TAX (GST) REGISTRATION

CIDCO is registered with Goods & Service Tax (GST) authorities and has Provisional GST No.27AACCC3303K1ZX under the GST Act. 2017.

19.1 All the contractors who are going to quote shall furnish their Goods & Service Tax (GST) Registration Number.

20.0 PROVISIONS OF CONTRACT LABOUR (REGULATIONS AND ABOLITION) ACT, 1970.

- a) The contractor shall comply with the provisions of the Contract Labour (Regulations and Abolitions) Act, 1970 and the Contract Labour (Regulations and Abolitions) Rules, 1971 as modified from time to time, whichever applicable and shall indemnify the CIDCO from and against any claims under the aforesaid Act and the Rules.
- b) The contractor shall obtain a valid license under the aforesaid Act as modified from time to time before the commencement of the work and continue to have a valid license until the completion of the works. Any failure to fulfill this requirement shall attract the penal provisions of the contract arising out of the resultant non-execution of the work.
- c) The contractor shall apply to labour employed by him directly or through sub-contractors the wages as per provisions of the aforesaid Act and the Rules wherever applicable. The Contractor shall, notwithstanding the provisions of the contract of the contrary, cause to be paid the wages to labour indirectly engaged on the work including any engaged by his sub-contractors in connection with the said work, as if the labour had been immediately employed by him.
- d) In respect of all labour directly or indirectly employed in the work for performance of the Contractor's part of the contract, the Contractor shall comply with or cause to be complied with provisions of the aforesaid Act and the rules wherever applicable.
- e) Any violation of prevailing labour laws will make Contractor liable for penal action as per the recommendation of labour Department.

21.0 PROVISION OF MINES ACT

The Contractor shall observe all the provision of the Mines Act, 1952 or any statutory modifications on re-enactment thereof for the time being

in force and any rules and regulations made there under in respect of all the persons directly or through petty contractors or sub-contractors employed by him under this contract and shall indemnify the CIDCO from and against any claim under the Mines Act, or the rules regulations framed thereunder, by or on behalf of any persons employed by him or otherwise.

22.0 EXISTING SERVICE LINE–PRECAUTIONS TO BE TAKEN

The contractor shall take due precautions not to damage any such service line, such as water supply, electric, telephone etc. during execution of the work. In case damage occurs due to negligence on part of the contractor, the same shall be restored to its original conditions by the contractor at his cost. If the contractor fails to do so, CIDCO will carryout the work at his risk and cost.

23.0 VARIATION LIMIT

For purpose of this contract, the variations or deviations in carrying out the work shall not exceed 15 percent of the contract sum. The Contract deviation/variation in quantity of individual items shall not be taken as deviation or variation. The difference between total value of work done and contract sum as defined above will be considered for deviation/variation. The contract rate or rates derived in accordance with provisions in contract shall apply for all new items, extra items and excess quantities of existing items so long as the cumulative cost variations are within stipulated percentage of contract sum.

24.0 WORKS TO THE SATISFACTION OF THE ENGINEER:

24.1 On completion of works, the Contractor shall submit a maintenance manual. The Contractor shall execute and maintain works in strict accordance with the contract to the satisfaction of the Engineer and

- shall comply with and adhere strictly to the Engineers. Instructions and directions on any matter whether mentioned explicitly or otherwise.
- 24.2 The Bidders shall note that all the clarification shall be obtained in pre-tender meeting and tender should be submitted without any conditions, whatsoever, clarifications given to the various Contractors in pretender would be summarized by CIDCO and would be issued to every contractor as Minutes of the Pretender Meeting. Such summary would form part of contract Agreement and contractor would submit final offer taking into consideration the same. Tender submitted with conditions would be summarily rejected.
- 24.3 The material for all items of works to be procured by the Contractor and shall be incorporated in the work only after testing and approval by the Engineer CIDCO shall not supply any material required for the work.
- 24.4 The escalation clause is applicable to this contract. The revised price variation clause as per clause No. 70.1 in General Condition of the Contract.
- 24.5 Carrying out the said work as per the standards and norms of ISO 9002, 1994 and will also be the responsibility of the agency to maintain the complete records and drawing etc. as per the requirements of ISO 9002 without any extra cost and within stipulated time period.
- 24.6 It is mandatory for successful bidder to provide site office and store near the work as per Clause No.8.4 of GCC alongwith telephone facility and office attendant.
- 24.7 It is also mandatory for the successful bidder to appoint qualified site engineer exclusively for this work and day to day supervision and co-ordination with department. The engineer appointed shall be available at work during all days of contractual period.
- 25.0 Chief Engineer & General Manager (Tech.) is re-designated a **Chief Engineer (NMIA)**. Therefore, in General Conditions of Contract,

wherever Chief Engineer & General Manager (Tech.) is mentioned please read as **Chief Engineer (NMIA)**.

26.0 USE OF WORK SITE AREA:

The bidders, in the bid documents, shall be provided with the size(s) and location(s) of area(s), free of cost, earmarked for various requirements arising during the course of execution of the scope of work put to the bid document. This shall be indicated in the plan showing the site area location. These area(s) shall be termed as Work site Area(s) and may be at one place and in one piece or at multiple locations in pieces of varying sizes and shapes. The bidders shall be permitted to enter for inspection purposes only. While preparing and working out their offers bidders shall take note of conditions and requirements for use of the work site area(s) as provided in this clause.

- a) The successful bidder (Contractor) shall take possession of the work site area(s) with prior written permission of the Engineer only.
- b) The Contractor shall submit a detailed plan and design, utilizing the area(s) in the most optimal manner, for the use of such area(s) and obtain written approval from the Engineer prior to erecting any and all temporary structures on them or making any arrangements that may cause to change their status. Additional requirement of area, if any, shall be communicated by the Contractor to the Corporation along with his planning and, if the need is found to be genuine, necessary and possible to be fulfilled, the Engineer will endeavor to fulfill it in 10 working days or any reasonable time period as communicated by the Engineer.
- c) Costs related to erecting any and all temporary structures, obtaining temporary water supply and electricity connections and any other facilitation that may be required for readying the area(s) for the purposes of execution of the entire scope of Works etc. shall be

borne entirely by the Contractor and such costs shall be deemed to be included in the offer. The work site area(s) are allocated on “**as is where is**” basis and the Contractor shall be deemed to have carried out traffic studies, route lengths etc. and the offer shall be deemed to include all transportation costs. No claims on account of these costs or any and all requests for extensions of time period on this account shall be considered by the Corporation under any circumstances.

- d) During execution of the Works the Contractor will be allowed to use such work site area(s) for the purpose of erecting temporary sheds, offices thereon for themselves, site office for the Engineer and his subordinates, labuor hutments, reinforcement yard, RMC yard, pre-casting yard etc. in accordance with the explicit requirements of the execution, scope and methodology.
- e) The Contractor shall not use, or allow to be used, any and all such open grounds, sheds, offices or yards or any other portion of the Works site area(s), for any purpose other than the carrying out of the execution of the scope as per the Works under the Contract.

The Contractor shall remove any and/or all such temporary structures from the area(s) at the completion of the Works, and no notice of such removal from the Engineer shall be necessary except the “Work Completion Certificate” issued by the Engineer, or earlier whenever required to do so by the Engineer after receiving 7 days’ notice. He shall make good any damage which may have been done and restore to good condition anything which may have been disturbed during the period of his occupation. The “Work Site Clearance Certificate” from the Engineer, that the Contractor has removed any and/or all such temporary structures from all the area(s), shall be a mandatory document for release of the Final Bill of the Contractor and availability of such

document shall be an express requirement for forwarding the final bill documents for purpose of payment.

In case the Contractor does not comply or delays the compliance unreasonably, the removal of any and all temporary structures, materials etc. and making good any and all damages which may have been done and restore to good condition anything which may have been disturbed during the period of his occupation of the Work Site Areas by the Contractor shall be carried out by the Corporation at the entire risks and costs of the Contractor, along with the administrative costs of 24.5% (Twenty four point five Percent), and the Contractor shall not have any claims, whatsoever, in this respect of the costs that are payable by him, then or at any later stage. Further the Contractor shall be debarred from participating in any and all bid processes of the Corporation for the next 36 months, starting from the month succeeding the month of such disbarment.

27.0 DELAY IN COMPLETION OF WORKS, OR SECTIONS THEREOF, AND LEVY OF LIQUIDATED DAMAGES (LD)

“Time is the essence of the Contract”. The successful bidder shall take the utmost serious note of this fact and, based on the time period specified in the NIB, prepare a detailed schedule of execution of all activities to complete the entire scope of work within the prescribed time limit. For major works (Accepted Price of INR 10 Crores and above) the schedule shall mandatorily be milestones based with start & end dates and values for each milestone. If the entire scope of work is divided into one or more parts, then separate schedules for execution for each such identified part shall be prepared and based on the Accepted Price (as per limit mentioned above for major works), quantum and complexity of the part of work the schedule shall be essentially milestones based with start & end dates and values for each milestone. The schedule(s) shall include program for deployment of resources (technical & other manpower,

equipment & machinery and requirement of funds, drawings, designs and decisions from the Corporation) and shall be based on standard industry & project management practices. A lop-sided or unbalanced schedule shall be summarily rejected, and the Engineer shall be the sole and entire judge as to the lop-sidedness or unbalance of the schedule. The Contractor shall obtain written approval from the Engineer for such schedule(s), original or revised, within one month from commencement date of the contract as per requirements set forth herein and by the Engineer.

In case the Contractor is not taking part or exhibiting a lack of interest in preparation, submission or seeking approval of the first schedule or does not cooperate and coordinate fully in the subsequent evaluation exercise, the exercise shall be completed by the Engineer, and his team, based on his own experience, perception and beliefs and the Contractor shall not be entitled to raise any claims, whatsoever, in this respect then or at any later stage on this account. Further a fine for such show of no or inadequate interest on the part of the Contractor, the Engineer being the sole and entire judge for such lack of interest, of INR 2.0 Lakhs (Indian Rupees Two Lakhs only) per stage of evaluation, provided that, the total fine shall be limited to INR 10 Lakhs (Rupees Ten Lakhs only).

This approved first schedule shall be the primary schedule (Base line program) for the purposes of close monitoring and evaluation of the performance of the Contractor. For the purpose of this clause, each part of work, wherever so identified, shall be treated and dealt with as an independent work and the provisions of this clause, whether for interim or final evaluations, shall be applied on this basis only.

Interim Evaluation(s): For all major works there shall be mandatory evaluations (based on financial values) at each milestone of the overall schedule and action taken as per steps below. In case of milestones not appearing at any or all of the 25%, 50% and 75% of the total time period (time period as per NIB and extensions granted for delays not attributable

to the Contractor), mandatory evaluations, in addition to evaluation at each and all milestones, shall be carried out at any or all of the 25%, 50% and 75% of the total time period. For other works there would be mandatory interim evaluations at the time 25%, 50% and 75% of the total time period of the Works is completed. The exercise of evaluation of actual progress versus planned progress, based on the first approved schedule, shall be conducted and the Contractor shall be required to cooperate and coordinate fully with the Engineer, and his representatives, in such evaluation.

- a) The total delay, if any, shall be analysed and bifurcated into delays into two parts i.e. delays for which the Contractor is not responsible (Delay due to factors beyond the reasonable control of the contractor) and the rest of the delay shall be considered as delays for which the Contractor is solely and unambiguously responsible.
- b) For the amount of delays, for which the Contractor is not responsible, an extension of time period shall be granted, subject to the Contractor not seeking any claim whatsoever on this account and completing all contractual requirements. During the time period, stipulated in the NIB or including extension granted for delays for which the Contractor is not responsible, no other interim extensions of time shall be requested for by the Contractor, such requests being mandatorily liable to summary rejection, or shall not be considered or granted by the Corporation.
- c) In case of no delay the first approved schedule shall remain unchanged and works shall proceed without any changes.
- d) In case of delay, owing entirely to lack of diligence on part of and fully attributable to the Contractor, the Engineer shall set aside an amount equal to 0.10% of the amount of delay per week, or part thereof, as an interim deposit for the period between the two evaluations; provided that if by the later milestones the Contractor covers up the delay while not creating any new delay for such later stage then the interim deposit(s) set aside by the Engineer shall be

released to the Contractor, free of interest. Provided further that if by the final evaluation such delay is not covered by the Contractor then the total Interim deposit shall be adjusted against the LD to be levied upon the Contractor.

- e) If, at the 75% stage, a backlog of 20% or more is found, owing entirely to lack of diligence on part of and fully attributable to the Contractor, the Corporation may, at its sole and entire discretion, split the total scope of Work and appoint additional agency to expedite the completion of the Works. The scope allocated to the additional agency shall be carried out at the entire risks and costs of the defaulting Contractor, along with the administrative costs of 24.5% (Twenty Four point five Percent), and the Contractor shall not have any claims, whatsoever, in the respect of quantum of curtailment or the costs that are payable by him as a result of such curtailment, then or at any later stage.
- f) The contractor shall revise the schedule as per the guidelines and requirements above, and deploy resources in all earnest to complete the work, as per the original scope or curtailed scope as the case may be, within the time period, as stipulated in the NIB or including extension granted for delays for which the Contractor is not responsible, as the case may be.

Final Evaluation: At the end of the stipulated time period, for the entire works or specially identified part(s), as the case may be including any and all extensions granted for delays for which the Contractor is not responsible, a mandatory exercise of evaluation of actual progress versus planned progress, based on the first approved schedule, or the revised approved schedule as the case may be, shall be conducted and the Contractor shall be required to cooperate and coordinate fully with the Engineer, and his representatives, in such evaluation.

- a) If the Contractor is found to be lagging and has not completed the Works in their entirety then the Contractor shall be liable to pay of LD.

- b) The amount on which LD shall be levied shall be worked out by bifurcating the Contract Sum into two parts as under:
- i. If the original work scope was divided into parts, each with its date of commencement and completion stipulated, then the Engineer shall determine which of these parts can be taken over from the Contractor **and put to its intended use**. The contract amount of these parts shall be taken as that which has been paid in the bills including payments for items in the BOQ, the extra items and price variation adjustments. (Amount A).
 - ii. If no parts as in (i) above exist then Engineer shall determine which part(s) of the entire scope of work can be taken over from the Contractor **and put to its intended use**. The contract amount of these parts shall be taken as that which has been paid in the bills including payments for items in the BOQ, the extra items and price variation adjustments. (Amount A).
 - iii. Provided that if any specified parts or part of any Works (where no parts have been identified) have been duly completed, tested and commissioned by the Contractor in accordance with the requirements of these contract documents and are not being put to their intended use for any reason(s) whatsoever which are unambiguously not attributable to the Contractor, the amount of such parts or part of Works shall be included in the Amount A above.
 - iv. The balance amount to be arrived at by reducing the sum in (i). above from the total Contract Sum (including price variation adjustments). (Amount B).
- c) The rate of LD (per month) shall be the SBI PLR for medium term as given on its official website (taken at a per month rate in percentage) prevalent at the end of the stipulated time period, including any extensions thereto for delays not attributable to the Contractor.
- d) On the amount A, no LD shall be levied.

- e) On the amount B, LD shall be levied at the rate arrived at in c) above for the entire extended period.
- f) The maximum period of delay, for which the Contractor is solely and unambiguously responsible, shall normally be 25% of the time period stipulated in the NIB. In this case the upper limit for levy of LD shall be 7.5% of the Contract Sum.
- g) If the scope of works is not completed by the Contractor by the end of the stipulated time period, including any extensions thereto for delays for which the Contractor is not responsible, and the extension granted with levy of LD, i.e. 25% of the time period stipulated in the NIB, and if the Corporation wishes to and if the Contractor agrees to, with unconditional acceptance and without any claims whatsoever, the period for completion of the works may be extended till such time the entire scope of works is completed by the Contractor. Provided that such further extension shall be granted only with levy of LD and the upper limit to the levy of LD (7.5% of the Contract Sum) shall cease to exist. Provided that, if the Corporation does not wish to grant any extensions thereto, the Contract shall be summarily closed and the balance work got completed by another agency or contractor, as expediently possible, at the entire risks and costs to the defaulting Contractor along with the administrative costs of 24.5% (**Twenty four point five Percent**) and the Contractor shall not have any claims, whatsoever, in this respect at that stage or later. Further the Contractor shall be debarred from participating in any and all bid processes of the Corporation for the next 36 months, starting from the month succeeding the month of such disbarment.
- h) If the Works' scope is not completed by the Contractor at the end of the stipulated time period, including extensions granted for the delays not attributable to the Contractor as well as the 25% additional extension permissible for delays attributable to the Contractor and for which LD is levied and the Corporation does not

wish to grant any further extensions thereto, the Contract shall be summarily closed and the balance work got completed by another agency or contractor as expediently possible at the entire risks and costs to the defaulting Contractor along with the administrative costs of **24.5% (Twenty four point five Percent)** and the Contractor shall not have any claims, whatsoever, in this respect at that stage or later. Further the Contractor shall be debarred from participating in any and all bid processes of the Corporation for the next 36 months, starting from the month succeeding the month of such disbarment.

- i) At the stage of final evaluation, when it is established that the Contractor is liable to pay of LD, the Engineer shall peg the Indices and average rates of the base materials to the levels corresponding to the date from which LD is levied. Pegged indices/ rates as well as actual indices/rates prevailing at the time of calculation of price variation for the period under consideration will be compared and lower of the two will be taken for the calculating actual price variation amount. No pegging of indices or average base rates shall be applicable or implemented during first or any and all interim evaluations.
- j) The action of invoking debarment shall be for not one such default but for more than one defaults.

Any and all amounts recoverable from the Contractor under the provisions of the clause shall be adjusted or set off against any sum payable to the Contractor under this or any other Contract with the Corporation. In the delay analysis to be undertaken by the Engineer, delays on account of usual business risks which an experienced and resourceful contractor is supposed to evaluate and absorb, shall not in any event, be considered as delays not attribute to the contractor.

28.0 PRICE VARIATION CLAUSE

1. The amounts payable to the contractor, valued at base indices in accordance with the Bill of Quantities, shall be adjusted for rises or falls in the indices for labour, materials (excluding cost of base rate materials) and fuel. The Annexure "A" of the bid document includes a list of percentages, for each of these components i.e. labour, material and fuel, which shall be used appropriately in the formulae provided hereunder. In addition to this for some selected materials (herein referred to "**base rate materials**" in these bid/contract documents) such as cement, steel, bitumen, CI/DI pipes etc. the amounts payable to the Contractor shall be adjusted by rises or falls in prices by addition or deduction of the amounts determined by the formulae prescribed hereunder. The list of such base rate materials, as deemed applicable by the Corporation (for the scope of work put to this bid/contract) along with their respective base prices (as on 30 days prior to the stipulated/revised date of submission of the Bids) as also available on the website of the Corporation (<http://www.cidco.maharashtra.gov.in/>). The Contractor shall abide by these lists and the contents thereof and no request for revision, inclusion or exclusion to these lists shall either be made by him or the Corporation shall consider such a request, which shall automatically stand summarily rejected.

The amount to be added to or deducted from the Payment Certificates (PC) for changes in Cost shall be determined from the following formula.

$$V_A = V_L + V_M + V_F + \sum V_S$$

Where,

V_A = total Amount (arrived at by algebraic addition) to be added to or deducted from payment certificate (PC).

V_L = Amount to be added to or deducted from PC for changes in cost due to labour.

V_M = Amount to be added to or deducted from PC for changes in cost due to all materials (excluding base rate materials).

V_F = Amount to be added to or deducted from PC for changes in cost due to POL.

$\sum V_S$ = Amount to be added to or deducted from PC for changes in cost due to base rate materials.

A. Formula for Labour Component:

$$V_L = 0.85 \times \frac{P_L}{100} \times (R - B) \times \frac{(L_t - L_o)}{L_o}$$

Where,

V_L = Increase or decrease in the cost of work during the month under consideration due to changes in indices for labour.

P_L = Percentage of labour component of the work as provided in the Annexure "A".

R = Cost of work done during the period under consideration including the outstanding secured (material) advance, payable along with the payment certificate, arrived at with the rates put to the BOQ and in accordance with the terms and conditions of the contract.

B = Cost of base rate materials, arrived at using the base rates, as applicable for the month preceding the stipulated/revised date of submission of Bids, consumed in the work during the period under consideration.

L_t = The average Consumer price index for industrial workers for the centre specified in Annexure "A" for the month under consideration as published by Labour Bureau, Ministry of Labour, Government of India.

L_o = The average Consumer price index for industrial workers for centre specified in Annexure "A" for the month preceding the stipulated/revised date of submission of Bids, as published by Labour Bureau, Ministry of Labour, Government of India.

B. Formula for Materials Component:

$$V_M = 0.85 \times \frac{P_M}{100} \times (R - B) \times \frac{(M_1 - M_o)}{M_o}$$

Where,

V_M = Increase or decrease in the cost of work during the month under consideration due to changes in indices for local materials other than base rate materials.

P_M = Percentage of local materials component (other than base materials) of the work as provided in Annexure "A".

M_1 = The all India average wholesale price index (all commodities) for the month under consideration as published by Ministry of Industrial Development, Government of India, New Delhi.

M_0 = The all India average wholesale price index (all commodities) for the month preceding the stipulated/revised date of submission of Bids, as published by the Ministry of Industrial Development, Government of India, New Delhi.

C. Formula for Petrol, Oil and Lubricant (POL) Component:

$$V_F = 0.85 \times \frac{P_F}{100} \times (R - B) \times \frac{(F_1 - F_0)}{F_0}$$

Where,

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

P_F = Percentage of fuel and lubricants component of the work as provided in Annexure "A".

F_1 = The average official retail price of HSD at centre specified in Annexure "A" during the period under consideration, including all taxes and levies.

F_0 = Average price of HSD at centre specified in Annexure "A" including all taxes and levies for the month preceding the stipulated/revised date of submission of Bids.

D. Price adjustment for Base Rate Material(s):

Price adjustment for increase or decrease in the cost of base rate material consumed by the Contractor shall be paid in accordance with the following formula:

$$V_S = Q_S \times (S_1 - S_0)$$

Where

V_s = Increase or decrease in the cost of work during the month under consideration due to Changes in the rates for base rate material

Q_s = Quantity of Base Rate Material consumed during the period under consideration

S_0 = Base rate of Base Rate Material for the month preceding the stipulated/revised date of submission of Bids

S_1 = Average rate of base rate material during the period under consideration as per the website of the Corporation or actual procurement price based on purchase order & invoice vouchers as produced by contractor whichever is less

Notes:

- a. The Operative Period of the Contract shall mean the period from Commencement Date and ending on the date when the time allowed for the work specified in the work order expires, taking into consideration the extension of time, if any, for completion of the Work granted by Engineer under the relevant clause or the conditions of Contract. The decision of the Engineer as regards the Operative Period of the Contract shall be final, conclusive and binding on the Contractor.
- b. This price variation clause shall be applicable to all contracts of Contract price more than ` 10 Lakhs.
- c. Price variation for varied items shall be operated as under:
 - i. If the rate has been taken as that of an item existing in the BOQ, or any one part of the BOQ to another, then price variation shall be operative from the date of execution of the varied item.
 - ii. If the rate has been derived from that of an item existing in the BOQ, or any one part of the BOQ to another, and using base rates of base rate materials then price variation shall be operative from the date of execution of the varied item.
 - iii. If the rate of the varied item is derived or taken from the latest schedule of rates then the base indices shall be taken as those

average for the month prior circulation of such schedule of rates and the base rates for base rate materials to be consumed in the varied item shall be as that provided in the schedule of rates. The price variation shall be operative from the date of execution of the varied item.

- iv. If the rate of the varied item is derived based on the market rates then the base indices shall be taken as average for the month prior to the month during which the market rates were taken for all components except base rate materials. The base rates for base rate materials to be consumed in the varied item shall be as those provided in the latest list circulated by the Engineering Department Headquarters of the Corporation. The price variation shall be operative from the date of execution of the varied item.
- d. This clause is operative both ways, i.e. if the amount V_A is on the plus side, payment on account of the price variation shall be allowed to the Contractor and if it is on the negative side the Corporation shall be entitled to recover the same from the Contractor and the amount shall be deductible from the Interim Payment Certificates for the respective period.
- e. In order to facilitate computation of price variation to be made under this clause, the Contractor shall submit copy of original purchase order and procurement invoices of all base rate materials. The Contractor shall also keep such books of accounts and other documents as are necessary. The Contractor shall allow inspection of the same by a duly authorised representative of the Corporation and shall at the request of the Engineer furnish in such a manner as the Engineer may require, true copies of any document so kept and such other information as the Engineer may require for verification.
- f. The price variation may be worked out on the basis of interim or provisional indices for the purposes of adjustment of interim payment certificates provided that calculation of price variation at

the time of preparation of Final statement will be based on confirmed indices only.

29.0 UNBALANCED BIDS

In case the L1 Bidder quotes an offer which is lower than 85% of the estimated cost put to the Bid (**unbalance on the lower side**) then the Bid shall be considered as an **unbalanced Bid**.

For such unbalanced bids, if the Corporation decides to award the Contract and issues the Letter of Acceptance (LOA) to award such contract, the successful Bidder shall, in addition to completing all necessary formalities as per the relevant provisions of the NIB, ITB, LOA & these bid documents, submit additional security as a 'Security towards unbalanced bid'. Failure to timely comply with this requirement shall be treated as a fundamental breach of the contract and the LOA will be withdrawn & the EMD will be forfeited, without any recourse to any claim. In case the Corporation decides that the unbalanced Bid (lower) is not workable and / or acceptable, then no Letter of Acceptance shall be issued and then the bid shall stand summarily rejected.

All communication in respect of such unbalanced bids shall be through the Bid Authority only who shall be intimating the requirements and clarifications desired by the Corporation and all representations, communications and justifications in this respect shall be made to / submitted by the lowest bidder to the Bid Authority only. Any communication from or to any other authority/officer in the Corporations shall not be considered as valid communication at all and shall stand summarily rejected.

The Contractor shall pay additional Security of an amount equal to the difference in 85% of the estimated cost put to the Bid and the quoted cost by the successful bidder as a 'Security towards unbalanced bid' for due fulfillment of the contract, unless otherwise stated in the Tender documents.

29.1 The mode of making the deposit is as under :

The 'Security towards unbalanced bid' shall be paid within 15 days after receipt of letter of Acceptance to tender. It is optional for Contractor to make this deposit in one or the other of the following –

- i) Wholly in cash; or
- ii) Wholly in F.D.R. of Scheduled Bank, pledged in favour of Employer; or
- iii) Partly in cash and partly in F.D.R of Scheduled Bank, Pledged in favour of Employer; or
- iv) By way of General Undertaking and Guarantee issued on behalf of the Contractors by the Nationalised / Scheduled Bank only by its Mumbai / Navi Mumbai Branch, provided the Banker's Guarantee covers the entire completion period, including extensions from time to time if any, the Bank Guarantee shall be accepted only in case of Contractors Registered with Government Departments and provided 'Security towards unbalanced bid' amount is Rs.1.00 Lacs and above.

If the 'Security towards unbalanced bid' is paid in the manner as per paragraphs (ii) or (iii) of Sub-clause above, the value of F.D.R. to be lodged a deposit shall be taken as five percent below the market value on the day of acceptance or at their face value whichever is less. In case the deposit is paid by the transfer of G.P. Notes, the endorsement in favour of the Corporation should be paid to the City and Industrial Development Corporation of Maharashtra Limited on order and should bear the 'EXAMINED' stamp of Public Department, Office, Reserve Bank of India. All the charges for safe custody, withdrawal or for collection of interest etc. on the paper deposit shall be payable by the Contractor. Securities endorsed for payment of interest in Mumbai only shall be accepted as deposits as aforesaid.

29.2 Period of Validity of 'Security towards unbalanced bid'

The 'Security towards unbalanced bid' shall be valid until the Contractor has executed and completed the works in accordance with the Contract. No claim shall be made against such security after the issue of the Taking over Certificate in accordance with GCC Clause 48 and such security shall be refunded to the Contractor within 14 days of the issue of the said Taking over Certificate after deduction for claims, if any.

29.3 Claims under 'Security towards unbalanced bid'

Prior to making a claim under the 'security towards unbalanced bid' the Employer shall, in every case, notify the Contractor stating the nature of the default in respect of which the claim is to be made.

30.0 INSTRUCTIONS OF THE ENGINEER AND LEVY OF FINE IN CASE OF NON-COMPLIANCE

Instructions given by the Engineer shall be in writing, provided that if for any reason the Engineer considers it necessary to give any such instruction orally, the Contractor shall comply with such instruction. The Engineer shall give confirmation, in writing, of such oral instruction, whether before or after the carrying out of the instruction. Provided further that if the Contractor, within 7 (seven) days, confirms in writing to the Engineer any oral instruction of the Engineer and such confirmation is not contradicted in writing within 7 (seven) days by the Engineer, it shall be deemed to be an instruction of the Engineer. All instructions of the Engineer shall be communicated with a reasonable time allowed for compliance by the Contractor.

The Contractor shall without unreasonable time lapse and with all diligence comply with the instructions of the Engineer within the specified time period, failing which the Engineer shall:

- i. In case the Contractor has commenced work as per the instruction but has not completed it, issue a notice, of one working day or such reasonable time as deemed fit by the Engineer, to the Contractor to

complete the balance work. If at the end of the notice period the Contractor has not completed the task, the Engineer shall apply a fine of 0.01% of the Contract Sum or INR 10000, whichever is less, per day of the delay beyond the notice period.

- ii. In case the Contractor has not commenced the instructed task the Engineer shall by way of quotation(s), three normally but even one if the exigencies of the situation so demand, appoint another agency to carry out the task as expediently possible at the entire risks and costs to the defaulting Contractor along with the administrative costs of **24.5% (Twenty Four point Five Percent)** and the Contractor shall not have any claims, whatsoever, in this respect.

31.0 REVISED DEFINITIONS OF CONTRACT PRICE / SUM: (Please replace appropriately in G.C.C. definitions – e(i) :

“Accepted Price” means the sum stated in the Letter of Intent as payable to the Contractor for the completion of the execution, carrying out tests on completion and commissioning of the Works or any Section or part thereof as stated in the Contract Documents with or without a snag-list, with reasonable time schedule for de-snagging the Works or any Section or part thereof as stated in the Contract Documents and remedying of any defects therein till the end of the Defects Liability Period in accordance with the provisions of the Contract Documents.

“Contract Price” means the revised value of the works, such revision as per the provisions of these Contract Documents, for the completion of the execution, carrying out tests on completion and commissioning of the Works or any Section or part thereof as stated in the Contract Documents with or without a snag-list, with reasonable time schedule for de-snagging the Works or any Section or part thereof as stated in the Contract Documents and remedying of any defects therein till the end of the Defects Liability Period in accordance with the provisions of the Contract Documents.

For the sake of clarity the "Contract Price" shall include:

- i. Revision in price due to excess or savings in quantities of items in the Bill of Quantities which have occurred due to the original provision being either less or more than actual required as per site conditions.
- ii. Revision in price due to order of the Engineer for variation in work.
- iii. Price adjustments due to the price variation clause (interim changes based on interim values of such adjustments and final changes due to final values of adjustments).
- iv. Deductions for recoveries or penalties or fines or levy of liquidated damages made under various relevant clauses of these contract documents.

32.0 It is sole responsibility of the agency to keep the electrical installation in healthy condition & take utmost care to avoid any electrocution to any human being or animal or propriety during execution & defect liability period.

33.0 LEVY OF PENALTY FOR DELAY IN SUBMISSION OF VARIOUS SECURITIES

The agency has to pay the penalty as mentioned in the following table for regularization of delay in submission of various securities such as performance security, unbalanced bid security, Additional Performance Security etc.

a) Maximum delay in submission of various securities will be allowed only for 90 days.

b) The levy of penalty is as under :

Sr.	Category of Contracts	Penalty per Day
1.	For contracts value more than Rs.3.00 Lakhs to Rs. 1.50 Crore.	Rs. 500.00 per day for delay for each security.
2.	For Contracts value more than Rs.1.50 Crores to Rs.15.00 Crores.	Rs. 1000.00 per day for delay for each security.

Sr.	Category of Contracts	Penalty per Day
3.	For contracts value more than Rs. 15.00 Crores to Rs. 50.00 Crores	Rs. 3000.00 per day for delay for each security.
4.	For Contracts of value more than Rs. 50.00 Crores.	Rs. 5000.00 per day for delay for each security.

- c) The above delay shall be calculated by the concern EE and approved by SE for the delay attributable to the contractors.
- d) In case of delay beyond 90 days or three months for no valid reason, the corporation would be at liberty to rescind the contract.

34.0 LIST OF APPROVED MAKES / BRANDS OF MATERIALS

The Bidders should invariably use products as per the makes approved by CIDCO and details posted on website www.cidcoindia.com. The validity of the approved vendors shall invariably be confirmed from the website.

35.0 EMPLOYER'S (CIDCO) SITE OFFICE :

Separate cabins for Executive Engineer and separate sitting arrangements for AEEs and AEs with toilet blocks with European WC. In addition to this at least one separate toilet block for ladies staff shall be provided and shall maintain properly.

36.0 PROTECTION TO CIDCO FEMALE ENGINEERS :

In case any CIDCO Female Engineer / Staff working on site, experiences indecent behavior from any officer / staff employed by Contractor and if concerned Female Engineer / Staff submits written complaint to concerned Executive Engineer, then the contractor will be obliged to remove the officer / staff mentioned in the complaint immediately without raising any objection within a day of receiving such complaint. the officer / staff of the contractor thus removed shall not be allowed to work on any other site under CIDCO's jurisdiction in future.

37.0 CENTRAL / STATE GOVERNMENT RULES AND REGULATIONS:

In terms of Clause No. 8.1 of The General Conditions of Contract, You shall with due care and diligence, design (to the extent provided for the contract), execute and complete the Works and remedy any defects therein in accordance with the provisions of the contract. Further, you shall abide by the latest circulars, Government Resolutions issued by Central / State Government as amended from time to time, with regards to safety and other mandatory provisions to be followed during execution of work.

38.0 THIRD PARTY QUALITY AUDIT

CIDCO will appoint a 'Third Party Quality Audit' to independently carryout audit of works on behalf of CIDCO. The frequency of such inspection will be decided as per the requirement of the project. Contractor has to extend all necessary co-operation to this agency and comply the inspection report as well as issues raised during inspection, within allocated duration.

39.0 In this bid document wherever reference is made to excise duty, MVAT, Service Tax, Octroi, LBT etc. the same should now be referred as GST in case of all laws that are subsumed in the GST Law.

Signature of Bidder

Date :



Superintending Engineer (Elect-Proj.)

Date :

SPECIAL INSTRUCTIONS TO BIDDERS

Name of Work: Providing Pumping arrangement along with Electrical power supply at holding pond near Dungi

- 1) CIDCO reserves the right to suitably increase/ reduce the scope of work put to this tender and to award the work to more than one agency.
- 2) CIDCO reserves the right to award the work.
- 3) CIDCO also reserves the right to award the work to other agencies who has not quoted for the same in case the offer is on higher side. It is not binding to award the work to the lowest with or without negotiation in case the rate offered is unjustifiable/ higher side as per CIDCO's assessment.
- 4) The Contractor is requested to go through the G.C.C particularly Clause No. 34.1 to 35.4 regarding labour acts.
- 5) The contractor should have his office in Navi Mumbai with all facilities of Skilled Staff, Computer, etc. to prepare reports and bills.
- 6) The contractor should be a registered contractor having valid labour licence issued by the Competent Authority.
- 7) The contractor should abide by the various labour laws applicable to their employees such as Minimum Wages Act, Provident Fund Act, Shops and Establishment Act, Payment of Bonus Act and such other acts, rules and regulations as are applicable from time to time.
- 8) The contractor shall be responsible to fulfill all the statutory obligations and dues to its labours and shall keep the corporation indemnified of any such claims found payable by the contractor.
- 9) While submitting the Bid, the Bidders/ contractors should quote after considering statutory contractual liabilities under various labour legislations applicable to the contract employees.

- 10) While submitting the tender the Bidders / contractors should consider the below listed facilities to be made available to the employees engaged on the job. The rate quoted by the Bidders should be inclusive of the cost required to make available below mentioned facilities. The Bidder will have to furnish the documentary confirmation that the facilities are made available to the employees engaged by him on the job.

The facilities to be paid to the employees is on the basis of minimum wages applicable from time to time published by Deputy Commissioner of Labour (Inf) under Shops and Commercial Establishment category.

- 11) If the contractor shows negligence / lithargy / un-attendance of works under the contract, notice of 8 days will be given and the work shall be get done at his risk and cost charging 24.5% as supervision charges and a token penalty of Rs. 500/- per incidence will be charged.
- 12) The Contractor shall be responsible during progress as well maintenance for any liability imposed by law by any damage to the work or any part thereof or to any of the materials or the other things used in performing the work of injury to any person or persons or for any property damaged in or outside the works limit. The contractor shall indemnify and hold the owner and Engineer harmless against any and all liability, claims, loss or injury including cost expenses and attorney's fees incurred in the defense of same arising from any allegations whether, groundless or not of damage or injury to any person or property resulting from the performance of the work or from any material used in the work or from any condition of the work or work site or from any cause whatever during the progress and maintenance of work.

Signature of Bidder

Date :



Superintending Engineer (Elect-Proj.)

Date :

SCOPE OF WORK

- 1.0 The scope of work in general consists of “Providing Pumping arrangement along with Electrical power supply at holding pond near Dungi”.

Sr.	ITEM DESCRIPTION
1	Supplying, installing, testing & commissioning compact substation with 3 phase, 22/0.433 kV, 50 Hz., 315 kVA, oil immersed copper wound transformer having indoor type transformer bushings, with HT side (incoming side) load break switches - 2 Nos. of appropriate capacity and LT side (outgoing side) MCCBs (4 pole) of appropriate capacity, with inbuilt metering cubical, standard accessories complete with test certificate with losses below 1077 Watts at 50% load, 3255 Watts at 100% load for transformer, as per IS:1180 - 2014 energy efficiency level II, with necessary permissions of Electrical Inspector, as per specification no SS- TR with required GI plate type earthing as approved by EIC.
2	Supplying, erecting and commissioning of diesel generating set with alternator of 200 kVA output continuous rating, 3 Phase, 415 V, 50c/s 0.8 p. f. A.C a totally enclosed air cooled / liquid cooled multi-cylinder diesel engine developing suitable BHP at 1500 rpm with 10% overload for 1 hour in 12 hours, along with standard accessories, self-excited, self-regulated, screen protected alternator with static excitation system running at 1500 RPM as per IS 4722- 2001 with voltage regulation +/- 5 %. Both the engine and alternator direct coupled on a common fabricated steel base frame and mounted on anti- vibrating pads with standard control panel comprising meters, switchgears, indicators connected with suitable wires/cables, the complete set enclosed in composite acoustic enclosure as fully assembled integral unit made of 16 SWG CRCA Sheet, sound absorbing material to restrict sound level upto 75 dB at 1.0 m, provided with first filling of oil, diesel etc. as per specification no. GEN-DG with required GI plate type earthing as approved by EIC.
3	Supplying, Erecting, Testing and Commissioning of 25 HP /18.5 KW having of 100 LPS at 10m point head Submersible dewatering pump set having solid handling capacity of 100mm. including 10m of 3x10 sqmm & 5x1.5

Sr.	ITEM DESCRIPTION
	sqmm cable each and all accessories complete with required control cables for commissioning.
4	<p>Supplying, Erection, Testing and Commissioning of MCC Panel having,</p> <p>INCOMER:</p> <p>2 nos of 400A FP Thermal Magnetic MCCB 36KA including a 400A FP ATS</p> <p>OUTGOINGS:</p> <p>5 Nos. of 80 A TP Thermal Magnetic MCCB 25kA</p> <p>2 Nos. 32A TP C Curve MCB 10kA including contactors and relays</p> <p>5 Nos. Star delta starters</p> <p>5 Nos. 10KVAR capacitor for individual pumps.</p>
5	Supplying & erecting mains with 3x10 sq.mm FRLSH copper PVC insulated wire laid in provided conduit/trunking/ inside pole/Bus bars or any other places as per specification No: WGMA/BW
6	Supplying & laying (including excavation) 15 cm dia RCC Hume pipe with coupling collar of standard thickness at required depth up to 90 cm below road / ground surface, for enclosing provided cable & necessary back filling with light ramming to make the road/ground surface as it was (Except bitumen carpet).
7	Supplying, erecting & terminating XLPE armoured cable 3½ core 185 sq. mm. aluminium conductor with continuous 12.97 sq. mm. (8 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL
8	Supplying, erecting & terminating XLPE armoured cable 3½ core 300 sq. mm. aluminium conductor with continuous 12.97 sq. mm. (8 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL
9	Supplying , erecting & terminating 3 x 120 sq. mm. aluminium 22 kV(E), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per specification no. CB-HT including required end terminations.
10	Supplying and erecting iron, sheet metal work consisting of CRCA sheets,

Sr.	ITEM DESCRIPTION
	various sections of iron, plates, chequered plates, rods, bars, MS pipes, etc. for panel board or any other purpose with bending, cutting, drilling and welding complete erected at the position with necessary materials duly painted with one coat of red oxide and two coats of enamel paint to match the switchgears or as per directions by the authority.
11	Supplying and erecting static energy meter 440 V 50 Hz. 100A ISI mark meter AC 3 phase 4 wires LCD/LED display complete erected on polished teak wood board duly wired with required size of weather proof PVC wires duly tested for class II accuracy by electric supply company.
12	Providing 250 mm double flange sluice valve confirming for IS- 14846 including worn gear arrangements as per test pressure, stainless steel spindle, caps, including inspection charges, transportation upto departmental store, unloading, stacking excluding GST levied by GOI & GOM in all respect etc. complete.
13	Providing and supplying ISI mark 250 mm CI D/F reflux valves (non-return valves) of following dia including railway freight, inspection charges, unloading from railway wagon, loading into truck, transportation upto departmental stores, unloading, stacking excluding GST levied by GOI & GOM in all respect etc. complete. Reflux valves as per I.S.5312 Part I (1984)
14	Supplying and erecting of 13 mtr RSJ pole size 152 x 152 mm and shall be painted completely with two coat of red oxide. The bottom section of the pole shall be painted with black bituminous paint upto 2.5 mtr height and remaining portion painted with two coats of silver enamel paint the rate indicated is for complete work including excavation for the foundation in all type of soils / hard rock etc. duly plastered mugging.
15	Supplying and erecting rolled steel joist (girder) pole 100 x 116 mm (23 kg/m) with provided base plate in provided foundation as per specification no. OH-PL/RSJ
16	Supply and erection of G.I. Channel 100x50x6 mm (9.2 Kg / MTR.) for erection of disc with suitable mounting arrangement and hole on any other purpose as per directives of engineer in charge.

Sr.	ITEM DESCRIPTION
17	Supply and erection of GI channel 75 x 40 x 6 mm (9.2 Kg / mtr.) HDG for erection go disc with suitable mounting arrangement and hole or any other purpose as per directives of Engineer in charge.
18	Supplying and erecting ACSR conductor of size - 6/1-4.72 mm (Dog) complete. (394.00 kg/km) as per specification No. OHCON/ACSR
19	Supplying and erecting anticlimbing devices, fabricated from pole clamps of MS Flat 40x5 mm, with drooping spikes 15 cm. in length, welded to it and erected on pole with danger board.
20	Supplying and erecting porcelain disc type insulator with necessary hardware suitable for 22kV line, complete as per specification no. OH-INS/DI
21	Strain Hardware for Dog 0.1 or Equ AAAC
22	Supplying and erecting GI strip of required size used for earthing on wall and/or any other purpose with necessary GI clamps fixed on wall painted with bituminous paint in an approved manner with joints required. As per specification No EA-EP.
23	Providing cement concrete foundation including excavation for the poles 60 cm x 60 cm x deep 1/6 of pole length in 1:3:6 cement concrete (20 x 25 mm stone metal) and 45 cm x 45 cm x 45 cm /45 cm dia. x 45 cm. height plinth duly plastered and with necessary curing and finishing in an approved manner. (for above 9 m poles) Each 3317 244 3561 16-3-4 Providing Cement
24	Supplying and erecting Assotated Nut bolts of various size a
25	Providing & erecting epoxy straight through joint outdoor/indoor for LT XLPE armoured cable 120 to 185 sq. mm. cable, with necessary material as per specification no. CB-JT/LT
26	Providing & erecting epoxy outdoor / indoor end termination kit for LT XLPE armoured cable 70 to 120 sq. mm. cable, with necessary material as per specification no. CB-JT/LT
27	Supplying and erecting 6 way Feeder Pillar Panel having, INCOMER: 1 No. of 630A HRC Fuse base with Vertical Fuse Unit

Sr.	ITEM DESCRIPTION
	OUTGOINGS: 5 Nos. of 400A HRC Fuse with Vertical Fuse Unit including foundation.
28	Providing pipe type earthing with 40mm. dia. G.I. pipe or 20 mm dia. G.I. Rod complete with all materials as per specification no. EA- EP
29	Obtaining all approvals from MSEDCL / Electrical Inspector or any other / statutory bodies and authorities as required of all works covered under the contract including preparation of as built drawings and handing over of entire installation to MSEDCL. Item also includes preparation of shop drawings and submission of same to CIDCO in 5 set and certified from CIDCO.

2.0 The work includes:-

- a) Preparing drawings, obtaining approvals from Statutory authorities (i.e. MSEDCL, Electrical Inspector & PWD Highway Authority etc.) for commencement of work & commissioning of system.
- b) Submission of application on behalf of client to MSEDCL Ltd for the co-ordination.
- c) All related allied works like trenching, control wiring of panels, earthing, safety equipments & obtaining statutory approvals from the concerned departments.

3.0 The entire electrical works should be carried out in accordance with the specifications without any extra cost. The work shall conform to latest edition of Indian Standard Specifications & Indian Electricity Rules.

4.0 The works shall be completed as per the requirement of ISO:9001 - 2000 & all required documents for the same shall be made available before execution of work.

5.0 The Technical specification of all the equipments and the quantities required of various accessories & auxiliaries are enclosed.

6.0 The quantities shown in the Schedule-'A' are tentative, The contractor

shall also ascertain the quantities of all the item required for the work and procure the material as per requirement after approval from the department. The material quantity shall be properly measured at site and shall be brought to the site accordingly. Excess material brought to site & not installed shall not be accepted by CIDCO nor it will be paid for.

7.0 Documentation :

7.1 The contractor on receipt of LOI shall submit five sets of general arrangement, schematic drawings, foundation plans, single line diagram.

7.2 On completion of the above works, and commissioning, the contractor shall prepare a set of "as built drawings" - 5 Nos., shop test reports, inspection reports, site test reports, operation and maintenance manuals of major equipments for handing over to CIDCO/MSEDCL.

8.0 Supervision of Erection :

The contractor shall arrange for a trained supervisor of respective equipment manufacturer during installation, testing & commissioning who will direct the sequence of erection, make necessary adjustments/ settings, make the equipment ready for testing, certify the pre-commissioning checks and give permission for commissioning. This shall be arranged by the contractor at no extra cost to CIDCO.


9.0 The successful agency shall have to make his own assessment and prepare the drawings, obtain approval from Statutory authorities before execution of work.

10.0 GENERAL TECHNICAL SPECIFICATIONS

10.1 The contractor shall carry out all minor civil work connected with electrical works. The contractor shall repair & make good damage caused to the civil structure while carrying out the electrical works.

- 10.2 The contractor shall provide vehicle with driver as & when required by the CIDCO/MSEDCL representative for site visit.
- 10.3 Before the commencement of work, contractor shall submit the Engineer-in-charge, the list of makes of material proposed to be used in the work alongwith the bar chart for the completion of the work.
- 10.4 **The contractor is responsible for:**
(i) Liason work with MSEDCL in respect of arranging shutdowns, approval of scheme from MSEDCL, after completion of the installation, it should be handed over to MSEDCL without any extra cost.
- 10.5 The necessary approvals/sanction to be obtained from MSEDCL/ CIDCO/Electrical Inspector/ PWD Highway Authority by the agency before taking up the work.
- 10.6 The work should be completed within the stipulated period on priority basis.
- 10.7 After completion of the work, the complete system has to be handed over to MSEDCL with Tripartite Agreement.

Signature of Bidder
Date :



Superintending Engineer (Elect-Proj.)
Date :

ANNEXURE-I

Subject work is strictly to be completed within stipulated work completion period and in accordance with the activities listed below completely as per the directives from Engineer-in-charge. The charges and the expenses for completing the following listed activities should be included in the quoted offer and no separate payments against this will be made.

1. Successful agency will have to obtain and submit the Contractors All Risk Insurance Policy (CAR) in original within one week from date of work order from the Director of Insurance, Government Insurance Fund, Maharashtra State, Mumbai. The Contractors All Risk (CAR) policy as said above shall be inclusive of insurance coverage under workman's compensation insurance policy for all workmen employed by contractor to complete the works covered under the present contract. Further, the Contractors All Risk policy should also cover the total contract period and Defects liability period completely as stated in the tender. In case of time period extension (if any), it is essential that, premium of CAR policies should be timely paid by the agency in order to ensure the continuity of CAR policy without any break in the same. Suitable action will be taken against defaulters as per General Conditions of Contract. Unless and until the Contractors All Risk Policy as stated in above manner is submitted to the office of the Engineer-in-charge, no payments will be released against any work executed.
2. No material advance or payment against supply item will be released to the agency. Agency should carry-out the work first, then only payment will be released as per BOQ items.
3. Required quantity of material to be ordered for carrying out the subject work shall be properly assessed and order for supply of material to be placed accordingly.

4. Arranging and carrying out material inspection and testing at respective manufacturer's work in co-ordination with and in presence of Engineer-in-charge or his representative and representative from other Statutory Body if required and submission of inspection and test report in original.
5. The contractor or his qualified engineer having updated technical knowledge for the subject work should invariably remain present and co-ordinate during every inspection and testing programme at manufacturers works, similarly during every joint site visits as and when required.
6. Obtaining material dispatch clearance before supplying the material at site.
7. After supply of material at site, all the documents such as delivery challan, excise gate pass, material test report (in original), etc. should be submitted to Engineer-in-charge for obtaining installation clearance.
 - a) The payment applicable against the supplied material will be released after completing the activities listed at Sr.No.1 to 7 above.
 - b) The record of all activities shall be submitted to the Engineer-in-charge & shall also be maintained in the ISO documents.
8. Carrying out the installation of work, as per BOQ or as per documents of EIC.
9. Arranging and carrying out pre & post testing and commissioning of the completed installation in presence of Engineer-in-charge and his representative.
10. Excess-saving statement as per final execution of work, item-wise measurement break up in detail and escalation claim as applicable along with detailed calculations and copies of referred indices, etc. to be submitted to the Engineer-in-charge.


It is mandatory to complete all the activities listed above from Sr.No.1 to 11 for releasing the final payment.

11. PAYMENT TERMS :

i) Against supply of material	-	75%
ii) Erection	-	15%
iii) Testing & commissioning, handing over	-	10%
Total	-	100%

It is the sole responsibility of the agency to keep the electrical installation in healthy condition & take utmost care to avoid any electrocution to any human being or animal.

Signature of Bidder
Date :



Superintending Engineer (Elect-Proj.)
Date :

ANNEXURE – II

(ESSENTIAL CONDITIONS OF CONTRACT)

Following conditions are the essential conditions of contract for carrying out and completing the subject work in all respect within stipulated time period. The successful agency will be responsible for completing the same as per the directives of Engineer-in-charge. The charges and expenditure, if any, required for completing the same should be included in the quoted offer, and no separate payments against this will be made.

- (A) The Contractor shall visit the site to access the actual quantum of work and period required for completing the same, before quoting the offer.
- (B) Subject work is to be completed within stipulated time period, strictly in accordance with the activities mentioned in Annexure-I and as per directives of Engineer-in-charge.
- (C) Scheme specifications and quantity of the material to be used for the subject work under the contract and specified in the tender document is only for guideline purpose. However, it will be the responsibility of the successful agency to submit the measurements and specifications in detail of each and every item before starting the execution of work for obtaining prior approvals and complete the work in accordance with the approvals, clearances obtained for the same. All cost required for completion of work as per statutory approval shall deemed to have included in the offer quoted.
- (D) It will be the agency's responsibility to obtain necessary sanctions and permissions for obtaining trenching and excavation permission from CIDCO along the proposed route.

- (E) The successful agency will be completely responsible for accidents occurred if any, during the execution of work. It will also be the responsibility of the agency for making police complaints on his letter head against any thefts and accidents etc. under intimation to CIDCO.
- (F) Arranging and carrying out the material inspection at respective manufacturers unit as stated in Annexure-I.
- (G) Carrying out necessary co-ordination and follow-up with concerned authorities for obtaining necessary sanctions and permissions as required towards completion of work in all respects.
- (I) Any other incidental charges required towards completion of work in all respect.
- (J) Bills submitted against the executed and completed works at site will be processed further by the Engineer-in-charge, after necessary scrutiny and verification. Minimum period of 15 working days will be required for the same.



Signature of Bidder

Date :

Superintending Engineer (Elect-Proj.)

Date :

GENERAL ELECTRICAL REQUIREMENTS

Regulations : All the electrical equipment and materials, including their installations, shall conform to the following applicable latest codes and standards.

1. Indian Electricity Rules 1956.
2. The Electricity Supply Act, 2003.
3. Fire Insurance Regulations.
4. Regulations laid down by the Chief Electrical Inspector of the State.
5. Regulations laid down by Factory Inspector of State.
6. Indian Standard Institution.
7. Factory Act.
8. Regulation laid down by lift Inspector of State.
9. Any other Regulations laid down by the local authority statutory commissions.
10. **All Electrical works will be carried out as per**
 - I. Relevant standards set by Bureau of Indian Standards (BIS)
 - II. Central Electricity Authority (Measures relating to Safety and electric Supply) Regulations 2010 (amended upto date)
 - III. National Electrical code 2011
 - IV. National Building Code 2016
 - V. Chapter 16 of PWD Hand book
 - VI. Specification for electrical works (First edition 2008) (Compiled and prepared by PWD(Electrical) (amended upto date)
 - VII. Energy Conservation Building Code (ECBC) : 2007
 - VIII. GRIHA rating system
 - IX. Technical specifications of Ministry of New and Renewable Energy.



Signature of Bidder
Date :

Superintending Engineer (Elect-Proj.)
Date :

PROFORMA OF CONTRACT AGREEMENT

(On Stamp Paper of Appropriate Value as per Provisions of Maharashtra Stamp Duty Act, 1958 as amended. The amended portion of Article 63 of the Act should be referred to in consonance with the 2006 notification)

AGREEMENT FOR THE WORK OF " _____"
_____ " (Name
of Work) Article of Agreement made at _____ (Place) on _____ (day) of
_____ (Month) of Two Thousand _____ (Year) between City and Industrial
Development Corporation of Maharashtra Limited, a Government of
Maharashtra Undertaking, incorporated under the Companies Act, 1956 and
having its Registered Office at 'NIRMAL', 2nd floor, Nariman Point, Mumbai-400
021 (hereinafter called the 'EMPLOYER') of the One part and
_____ (Name of Agency) whose
Registered office is situated at _____
_____ (address) (hereinafter called the 'CONTRACTOR') of
the Other Part.

WHEREAS:

The Employer being desirous of providing & executing the work mentioned, enumerated or referred to in the Bid Notice including Corrigendum to Bid Notice, Instructions to Bidder, General Conditions of Contract, Special Conditions of Contract, Notes & Preambles, Schedule of Rates & Quantities, Specifications, Drawings and other documents, constituting a Bid and acceptance thereof, copy hereto annexed all of which are designed to form part of this contract and are included in the term 'CONTRACT' wherever herein used.

AND WHEREAS:

The Employer accepted the Bid of the Contractor for the provisions and the execution of the said work at the item rate stated in the schedule of quantities of works (hereinafter called the Schedule of Rates upon the terms and subject to the conditions of contract).

AND WHEREAS:

The Contractor has deposited with the Employer the sum of Rs. _____ (Rupees _____ only) being the Contract Deposit payable by him at the rate of 2.50% of the Contract sum and undertake to pay the balance of the Performance Security payable by him at the rate of 2.50% of the Contract sum, by allowing the Employer to deduct amount from the bills payable to him at rate of 5% provided that the total deduction together with contract deposit shall not exceed in the aggregate 5% of the contract sum.

NOW THIS AGREEMENT WITNESSES AND IT IS HEREBY AGREED BY AND BETWEEN THE PARTIES AND DECLARED AS FOLLOWS :-

1. The documents which form part of the contract will be the Bid Notice, including Corrigendum to Bid Notice, Instructions to Bidders, General Conditions of Contract, Special Conditions of Contract, Notes & Preambles, Schedule of Rates & Quantities, Specifications, Drawings and other documents, constituting a Bid and acceptance thereof. It is further agreed that the "Acceptance Letter" vide No. _____ dated _____ & Work Order or Order for Commencement of Work shall constitute part and parcel of the contract between the parties.

2. In consideration of the payments to be made to the Contractor for the works to be executed by him, the Contractor shall and will duly provide, execute and complete the said work on or before the dates mentioned in the time schedule of completion of work attached to the Bid documents and shall maintain the same at his own cost for the defects liability period thereafter and perform all such acts and things in the contract mentioned or described or which are to be implied there from or may be reasonably necessary for the completion of the said works at the times and the manner and subject to the terms and conditions or stipulations mentioned in the contract.
3. In consideration of the due provision, execution and completion of the said works, the Employer does hereby agree with the Contractor that the Employer will pay to the contractor, the respective amount for the work actually done by him at the schedule rates quoted and such other sums as may become payable to the Contractor under the provisions of the contract, such payment to be made at such time and in such manner as provided for in the agreement.
4. In consideration of the due provisions, execution and completion of the said work, the 'Contractor' does hereby agree to pay to the Employer the sums as may be due to the Employer for the services if rendered by the Employer to the Contractor and such other sum or sums as may become payable to the Employer towards loss, damage to the Employer's equipment, materials construction plant and machinery, including those hired to the contractor, if any set forth in the said conditions of contract, such payments to be made at such time and in such manner as provided in the contract.

5. All disputes arising out of or in any way connected with this Contract Agreement shall be deemed to have arisen in Mumbai and only the courts in Mumbai shall have jurisdiction to determine the same.
6. The several parts of this contract have been read by me/us and fully understood by me/us.

IN WITNESS WHEREAS THE PARTIES HAVE EXECUTED THESE PRESENTS IN DUPLICATE THE DAY AND YEAR FIRST MENTIONED ABOVE.

SIGNED & DELIVERED FOR AND ON }
BEHALF OF CITY AND INDUSTRIAL }
DEVELOPMENT CORPORATION OF }
MAHARASHTRA LIMITED. }

Signature _____

Designation _____

In the presence of **WITNESS** :

1. _____

Address _____

2. _____

Address _____

SIGNED AND DELIVERED FOR }
AND ON BEHALF OF M/s. _____}
_____ }

Signature _____

In the presence of **WITNESS** :

1. _____

Address _____

2. _____

Address _____

PROFORMA OF BANK GUARANTEE
IN LIEU OF CONTRACT DEPOSIT

(on stamp paper Appropriate Value from Nationalised Bank
& operatable in Mumbai or Navi Mumbai only)
(B.G. shall be in case of Contract Amount more than Rs.100 Lakhs)

To,

**City & Industrial Development Corporation
of Maharashtra Limited,**
'Nirmal', 2nd Floor, Nariman Point,
Mumbai - 400 021.

- 1) In consideration of the City and Industrial Development Corporation of Maharashtra Limited., a Company incorporated under the Companies Act 1956 (1 of 56) and having its registered Office at Nirmal, 2nd Floor, Nariman Point, Mumbai-400021 (hereinafter called the 'Employer' which expression shall unless repugnant to the subject or context include its successors and assigns) having agreed under the terms and conditions of Contract No. _____ dated _____ made between M/s _____ (Name of Agency) (hereinafter called the 'Contractor' which expression shall unless repugnant to the subject or context include his heirs, executors administrators and assigns / (its successors and assigns) and the Employer in consideration with _____ (Name of Work). (hereinafter called the said "Contract") to accept a deed of Guarantee as herein provided for Rs. _____ by _____ (Name of the Nationalized / Scheduled Bank, Mumbai / Navi Mumbai Branch) towards Contract Deposit, for the due fulfillment by the Contractor of the terms and conditions contained in the said contract, We, _____ (Name of Bank and detailed address) the Bank constituted and established under the Banking

Companies (Acquisition and Transfer of Undertaking) Act, 1979 (hereinafter referred to as the 'said Bank') and having our Head Office at _____(address) at the request of M/s. _____ (Name of Agency) do hereby undertake to pay to the Employer an amount not exceeding Rs. _____ (Rupees _____ only) against any loss or damage caused to or suffered or would be caused to or suffered by the Employer by reasons of any breach or breaches by the said Contractor(s) of any of the terms or conditions contained in the said Contract Agreement and to unconditionally pay the amount claimed by the Employer on demand and without demur to the extent expressed.

2) We, _____ (Name of Bank) do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the Employer stating that the amount claimed is due by way of loss or damage caused to, or would be caused to or suffered by the Employer by reasons of breach by the said Contractor(s) of any of the terms or condition contained in the said Contract Agreement or by reasons of the Contractor(s) failure to perform the said Contract Agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. _____ (Rupees _____ only).

3) We, _____(Name of Bank) further agree that the Employer shall be the sole judge of and as to whether the Contractor has committed and breach of any of the terms

and conditions of the said Contract and the extent of loss, damage, costs, charges & expenses caused to or suffered by or that may be caused to or suffered by the Employer on account thereof and the decision of the Employer that the Contractor has committed such breach and as to the amount or amounts of loss, damage, costs, charges & expenses caused to or suffered by or that may be caused to or suffered by the Employer from time to time shall be final and binding on us.

- 4) We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Contractor(s) / Supplier(s) in any suit or proceeding pending before any Court or Tribunal unequivocal, without demur. The payment so made by us under this bond shall be a valid discharge of our liability for payment thereunder and the Contractor(s)/ Supplier(s) shall have no claim against us for making such payment.
- 5) We, _____ (Name of Bank) further agree that the guarantee herein contained shall remain in full force and effect during the Contract Period including extensions in time limit if any & also till such time the Taking Over Certificate is issued for the whole completed work including that would be taken from the performance of the said Agreement and shall continue to be enforceable till all the dues of the Employer under or by the said Agreement have been fully paid and its claims satisfied or discharged or till the _____ (indicate the Authority & Administrative Department) certified that the terms and conditions of the said Contract Agreement have been fully and properly carried out by the said Contractor (s) and accordingly discharges this guarantee. Unless a demand or claim under this guarantee is made on us in writing on or before _____ (Contract period + claim period) we shall be discharged from all liability under this guarantee thereafter.

- 6) We, _____, further agree with the Employer, that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Agreement or to extend the time of performance by the said Contractor(s) from time to time or to postpone for any time any of the powers exercisable by the Employer against the said Contractor (s) and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reasons of any such variation, or extension being granted the said Contractor(s) or for any forbearance act or omission on the part of the Employer or any indulgence by the Employer to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision have effect of so relieving us.
- 7) This guarantee will not be discharged due to the change of the constitution of the Bank or the Contractor(s) /Supplier(s).
- 8) This guarantee is valid till _____(completion due) unless a suitable action to enforce the claim under this guarantee is made within six months from completion date i.e. up to _____(date) all yours rights under this guarantee shall be forfeited and we shall be relieved and discharged from all liabilities thereunder.
- 9) We, _____ (Name of Bank) lastly undertake not to revoke this guarantee during the currency except with the previous consent of the Employer in writing.

Dated this _____ day of _____ 20__

FOR & ON BEHALF OF BANK

The above guarantee is accepted

For and on behalf of the Employer

(Name & Designation)

Date :

INDENTURE BOND

(On stamp paper of Rs.300/-)

THIS INDENTURE made on the _____(Day) of _____(Month), 20____ (Year)
M/s. _____(Name of Agency) (hereinafter
called the 'Contractor' which expression shall, where the context so admits or
implies be deemed to include his heirs, executors, administrators, and assigns) of
the ONE PART and City and Industrial Development Corporation of Maharashtra
Limited, a Company incorporated under the Companies Act, 1956 and having its
registered office at 'Nirmal', 2nd floor, Nariman Point, Mumbai 400 021
(hereinafter called the 'EMPLOYER', which expression shall, where the context so
admits or implies be deemed to include its successor and assigns) of the OTHER
PART.

The contractor has entered into a contract dated _____ for the work of
" _____"
(Name of Work) on the terms and conditions set out their.

The contractor has applied to the Employer that he be allowed advances on the
materials (hereinafter called the 'said Material') absolutely belonging to him and
brought by him to the site of the works for use in construction of such of the works
as he had undertaken to execute at stipulated rates, AND of aforesaid nature. The
security of the quantities and other particulars of the materials for which the
advances are being made in the Monthly Payments, will be the sole responsibility of
the Contractor.

**NOW THIS INDENTURE WITNESSTH THAT IN PURSUANCE OF THE SAID
CONTRACT** and in consideration of the sum of Rs._____ paid on or
before the execution of these presents to the contractor by the Employer and of the
such further advance (if any) as may be made to him as aforesaid, the Contractor
hereby covenant and agree with the Employer and declares as follows:

1. That the said sum so advanced by the Employer to the Contractor as aforesaid and all or any further sum or sums advanced as aforesaid shall be used by the contractor in or towards expediting the execution of the said works and for no other purpose whatsoever.
2. That the said materials which have been offered to and accepted by the Employer for advances on material, is absolutely the Contractor's own property and free from encumbrances of any kind and the contractor shall not make any application or receive a further advance from the Employer on the same materials. The contractor indemnifies the Employer against all claims to any material in respect of which an advance has been made to him as aforesaid.
3. That the said materials and all other materials on the security of which any further advances may hereafter be made as aforesaid shall be used by the Contractor solely in the execution of the said works in accordance with the direction of the Engineer (hereinafter called 'the Engineer') and in terms of the said contract.
4. That the contractor shall make at his own cost all necessary and adequate arrangements for the proper watch, safe custody and protection against all risks of the said materials in the contractor's custody and on his own responsibility and shall at times be open to inspection by the Engineer or any officer authorised by him. In the event of the said materials or any part thereof being stolen, destroyed, or damaged, the contractor shall forthwith replace the same with other materials of like quantity or repair and make good the same as required by the Engineer.
5. The above said materials shall not on any account be removed from the site except with the written permission of the Engineer or any officer authorised by him on that behalf.

6. That the advance shall be repayable in full when or before the contractor receives the payment from the Employer on the price payable to him for the said works under the contract provided that if any intermediate payment are made to the contractor on account of work done, when on the occasion of such payment the Employer will be at liberty to make a recovery from the Contractor's payment, for such payment by deducting therefrom the value of the said materials actually used in the construction and in respect of which recovery has not been made previously. The value for the purpose of recovery has not been made previously. The value for the purpose of recovery shall be at the rates at which the advances were calculated.
7. That if the Contractor shall at any time make any default in the performance of observance in any respect of any of their terms and provisions of the said contract or of the said contract or of these presents, the total amount of the advance or advances that may still be owing to the Employer shall be immediately on the happening of such default be repayable by the contractor to the Employer together with interest rate per annum as prevailing from the date of the respective dates of such advance or advances, to the date of repayment and with all costs, charges, damages and expenses incurred by the Employer in or for the recovery thereof or the enforcement of this security or otherwise be reasons of the default of the contractor and the contractor hereby covenants and agrees with the Employer to repay the same respectively to the Employer accordingly.
8. That the contractor hereby hypothecates all the said materials with the repayment to the Employer of the said sum so advanced and any further sum or sums, advance as aforesaid all costs, damage and expenses payable under these presents provided always and it is hereby agreed

and declared that notwithstanding anything in the said agreement and without prejudice to the powers contained therein shall become enforceable and the money shall not be paid in accordance with, the Employer may at any time thereafter adopt all or any of the following courses as he may deem fit.

- (a) Seize and utilise the said materials or any part thereof in the completion of the said works on behalf of the contractor in accordance debiting the contractor with the value of the work done as if he had carried it out in accordance with the said contract and the rates thereby provided. If the balance is against the contractor, he is to pay same to the Employer on demand.
 - (b) Remove and sell by public auction the seized materials or any part thereof and out of the money arising from the sale retain all the sum aforesaid repayable or payable to the Employer under these presents and pay over the surplus (if any) to the Contractor.
 - (c) Deduct all or any part of the money owing out of Performance Security of any sum due to the contractor under the said contract.
9. That except in the event of such default on the part of the contractor as aforesaid interest on the said advance shall not be payable.
10. The Contractor shall execute a promissory note for a sum of Rs._____ only in favour of the Employer to provide a collateral security for the repayment of the advance made to the contractor.

IN WITNESS WHEREOF THE _____ and City &
Industrial Development Corporation of Maharashtra Limited have hereby put
their respective hands the day and year first above written.

SIGNED SEALED AND DELIVERED)
BY THE SAID CONTRACTOR IN)
THE PRESENCE OF)
) SIGNATURE OF
) CONTRACTOR

WITNESSES :

1.

2.

SIGNED SEALED AND DELIVERED)
BY AND FOR AND ON BEHALF OF)
CITY & INDUSTRIAL DEVELOPMENT)
CORPORATION OF MAHARASHTRA)
LIMITED)

IN THE PRESENCE OF WITNESSES)

ENGINEER

PROMISSORY NOTE
(on stamp paper of Appropriate Value)

In terms of para 10 of Indenture Bond we agree to pay a sum of Rs. _____

(Rupees _____

_____) as a collateral security for Contract Agreement No.

_____ for the work of

_____ .

For
(Signature of Contractor)

Place :

Date :

INDEMNITY BOND

(On Stamp Paper of Value Rs.300/-)

In consideration of City and Industrial Development Corporation of Maharashtra Limited, a Company incorporated under the Companies Act, 1956 and having its Registered Office at "Nirmal", 2nd floor, Nariman Point, Mumbai - 400 021 (hereinafter referred to as the 'Employer', which expression shall unless it be repugnant to the context or meaning thereof includes it's successors and assigns) having awarded the contract of the work of
" _____ "

(Name of Work) at an awarded cost of Rs. _____ to M/s.
_____ (Name of Agency) a Partnership / Proprietorship / Private Limited / Public Limited firm carrying in such name and style the business of construction (hereinafter referred to as the 'Contractor' which expression shall, unless it be repugnant to the context or meaning thereof, includes its Proprietor/Partners/Directors for the time being or its surviving partner or his heirs and executors).

We, M/s. _____, being the Contractor do hereby agree and undertake and indemnify and save harmless the Employer in consequence of the manufacturing defect, latent manufacturing defect and construction defect found in the constructed works at any time in a period of Five (5) years commencing with the certified completion date certificate by the Employer to the Contractors in accordance with and subject to the provisions of the said contract.

It is hereby agreed and declared that the CHIEF ENGINEER (NMIA) of the Employer or any officer acting on his behalf shall be Competent Authority to decide upon the question as to the defects in the construction of works and the remedy to be applied by the Contractor for their rectification at his cost and his

decision shall be final, conclusive and binding upon both the Employer and the Contractor, provided that the CHIEF ENGINEER (NMIA) shall so decide after giving an opportunity to the Contractor to represent his case.

We hereby agree and undertake irrevocably and unconditionally to carry out duly each and every decision, order, direction or instruction as may be issued by the said CHIEF ENGINEER (NMIA) or as the case may be, the Officer of the Employer in this behalf and to rectify properly and promptly the defects found by him.

For & On behalf of M/s. _____

Date :
(Seal)

Notary, Maharashtra State

Before Me

Notary, Maharashtra State

Notary and Registered
at Serial Number

Accepted by :

(For & On behalf of CIDCO Ltd.)

PROFORMA OF BANK GUARANTEE FOR EMD

(Valid for Min. period of 6 months)
(On stamp paper of Appropriate Value)

To:

**The City and Industrial Development
Corporation of Maharashtra Limited,**
'Nirmal', 2nd floor, Nariman Point,
Mumbai - 400 021.

1. In consideration of City & Industrial Development Corporation of Maharashtra Limited, a Company incorporated under the Companies Act, 1956 (I of 56) and having its registered office at 'Nirmal', 2nd floor, Nariman Point, Mumbai 400 021 (hereinafter called the "Employer" which expression shall unless repugnant to the subject and context on meaning thereof include its successors and assigns) having invited Bids in connection with Contract No. _____ dated _____ for the execution of Civil work of _____ and in further consideration of the Employer having consented to permit M/s. _____ (Name of Agency) (hereinafter called "the Bidder", which expressions shall unless be repugnant on the context and meaning thereof include his heir, executors and administrators and assign/assigns) to deposit the Earnest Money Deposit of Rs. _____ (Rupees _____) in the form of an unconditional and irrevocable Bank Guarantee furnished by (Name of Nationalised / Scheduled Bank, Mumbai / Navi Mumbai Branch) in accordance with the conditions of the said notice inviting the Bids.
2. We the Bank of _____ (Name of Bank), constituted and established under the Banking companies Act, Acquisition

and Transfer Undertaking Act 1970 - a company incorporated under Companies Act 1956 and Scheduled Bank, within the meaning of Reserve Bank Act 1934, Clause (e) of Section 2 having our Head office at _____(Address) do and hereby guarantee, undertake and agree to pay the Employer a sum of Rs. _____ (Rupees _____) in the event of the Bidder revoking his Bid or; offer or vary or modify any conditions stipulated in, more particularly specified in para 3.4 of the Notice of Bid & Instructions to the Bidders; or further, in the event of the Bidder failing or omitting to deposit the Contract Deposit in accordance with Condition No.10.1.1 of the General Conditions of the contract.

3. We, Bank of _____ further agree that the Employer shall be sole judge of and as to whether the contractor has committed any breach or breaches of any of the terms and conditions of the said contract and the extent of loss, damages, costs, charges and expenses caused to or suffered by or that may be caused to or suffered by the Employer on account thereof and the decision of the Employer that the contractor has committed such breach or breaches and as to the amount or amounts of loss, damage, cost, charges and expenses caused to or suffered by or that may be caused to or suffered by the Employer from time to time shall be final and binding on us.
4. We, the said Bank, further agree that the Guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said contract and till all the dues of the Employer under the said Contract or by virtue of any of the terms and conditions governing the said contract have been fully paid and it's claims satisfied or discharged and till Chief Engineer & General Manager(Tech) certifies that the terms and conditions of the said contract have been fully and properly carried out by the contractor and

accordingly discharges this guarantee subject however that the Employer shall have no claim under this Guarantee after completion of the work or from the date of cancellation of the said contract, as the case may be, unless a notice of the claim under this Guarantee has been served on the Bank before the expiry of the said period of six months from the date of receipt of Bid i.e. in which case the same shall be enforceable against the Bank notwithstanding the fact that the same is enforced after the expiry of the said period of six months from the date of receipt of Bid i.e._____.

5. The Employer shall have the fullest liberty without affecting in any way the liability of the Bank under this Guarantee of Indemnity from time to time vary any of the terms and conditions of the said contract or to extend time of performance by the Contractor or to postpone for any time and from time to time any of the power exercisable by its against the contractor and either to enforce or forbear from enforcing any of the terms and conditions governing the said contract or securities available to the Employer and the said bank shall not be released from its liability under these presents by an exercise by the Employer of the liberty with reference to the matters aforesaid or by reason of time being given to the Contractor or any other forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the Contractor or of any other matter or things whatsoever which under the law relating to surities would but for this provision have the effect of so releasing the Bank from its such liability.
6. It shall not be necessary for the Employer to proceed against the contractor before proceeding against the Bank and the Guarantee herein contained shall be enforceable against the bank notwithstanding any security which the Employer may have obtained or obtain from the

Contractor shall at the time when proceedings are taken against the bank hereunder be outstanding or unrealised.

7. We, the said Bank lastly undertake not to revoke this Guarantee during the currency except with the previous consent of the Employer in writing and agree that any change in the constitution of the Contractor or the said Bank shall not discharge our liability hereunder.
8. Our liability under this bond is restricted to Rs. _____ and it will remain till the _____, unless an action to enforce the claim under the guarantee is filed against us before that date all your rights under the said Guarantee shall be forfeited and we shall be relieved and discharged for all liability thereunder.

Dated this _____ the day of _____ 20__.

For and on behalf of the Bank

Date :

The above guarantee is accepted by

For & on behalf of the Employer

(Name and Designation)

PROFORMA OF BANK GUARANTEE TOWARDS
UNBALANCED BID

(On stamp paper of Rs.300/- from Nationalized Bank & operatable in Mumbai or Navi Mumbai only)

(B.G. shall be accepted in case of security towards unbalanced bid amount is equal to or more than Rs. 1.0 lakh)

To,

The City and Industrial Development Corporation
of Maharashtra Limited,
'Nirmal', 2nd floor, Nariman Point,
Mumbai - 400 021.

1. In consideration of City & Industrial Development Corporation of Maharashtra Limited, a Company incorporated under the Companies Act, 1956 (I of 56) and having its registered office at 'Nirmal', 2nd floor, Nariman Point, Mumbai 400 021 (hereinafter called the 'Employer' which expression shall unless repugnant to the subject and context on meaning thereof include its successors and assigns) having agreed under the term and conditions of Contract Agreement Contract No. _____ dated _____ made between M/s. _____ (Name of Agency) (hereinafter called the 'Contractor' which expressions shall unless be repugnant to the subject or context and meaning thereof include his heir, executors and administrators and assign its successors and assign) and the Employer in consideration with _____ (Name of work) (hereinafter called "the said Contract") to accept a deed of Guarantee as herein provided for Rs. _____ by _____ (Name of the Nationalized / Scheduled Bank, Mumbai / Navi Mumbai Branch) towards unbalanced bid, for the due fulfillment by the Contractor of the terms and conditions contained in the said contract. We, _____ (Name of Bank and detailed address) the Bank constituted and establish under the

Banking Companies (Acquisition and Transfer of Undertaking) Act, 1979 (hereinafter referred to as the 'said Bank') and having our Head Office at _____ (Address) at the request of M/s. _____ (Name of Agency) do hereby undertake to pay to the Employer an amount not exceeding Rs. _____ (Rupees _____ only) against any loss or damage caused to or suffered or would be caused to or suffered by the Employer by reasons of any breach by the said Contractor (s) of any of the terms or conditioned in the said Contract Agreement and to unconditionally pay the amount claimed by the Employer on demand and without demur to the extent expressed.

2. We, _____ (Name of Bank) do hereby undertake to pay amounts due and payable under this guarantee without any demur, merely on a demand from the Employer stating that the amount claimed is due by way of loss or damage caused to, or would be caused to or suffered by the Employer by reason of breach by the said Contractor(s) of any of the terms or condition contained in the said Contract Agreement or by reasons of the Contractor(s) failure to perform the said Contract Agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. _____ (Rupees _____ only).
3. We, _____ (Name of Bank) further agree that the Employer shall be the sole judge of and as to whether the Contractor has committed a breach of any of the terms and conditions of the said Contract and the extent of the loss, damage, costs, charges and expenses caused to or suffered by or that may be caused to or suffered by the Employer on account thereof and the decision of the Employer that the Contractor has committed such breach and as to the amount or amounts of loss, damage, costs, charges and expenses caused to or suffered by or that

may be caused to or suffered by the Employer from time to time shall be final and binding on us.

4. We undertake to pay the Employer any money so demanded notwithstanding any dispute or disputes raised by the Contractor(s)/ Supplier(s) in any suit or proceeding pending before any court of Tribunal unequivocal, without demur. The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the Contractor(s) / Suppliers) shall have no claim against us for making such payment.

5. We, _____ (*Name of Bank*) further agree that the guarantee herein contained shall remain in full force and effect during the Contract Period including Extensions in time limit if any & also till such time the Taking Over Certificate is issued for the whole completed work including that would be taken from the performance of the said Agreement and shall continue to be enforceable till all the dues of the Employer under or by the said Agreement have been fully paid and its claims satisfied or discharged or till the _____ (*indicate the Authority & Administrative Department*) certified that the terms and conditions of the said Contract Agreement have been fully and properly earned out by the said Contractor(s) and accordingly discharges this guarantee. Unless a demand or claim under this guarantee is made on us in writing on or before _____ (*contract period + claim period*) we shall be discharged from all liability under this guarantee thereafter.

- 6) We, _____, further agree with the Employer, that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Agreement or to extend the time of performance by the said Contractor(s) from time to time or to postpone for any time any of the powers exercisable by the Employer against the said Contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be

relieved from our liability by reasons of any such variation, or extension being granted the said Contractor(s) or for any forbearance act or omission on the part of the Employer or any indulgence by the Employer to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provisions have effect of so relieving us.

- 7) This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor(s) / Supplier(s).
- 8) This guarantee is valid till _____ (*completion date*) unless a suitable action to enforce the claim under this guarantee is made within six months from completion date i.e. up to _____ (*date*) all yours rights under this guarantee shall be forfeited and we shall be relieved and discharged from all liabilities there under.
- 9) We, _____ (*Name of Bank*)
lastly undertake not to revoke this guarantee during die currency except with the previous consent of the Employer in writing.

Dated this _____ day of _____ 20__.

Dated this _____ day of _____ 20__.

FOR & ON BEHALF OF BANK

The above guarantee is accepted
For and on behalf of the Employer

(Name & Designation)


Date :

PROFORMA AGREEING TO
GENERAL CONDITIONS OF CONTRACT

1. It is hereby agreed that the General Conditions of Contract comprising condition Nos. 1 to 71.1, Annexure 'A, 'B' & 'C', Appendix I to Sub Clause 67.4 and Appendix II to Sub Clause 67.4 part constituting the contract and I/We agree to abide by the conditions therein.
2. I/we have read and understood the said General Conditions of Contract with the Annexures and Appendix and my/our signature/s hereunder amounts to my/our having signed the above referred General Conditions of contract as forming part of this contract.
3. Please Note that the correction in the Clause No. 47.1 (Compensation for Delay) line No.2 of G.C.C. Please read clause No.43, instead of Clause No. 48. All other text remain unchanged.

This is to confirm that I have read all the **General Condition of the contract** and understood the same.

Signature of Bidder
Date :



Superintending Engineer (Elect-Proj.)
Date :

PROFORMA FOR ANTI-COLLUSION CERTIFICATE

Date:

To,
Executive Engineer (ELECT-AP)
CIDCO Ltd., 8th Floor, Raigad Bhavan,
CBD Belapur , Navi Mumbai-400 614.

Sir,

Ref: Bid for "Providing Pumping arrangement along with Electrical power supply at holding pond near Dungi"

We hereby certify and confirm that in the preparation and submission of this Proposal, we have not acted in concert or in collusion with any other bidder or other person(s) and also not done any act, deed or thing which is or could be regarded as anti-competitive.

We further confirm that we have not offered nor will offer any illegal gratification in cash or kind to any person or agency in connection with the instant Proposal.

Dated this Day of, 20__

Name of the bidder

Signature of the Authorized
person

Name of the Authorized Person

NOTE:

On the Letterhead of the bidder.



Name of Work : Providing Pumping arrangement along with Electrical power supply at holding pond near Dungi

C.A.No. : 01/CIDCO/EE(Elect-AP)/2020-21

GENERAL CONDITIONS OF CONTRACT

Sl. Pg. 92 to Sl. Pg. 207



**CITY & INDUSTRIAL DEVELOPMENT
CORPORATION OF MAHARASHTRA LTD.**

**REVISED
GENERAL CONDITIONS OF CONTRACT
OF CIDCO LTD.**

(W.e.f. _____)

Updated upto _____

ISSUED TO _____

SIGN. OF ISSUING AUTHORITY _____

Price Rs. 100/-

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GENERAL CONDITIONS

Definitions and Interpretation

Definitions

1.1 In the Contract (as hereinafter defined) the following words and expressions shall have the meanings hereby assigned to them, except where the context otherwise requires:

- (a) (i) **“Employer”** means the CIDCO Ltd. a Company incorporated under the Companies Act, 1956 (The Corporation).
- (ii) **“Contractor”** means the person whose tender has been accepted by the Employer and the legal successors in title to such person, but not any assignee of such person appointed without consent of Employer.
- (iii) **“Subcontractor”** means the person named in the Contract as a Subcontractor for a part of the Works or any person to whom a part of the Works has been subcontracted with the consent of the Engineer and the legal successors in title to such person, but not any assignee of any such person appointed without consent of Employer.
- (iv) **“Engineer”** means the person nominated by the Employer to act as Engineer for the purposes of the Contract and named as such in Annexure “A” of these Conditions.
- (v) **“Engineer’s Representative”** means a person appointed from time to time by the Engineer under Sub-Clause 2.2
- (vi) The **‘Managing Director’** means the Managing Director of the CIDCO Ltd., for the time being holding that office and also his successors and shall include any officer authorised by him.
- (vii) The **‘Joint Managing Director’** means the Joint Managing Director of the CIDCO Ltd., for the time being holding that office

and also his successors and shall include any officer authorised by him.

- (viii) The "**Chief Engineer**" means Chief Engineer & General Manager (Technical), the officer so designated in the Corporation or any other officer who is for the time being entrusted with his functions, duties and powers by the Managing Director and notified to the Contractor.
 - (ix) The "**Additional Chief Engineer**" means the officer, so designated in the Corporation or any other officer who is for the time being entrusted with his functions, duties and powers by the Managing Director and notified to the Contractor.
 - (x) The "**Chief Accounts Officer**" means the officer, so designated in the Corporation or any other officer who is for the time being entrusted with his functions, duties and powers by the Managing Director and notified to the Contractor.
 - (xi) The '**Superintending Engineer** ' means the officer, so designated in the Corporation or any other officer who is for the time being entrusted with his functions, duties and powers by the Managing Director and notified to the Contractor.
 - (xii) The '**Executive Engineer** ' means the officer, so designated in the Corporation or any other officer who is for the time being entrusted with his functions, duties and powers by the Managing Director and notified to the Contractor.
 - (xiii) The "**Inspecting Officers**" shall mean the Chief Engineer, Additional Chief Engineer, Superintending Engineer or any other officer or person for the time being exercising their functions, duties and powers.
- (b) (i) "**Contract**" means these Conditions, the Specifications, the Drawings, the Bill of Quantities, the Tender, the Letter of Acceptance, the Work order, the Contract Agreement (if completed) and such further documents as may be expressly incorporated in the Letter of Acceptance or Contract Agreement (if completed).

- (ii) **"Specification"** means the specification of the Works included in the Contract and any modification thereof or addition thereto made under Clause 51 or submitted by the Contractor and approved by the Engineer.
 - (iii) **"Drawings"** means all drawings, calculations and technical information of a like nature provided by the Engineer to the Contractor under the Contract and all drawings, calculations, samples, patterns, models, operation and maintenance manuals and other technical information of a like nature submitted by the Contractor and approved by the Engineer.
 - (iv) **"Bill of Quantities"** means the priced and completed Bill of quantities forming part of the Tender.
 - (v) **"Tender"** means the Contractor's priced offer to the Employer for the execution and completion of the Works and the remedying of any defects therein in accordance with the provisions of the Contract, as accepted by the Letter of Acceptance.
 - (vi) **"Letter of Acceptance"** means the formal acceptance by the Employer of the Tender.
 - (vii) **"Contract Agreement"** means the contract agreement (if any) referred to in Sub-Clause 9.1.
 - (viii) **"Work Order"** means the written communication of the Engineer ordering starting of the Work and specifying Commencement date and date of completion.
- (c) (i) **"Commencement Date"** means the date upon which the Contractor receives the notice to commence, issued by the Engineer pursuant to clause 41.
- (ii) **"Time for Completion"** means the time for completing the execution of and passing the Test on Completion of the Works or any Section or part thereof as stated in the Contract (or as extended under Clause 44) calculated from the Commencement Date.
- (d) (i) **"Tests on Completion"** means the tests specified in the contract or otherwise agreed by the Engineer and the Contractor which are

to be made by the Contractor before the Works or any section or part thereof are taken over by the Employer.

- (ii) **“Taking over Certificate”** means a certificate issued pursuant to clause 48.
- (e) (i) **“Contract Price”** means the sum stated in the Letter of Acceptance as payable to the Contractor for the execution and completion of the Works and the remedying of any defects therein in accordance with the provisions of the Contract.
- (ii) **“Performance Security”** means the aggregate of all monies retained by the Employer pursuant to Sub-Clause 10.1.
- (iii) **“Interim Payment Certificate”** means the certificate of payment issued by the Engineer other than the Final Payment Certificate.
- (iv) **“Final Payment Certificate”** means the certificate of payment issued by the Engineer pursuant to Sub-Clause 60.8.
- (f) (i) **“Works ”** means the Permanent Works and the Temporary Works or either of them as appropriate.
- (ii) **“Permanent Works”** means the permanent Works to be executed (including Plant) in accordance with the Contract.
- (iii) **“Temporary Works”** means all temporary Works of every kind (other than Contractor’s Equipment) required in or about the execution and completion of the Works and the remedying of any defects therein.
- (iv) **“Plant”** means machinery, apparatus and the like intended to form or forming part of the Permanent Works.
- (v) **“Contractor’s Equipment”** means all appliances and things of whatsoever nature (other than Temporary Works) required for the execution and completion of the Works and the remedying of any defects therein, but does not include Plant, materials or other things intended to form or forming part of the Permanent Works .
- (vi) **“Section”** means a part of the Works specifically identified in the Contract as a Section.

- (vii) **“Site”** means the places provided by the Employer where the Works are to be executed and any other places as may be specifically designated in the Contract as forming part of the Site.
- (g) (i) **“Cost”** means all expenditure properly incurred or to be incurred, whether on or off the Site, including overhead and other charges properly allocable thereto but does not include any allowance for profit.
- (ii) **“Day”** means calendar day.
- (iii) **“Foreign currency”** means a currency of a country other than that in which the Works are to be located.
- (iv) **“Writing”** means any hand-written, type-written, or printed communication, including telex, cable and facsimile transmission.

Headings and Marginal Notes

- 1.2** The headings and marginal notes in these Conditions shall not be deemed part thereof or be taken into consideration in the interpretation or construction thereof or of the Contract.

Interpretation

- 1.3** Words importing persons or parties shall include firms and corporations and any organization having legal capacity.

Singular and Plural

- 1.4** Words importing the singular only also include the plural and vice versa where the context requires.

Notices, Consents, Approvals, Certificates & Determinations

- 1.5** Wherever in the Contract provision is made for the giving or issue of any notice, consent, approval, certificate or determination by any person, unless otherwise specified such notice, consent, approval, certificate or determination shall be in writing and the words “notify”, “certify” or “determine” shall be construed accordingly. Any such consent, approval, certificate or determination shall not unreasonably be withheld or delayed.

Engineer and Engineer's Representative

Engineer's Duties and Authority

- 2.1 (a) The Engineer shall carry out the duties specified in the Contract.
- (b) The Engineer may exercise the authority specified in or necessarily to be implied from the Contract, provided, however, that in respect of the items mentioned in following paragraph (d) of this section, the Engineer shall obtain specific approval of the Employer. Provided further that, any requisite approval shall be deemed to have been given by the Employer for any such authority exercised by the Engineer.
- (c) Except as expressly stated in the Contract, the Engineer shall have no authority to relieve the Contractor of any of his obligations under the Contract.
- (d) Notwithstanding anything contrary in this document, the Engineer shall obtain specific approval of the Employer in respect of the following:
- (a) Approving subletting of the work.
 - (b) Granting claims to the Contractor.
 - (c) Ordering suspension of the work.
 - (d) Determining an extension of time.
 - (e) Reduction of Compensation for Delay as per Sub-Clause 47.2
 - (f) ordering variations.
 - (g) Ordering any work/test beyond the scope of the Contract.
 - (h) Determining rates for the varied works.
 - (i) Any variations in the Contract condition.
 - (j) Approval to designs and working drawings.
 - (k) payment of bonus for early completion

Engineer's Representative

- 2.2 The Engineer's Representative may be appointed by and be responsible to the Engineer and shall carry out such duties and exercise such authority as may be delegated to him by the Engineer under Sub-Clause 2.3.

Engineer's Authority to Delegate

- 2.3 The Engineer may from time to time delegate to the Engineer's Representative any of the duties and authorities vested in the Engineer and he may at any time revoke such delegation. Any such delegation or revocation shall be in writing and shall not take effect until a copy thereof has been delivered to the Employer and the Contractor.

Any communication given by the Engineer's Representative to the Contractor in accordance with such delegation shall have the same effect as though it had been given by the Engineer. Provided that:

- (a) Any failure of the Engineer's Representative to disapprove any work, materials or Plant shall not prejudice the authority of the Engineer to disapprove such work, materials or Plant and to give instructions for the rectification thereof; and
- (b) If the Contractor questions any communication of the Engineer's Representative he may refer the matter to the Engineer who shall confirm, reverse or vary the contents of such communication.

Appointment of Assistants

- 2.4 The Engineer or Engineer's Representative may engage any number of persons to assist the Engineer's Representative in the carrying out of his duties under Sub-Clause 2.2. He shall notify to the Contractor the names, duties and scope of authority of such persons. Such assistants shall have no authority to issue any instructions to the Contractor save in so far as such instructions may be necessary to enable them to carry out their duties and to secure their acceptance of materials, Plant or workmanship as being in accordance with the Contract, and any instructions given by any of them for those purposes shall be deemed to have been given by the Engineer's Representative.

Instructions in Writing

- 2.5 Instructions given by the Engineer shall be in writing, provided that if for any reason the Engineer considers it necessary to give any such instruction orally, the Contractor shall comply with such instruction. Confirmation in writing of such oral instruction given by the Engineer, whether before or after the carrying out of the instruction, shall be deemed to be an instruction within the meaning of this Sub-Clause. Provided further that if the Contractor, within 7 days, confirms in writing to the Engineer any oral instruction of the Engineer and such confirmation is not contradicted in writing within 7 days by the Engineer, it shall be deemed to be an instruction of the Engineer.

The provision of this Sub-Clause shall equally apply to instructions, given by the Engineer's Representative and any assistants of the Engineer or the Engineer's Representative appointed pursuant to Sub-Clause 2.4.

A site order book shall be maintained on the site and it shall be the property of the Employer and the Contractor shall promptly sign orders given therein by the Engineer or his representative or his assistant and comply with them. The compliance shall be reported by Contractor to the Engineer in good time so that it can be checked.

Engineer to Act Impartially

- 2.6 Wherever, under the Contract, the Engineer is required to exercise his discretion by:
- (a) giving his decision, opinion or consent,
 - (b) expressing his satisfaction or approval,
 - (c) determining value, or
 - (d) Otherwise taking action which may affect the right and obligations of the Employer or the Contractor

he shall exercise such discretion impartially with in the terms of the Contract and having regard to all the circumstances. Any such decision, opinion, consent, expression of satisfaction, or approval, determination of value or action may be opened up, reviewed or revised as provided in Clause 67.

Assignment and Subcontracting

Assignment of Contract

3.1 The Contractor shall not, without the prior consent of the Employer (which consent, notwithstanding the provisions of Sub-Clause 1.5, shall be at the sole discretion of the Employer), assign the Contract or any part thereof, or any benefit or interest therein or thereunder, otherwise than by:

- (a) a charge in favour of the Contractor's bankers of any monies due or to become due under the Contract,
- (b) assignment to the Contractor's insurers (in cases where the insurers have discharged the Contractor's loss or liability) of the Contractor's right to obtain relief against any other party liable.

Subcontracting

4.1 The Contractor shall not subcontract the whole of the Works. Except where otherwise provided by the Contract, the Contractor shall not subcontract any part of the Works without the prior consent of the Engineer. Any such consent shall not relieve the Contractor from any liability or obligation under the Contract and he shall be responsible for the acts, defaults and neglects of any Subcontractor, his agents, servants or workmen as fully as if they were the acts, defaults or neglects of the Contractor, his agents, servants or workmen.

Provided that the Contractor shall not be required to obtain such consent for:

- (a) the provision of labour,
- (b) the purchase of materials which are in accordance with the standards specified in the Contract, or
- (c) the subcontracting of any part of the Works for which the Subcontractor is named in the Contract.

Assignment of Subcontractor's Obligations

4.2 In the event of a Subcontractor having undertaken towards the Contractor in respect of the Work executed, or the goods, materials, Plant or services supplied by such Subcontractor, any continuing obligation extending for a period exceeding that of the Defects Liability Period under the Contract, the Contractor shall at any time, after the expiration of such Period, assign to the Employer, at

the Employer's request and cost, the benefit of such obligation for the unexpired duration thereof.

Contract Documents

Language(s) and Law

- 5.1 (a) The languages are English and Marathi, being a Local Language of State of Maharashtra, India. The Ruling Language is English.
- (b) Law - The Contract shall be governed by and construed in accordance with the law of India and all disputes arising out of or in any way connected to the Contract shall be deemed to have arisen in Mumbai and only the courts in Mumbai shall have jurisdiction to determine the same.

Priority of Contract Documents

- 5.2 The several documents forming the Contract are to be taken as mutually explanatory of one another, but in case of ambiguities or discrepancies the same shall be explained and adjusted by the Engineer who shall thereupon issue to the Contractor instructions thereon and such event, unless otherwise provided in the Contract, the priority, in descending order, of the documents forming the Contract shall be as follows:

- (a) Letter of Acceptance
- (b) Description of items of Work given in bill of quantities.
- (c) Particular specifications for contract
- (d) Special conditions of contract.
- (e) General conditions of contract.
- (f) Drawing forming part of contract.
- (g) Any other document forming part of the contract.

In case of Lump-sum contracts/ Turnkey Contracts, the order of preference mentioned above stands altered whereby the drawing forming part of the Contract will have highest priority next to Letter of Acceptance.

Custody and Supply of Drawings and Documents

- 6.1 The Contract document and Drawings shall remain in the sole custody of the Engineer, but two copies thereof, duly certified by the Engineer, shall be provided

to the Contractor free of charge. The Contractor shall make at his own cost any further copies required by him. Unless it is strictly necessary for the purposes of the Contract, the Drawings, Specification and other documents provided by the Employer or the Engineer shall not, without the consent of the Engineer, be used or communicated to a third party by the Contractor. Upon issue of the Defects Liability Certificate, the Contractor shall return to the Engineer all Drawings, Specification and other documents provided under the Contract.

One Copy of Drawings to be kept on Site

- 6.2 One copy of the Drawing, provided to or supplied by the Contractor as aforesaid, shall be kept by the Contractor on the Site and the same shall at all reasonable times be available for inspection and use by the Engineer and by any other person authorised by the Engineer in writing.

Disruption of Progress

- 6.3 The Contractor shall give notice to the Engineer, with a copy to the Employer, whenever planning or execution of the Works is likely to be delayed or disrupted unless any further drawing or instruction is issued by the Engineer within a reasonable time. The notice shall include details of the drawing or instruction required and of why and by when it is required and of any delay or disruption likely to be suffered if it is late.

Delays and Cost of Delay of Drawings

- 6.4 If, by reason of any failure or inability of the Engineer to issue, within a time reasonable in all the circumstances, any drawing or instruction for which notice has been given by the Contractor in accordance with Sub-Clause 6.3, the Contractor suffers delay and/or incurs costs then the Engineer shall, after due consultations with the Employer & the Contractor, determine:
- a) any extension of time to which the Contractor is entitled under Clause 44, and
 - b) the amount of such costs, which shall be added to the Contract Price, and shall notify the Contractor accordingly, with a copy to the Employer.

Failure by Contractor to Submit Drawings

- 6.5 If the failure or inability of the Engineer to issue any drawings or instructions is caused in whole or in part by the failure of the Contractor to submit Drawings,

Specification or other documents which he is required to submit under the Contract, the Engineer shall take such failure by the Contractor into account when making his determination pursuant to Sub-Clause 6.4.

Supplementary Drawings and Instructions

- 7.1 The Engineer shall have authority to issue to the Contractor, from time to time, such supplementary Drawings and instructions as shall be necessary for the purpose of the proper and adequate execution and completion of the Works and the remedying of any defects therein. The Engineer may also issue further drawings or instructions pursuant to Clause 51. The Contractor shall carry out and be bound by the same.

Permanent Works Designed by Contractor

- 7.2 Where the Contract expressly provides that part of the Permanent Works shall be designed by the Contractor, he shall submit to the Engineer, for approval :
- (a) such drawings, specifications, calculations and other information as shall be necessary to satisfy the Engineer as to the suitability and adequacy of that design, and
 - (b) operation and maintenance manuals together with drawings of the Permanent Works as completed, in sufficient detail to enable the Employer to operate, maintain, dismantle, reassemble and adjust the Permanent Works incorporating that design. The Works shall not be considered to be completed for the purposes of taking over in accordance with Clause 48 until such operation and maintenance manuals, together with drawings on completion, have been submitted to and approved by the Engineer.

Responsibility Unaffected by Approval

- 7.3 Approval by the Engineer, in accordance with Sub-Clause 7.2, shall not relieve the Contractor of any of his responsibilities under the Contract.

General Obligations

Contractor's General Responsibilities

- 8.1 The Contractor shall, with due care and diligence, design (to the extent provided for by the Contract), execute and complete the Works and remedy any defects therein in accordance with the provisions of the Contract. The Contractor shall

provide all superintendence, labour, materials, Plant, Contractor's Equipment and all other things, whether of a temporary or permanent nature, required in and for such design, execution, completion and remedying of any defects, so far as the necessity for providing the same is specified in or is reasonably to be inferred from the Contract.

The Contractor shall give prompt notice to the Engineer, with a copy to the Employer, of any error, omission, fault or other defect in the design of or Specification for the Works, which he discovers when reviewing the Contract of executing the Works.

Site Operations and Methods of Construction

- 8.2 The Contractor shall take full responsibility for the adequacy, stability and safety of all Site operations and methods of construction. Provided that the Contractor shall not be responsible (except as stated hereunder or as may be otherwise agreed) for the design or specification of Permanent Works, or for the design or specification of any Temporary Works not prepared by the Contractor. Where the Contract expressly provides that part of the Permanent Works shall be designed by the Contractor, he shall be fully responsible for that part of such Works, notwithstanding any approval by the Engineer.

Contractor's Representative

- 8.3 The Contractor shall himself supervise the execution of Works or shall appoint a competent representative approved by the Engineer to act in his stead. If in the opinion of the Engineer the Contractor has himself not sufficient knowledge and experience to be capable of receiving instructions or cannot give his full attention to the Works, the Contractor shall at his own expense, employ as his accredited representative, a suitably qualified and experienced person approved by the Engineer. The name of the representative, so appointed, along with the qualifications, experience and address, shall be communicated to the Engineer. The representative shall be a responsible person adequately authorised by the Contractor to take decision on site and to spend money, if required for procuring material and labour etc., to carry out emergency Work in the interest of the Contract work, if so required by the Engineer. Orders given to Contractor's representative shall be considered to have the same force as if these had been given to the Contractor himself. If the Contractor fails to appoint a suitable representative as directed by the Engineer, the Chief Engineer shall have full

powers to suspend the execution of the Works until such date as a suitable representative is appointed and the Contractor shall be held responsible for the delay so caused to the Works.

Temporary office for the Engineers

- 8.4 The Contractor shall at his own cost and to the satisfaction of the Engineer , Construct an office at the Works site, for Engineer's Supervisory staff which will include adequate furniture and the necessary arrangement for drinking water, toilet, etc. and shall be got approved from the Engineer. The office shall have area not less than the area given below:

Contract Amount	Minimum area of site Office
a) From 25 Lacs and upto 1 Crore	40 sq.m.
b) Above 1 crore and upto 10 crores	60 sq.m.
c) Above 10 crores	75 sq.m.

- a) For the Works above 1.0 crore, the Contractor shall also provide a new Computer of latest configuration with latest software with printer, scanner, back-up facility with UPS including maintenance of the Computer till the end of certified completion period of the contract.

The Contractor will bear all the expenses including procurement, installation and maintenance of the Computer. The Contractor shall also provide the Computer Operator and required consumables during the entire Contract period.

- b) The Computer, printer, scanner, UPS etc. provided under this clause, shall be the property of the Contractor and shall be taken back after the payment under Final Payment Certificate is made.

Changes in Constitution

- 8.5 Where the Contractor is a partnership firm, the prior approval in writing of the Managing Director shall be obtained before any change is made in the constitution of the firm. Where the Contractor is an individual or a Hindu Undivided family business concern such approval as aforesaid shall likewise be

obtained before the Contractor enters into any partnership agreement where under the partnership firm would have the right to carry out the Work hereby undertaken by the Contractor. If prior approval as aforesaid is not obtained, the Contractor shall be deemed to have been assigned in contravention of the condition 63 hereof and the same action may be taken and the same consequences shall ensure as provided for in the said condition 63.

Contract Agreement

- 9.1 The Contractor shall, within 30 days from the date of issue of Letter of Acceptance, prepare Contract agreement on stamp paper of required denominations as per the format provided in Contract document and shall attend the office of the Engineer, with intimation to the Engineer, to sign the Contract Agreement.

Performance Security

- 10.1 The Contractor shall pay a total Performance Security equal to five percent of the Contract Price as a security in form of Contract deposit and Retention money for due fulfilment of the contract, unless otherwise stated in the tender documents.

The mode of making this deposit is as under:

10.1.1 Contract deposit

A sum amounting to two & half percent (2.5 %) of the Contract Price shall be paid within 15 days after receipt of intimation in writing of acceptance to tender. It is optional for Contractor to make this deposit in one or the other of the following -

- i) Wholly in cash; or
- ii) Wholly in F.D.R. of Scheduled Bank, pledged in favour of Employer; or
- iii) Partly in cash and partly in F.D.R of Scheduled Bank, pledged in favour of Employer; or
- iv) By way of General Undertaking and Guarantee issued on behalf of the Contractors by the Nationalised/Scheduled Bank only by its Mumbai/Navi Mumbai Branch, provided the Banker's Guarantee covers the entire completion period, including extensions from time to time if any, the Bank Guarantee shall be acceptable only in case of Contractors Registered with Government Departments and provided Contract Price is Rs.100.00 lacs and above.

10.1.2 If the Contract deposit is paid in the manner as per paragraphs (ii) or (iii) of Sub-Clause 10.1.1 above, the value of F.D.R. to be lodged a deposit shall be taken as five percent below the market value on the day of acceptance or at their face value whichever is less.

In case the deposit is paid by the transfer of G.P. Notes, the endorsement in favour of the Corporation should be paid to the City and Industrial Development Corporation of Maharashtra Limited on order and should bear the 'EXAMINED' stamp of Public Department, Office, Reserve Bank of India. All the charges for safe custody, withdrawal or for collection of interest etc. on the paper deposit shall be payable by the Contractor. Securities endorsed for payment of interest in Mumbai only shall be accepted as deposits as aforesaid.

10.1.3 Retention Money

The remaining amount of the Performance Security of two & half percent (2.5 %) shall be recovered from amount due to the Contractor under Interim payment Certificates at the rate of five percent and such retention together with the Contract deposit made as aforesaid shall not exceed in the aggregate five percent of the Contract Price after which the deduction will cease.

Period of Validity of Performance Security

10.2 The performance security shall be valid until the Contractor has executed and completed the Works and remedied any defects therein in accordance with the Contract. No claim shall be made against such security after the issue of the Defects Liability Certificate in accordance with Sub-Clause 62.1 and such security shall be refunded to the Contractor within 14 days of the issue of the said Defects Liability Certificate after deduction for claims, if any.

Claims under Performance Security

10.3 Prior to making a claim under the performance security the Employer shall, in every case, notify the Contractor stating the nature of the default in respect of which the claim is to be made.

Inspection of Site

11.1 The Employer shall have made available to the Contractor, before the submission by the Contractor of the Tender, such data on hydrological and sub-surface conditions as have been obtained by or on behalf of the Employer from

investigation undertaken relevant to the Works but the Contractor shall be responsible for his own interpretation thereof.

The Contractor shall be deemed to have inspected and examined the Site and its surroundings and information available in connection therewith and to have satisfied himself (so far as is practicable, having regard to considerations of cost and time) before submitting his Tender, as to:

- (a) the form and nature thereof, including the sub-surface conditions,
- (b) the hydrological and climatic conditions,
- (c) the extent and nature of Work and materials necessary for the execution and completion of the Works and the remedying of any defects therein, and
- (d) the means of access to the Site and the accommodation he may require and, in general, shall be deemed to have obtained all necessary information, subject as above mentioned, as to risks, contingencies and all other circumstances which may influence or affect his Tender.

If the Contractor shall claim to have been obstructed in the execution of the Contract work by any act of lawlessness on the part of any person other than an agent or servant of the Corporation, the Contractor shall exclusively deal with such act by the due process of law but shall not be entitled to attribute thereby the breach of any obligation under the Contract to the Corporation and to claim from the Corporation compensation for damage or loss, if any thereby suffered, but shall only be entitled to an appropriate extension of period agreed for the completion of the Contract work. Provided that, the Contractor has reported to the local police authorities and the Corporation, every such act of obstruction with particulars, soon after its occurrence and the Corporation has, after enquiry, found the same to be substantially true and has determined the duration of such obstruction.

The Contractor shall be deemed to have based his Tender confirming details on his own inspection and examination, all as aforementioned.

Sufficiency of Tender

- 12.1 The Contractor shall be deemed to have satisfied himself as to the correctness and sufficiency of the Tender and of the rates and prices stated in the Bill of

Quantities, all of which shall, except insofar as it is otherwise provided in the Contract, cover all his obligations under the Contract (including those in respect of the supply of goods, materials, Plant or services or of contingencies for which there is a Provisional Sum) and all matters and things necessary for the proper execution and completion of the Works and the remedying of any defects therein.

Not Foreseeable physical obstructions or Conditions

- 12.2 If, however, during the execution of the Works the Contractor encounters physical obstructions or physical conditions, other than climatic conditions on the Site, which obstructions or conditions were, in his opinion, not foreseeable by an experienced contractor, the Contractor shall forthwith give notice thereof to the Engineer, with a copy to the Employer. On receipt of such notice, the Engineer shall, if in his opinion such obstructions or conditions could not have been reasonably foreseen by an experienced contractor, after due consultation with the Employer and the Contractor, determine any extension of time to which the Contractor is entitled under Clause 44, and shall notify the Contractor accordingly, with a copy to the Employer. Such determination shall take account of any instruction which the Engineer may issue to the Contractor in connection therewith, and any proper and reasonable measures acceptable to the Engineer which the Contractor may take in the absence of specific instructions from the Engineer.

Work to be in Accordance with Contract

- 13.1 Unless it is legally or physically impossible, the Contractor shall execute and complete the Works and remedy any defects therein in strict accordance with the Contract to the satisfaction of the Engineer. The Contractor shall comply with and adhere strictly to the Engineer's instructions on any matter, whether mentioned in the Contract or not, touching or concerning the Works. The Contractor shall take instructions only from the Engineer (or his delegate).

Programme to be Submitted

- 14.1 The Contractor shall, within 30 days after the date of the Letter of Acceptance, submit to the Engineer for his consent a programme, in such form and detail as the Engineer shall reasonably prescribe, for the execution of the Works. The Contractor shall, whenever required, by the Engineer, also provide in writing for

his information a general description of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works.

Revised Programme

- 14.2 If at any time it should appear to the Engineer that the actual progress of the Works does not conform to the programme to which consent has been given under Sub-Clause, 14.1, the Contractor shall produce, at the request of the Engineer, a revised programme showing the modifications to such programme necessary to ensure completion of the Works within the Time for Completion.

Cash Flow Estimate to be Submitted

- 14.3 The Contractor shall, within 30 days after the date of the Letter of Acceptance, provide to the Engineer for his information a detailed cash flow estimate, in quarterly periods, of all payments to which the Contractor will be entitled under the Contract and the Contractor shall subsequently supply revised cash flow estimates at quarterly intervals, if required to do so by the Engineer.

Contractor not relieved of Duties or Responsibilities

- 14.4 The submission to and consent by the Engineer of such programmes or the provision of such general descriptions or cash flow estimates shall not relieve the Contractor of any of his duties or responsibilities under the Contract.

Early Warning

- 14.5 The Contractor is expected to warn the Engineer, at the earliest opportunity, of specific likely future events or circumstances that may adversely affect the quality of work, increase the contract price or delay an estimate of the expected effect of the future events or circumstances on the Contract Price and Time for Completion. The estimate shall be provided by the contractor as soon as reasonably possible.

Contractor's Superintendence

- 15.1 The Contractor shall provide all necessary superintendence during the execution of the Works and as long thereafter as the Engineer may consider necessary for the proper fulfilling of the Contractor's obligations under the Contract. The Contractor, or a competent and authorised representative approved by the Engineer, which approval may at any time be withdrawn, shall give his whole time

to the superintendence of the Works. Such authorised representative shall receive, on behalf of the Contractor, instructions from the Engineer.

If approval of the representative is withdrawn by the Engineer, the Contractor shall, as soon as is practicable, having regard to the requirement of replacing him as hereinafter mentioned, after receiving notice of such withdrawal, remove the representative from the Works and shall not thereafter employ him again on the Works in any capacity and shall replace him by another representative approved by the Engineer.

Use of Corporation's land

15.2 The Contractor shall not be permitted to enter (other than for inspection purposes) or take possession of site until instructed to do so by the Engineer in writing. The portion of the site to be occupied by the Contractor shall be defined and/or marked on the site plan, failing which these shall be indicated by the Engineer and the Contractor shall on no account be allowed to extend his operations beyond these areas. The Contractor will be allowed to use such land free of charge for the purpose of sheds, offices thereon for themselves and for the Engineer and his subordinates, and shall remove the same from the ground at the completion of the Works or whenever required to do so by the Engineer after receiving 7 days notice. He shall make good any damage which may have been done and restore to good condition anything which may have been disturbed during the period of his occupation.

- a) The Contractor shall not use or allow to be used any such ground, sheds or offices, or any portion of the site of the Works, for any other purpose than the carrying out of Works under the Contract. In the event of there being no plot or ground or insufficiency of ground belonging to the Corporation, available for the above purposes, the Contractor shall provide other such ground at his own cost. The Contractor shall, in any case, pay all taxes, which have to be paid in respect of all ground sheds or offices used as above, and all the license fees, etc., that may be demanded for the storage or otherwise of the various articles as per rules in force. The Contractor shall provide, if necessary or if required, on the site, all temporary access thereto and shall alter, adopt and maintain the same as required from time to time and shall take up and clear them away as and when no longer required and make good all damage done to the site.

- b) In case, the Contractor requires additional land for specialised Works under the Contract, he shall approach to the Chief Engineer with details of his requirements. The decision of Chief Engineer in this respect shall be final and binding on the Contractor.

Supply of Water and Power

15.3 The Contractor shall make, at his own cost, his own arrangement for:

- a) supply of water required for the Works including water required for testing purpose and also for drinking purpose.
- b) power connection, if required.

Contractor's Employees

16.1 The Contractor shall provide on the Site in connection with the execution and completion of the Works and the remedying of any defects therein :

- (a) only such technical assistants as are skilled and experienced in their respective callings and such foremen and leading hands as are competent to give proper superintendence of the Works , and
- (b) such skilled, semi-skilled and unskilled labour as is necessary for the proper and timely fulfilling of the Contractor's obligations under the Contract.

Engineer at Liberty to Object

16.2 The Engineer shall be at liberty to object to and require the Contractor to remove forthwith from the Works any person provided by the Contractor who, in the opinion of the Engineer, misconducts himself, or is incompetent or negligent in the proper performance of his duties, or whose presence on Site is otherwise considered by the Engineer to be undesirable, and such person shall not be again allowed upon the Works without the consent of the Engineer. Any person so removed from the Works shall be replaced as soon as possible.

Setting Out

17.1 The Contractor shall be responsible for:

- (a) The accurate setting out of the Works in relation to original points, line and levels of reference given by the Engineer in writing.

- (b) The correctness, subject as above mentioned, of the position, levels, dimensions and alignment of all parts of the Works , and
- (c) The provision of all necessary instruments, appliances and labour in connection with the foregoing responsibilities.

If, at any time during the execution of the Works , any error appears in the position, levels, dimensions or alignment of any part of the Works , the Contractor, on being required so to do by the Engineer, shall at his own cost, rectify such error to the satisfaction of the Engineer, unless such error is based on incorrect data supplied in writing by the Engineer, in which case the Engineer shall determine an addition to the Contract Price in accordance with Clause 52 and shall notify the Contractor accordingly, with a copy to the Employer.

- d) All levels referred to in connection with these Works are based on G.T.S. levels

The checking of any setting out or of any line or level by the Engineer shall not in any way relieve the Contractor of his responsibility for the accuracy thereof and the Contractor shall carefully protect and preserve all bench-marks, site-rails, pegs and other things used in setting-out the Works .

Boreholes and Exploratory Excavation

- 18.1 If, at any time during the execution of the Works, the Engineer requires the Contractor to make boreholes or to carry out exploratory excavation, such requirement shall be the subject of an instruction in accordance with Clause 51.

Safety, Security and Protection of the Environment

- 19.1 The Contractor shall, throughout the execution and completion of the Works and the remedying of any defects therein :

- (a) have full regard for the safety of all persons entitled to be upon the Site and keep the Site (so far as the same is under his control) and the Works (so far as the same are not completed or occupied by the Employer) in an orderly state appropriate to the avoidance of danger to such persons.

The Contractor shall, at his own expense, arrange for the safety provisions indicated in Annexure-'B' or as required by the Engineer, in

respect of all labour, directly or indirectly employed for performance of the Works and shall provide all facilities in connection therewith. In case, the Contractor fails to make arrangements and provide necessary facilities as aforesaid, the Engineer may do so and recover the costs thereof from the Contractor.

- (b) Provide and maintain at his own cost all lights, guards, fencing, warning signs and watching, when and where necessary or required by the Engineer or by any duly constituted authority, for the protection of the Works or for the safety and convenience of the public or others, and
- (c) Take all reasonable steps to protect the environment on and off the Site, in accordance with Environment (Protection) Act, 1986, and amendments thereof, 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.
- (d) Trees designated by the Engineer shall be suitably protected from damage during the course of the Work as directed by the Engineer, cost of which shall be borne by the Contractor.

Employer's Responsibilities

19.2 If under Clause 31 the Employer shall carry out work on the Site with his own workmen he shall, in respect of such work:

- (a) have full regard to the safety of all persons entitled to be upon the Site, and
- (b) keep the Site in an orderly state appropriate to the avoidance of danger to such persons.

If under Clause 31 the Employer shall employ other contractors on the Site, he shall require them to have the same regard for safety and avoidance of danger.

Care of Works

20.1 The Contractor shall take full responsibility for the care of the Works and materials and Plant for incorporation therein from the Commencement Date until the date of issue of the Taking-Over Certificate for the whole of the Works, when the responsibility for the said care shall pass to the Employer, provided that :

- (a) if the Engineer issues a Taking-Over Certificate for any Section or part of the Permanent Works, the Contractor shall cease to be liable for the care of that Section or part from the date of issue of the Taking-Over Certificate, when the responsibility for the care of that Section or part shall pass to the Employer, and
- (b) the Contractor shall take full responsibility for the care of any outstanding Works and materials and Plant for incorporation therein which he undertakes to finish during the Defects Liability Period until such outstanding Works have been completed pursuant to Clause 49.

Responsibility to Rectify Loss or Damage

20.2 If any loss or damage happens to the Works, or any part thereof, or materials or Plant for incorporation therein, during the period for which the Contractor is responsible for the care thereof, from any cause whatsoever, other than the risks defined in Sub-Clause 20.4, the Contractor shall, at his own cost, rectify such loss or damage so that the Permanent Works conform in every respect with the provisions of the Contract to the satisfaction of the Engineer. The Contractor shall also be liable for any loss or damage to the Works occasioned by him in the course of any operations carried out by him for the purpose of complying with his obligations under Clause 49 and 50.

Loss or Damage Due to Employer's Risks

20.3 In the event of any such loss or damage happening from any of the risks defined in Sub-Clause 20.4, or in combination with other risks, the Contractor shall, if and to the extent required by the Engineer, rectify the loss or damage and the Engineer shall determine an addition to the Contract Price in accordance with Clause 52 and shall notify the Contractor accordingly, with a copy to the Employer.

In the case of a combination of risks causing loss or damage any such determination shall take into account the proportional responsibility of the Contractor and the Employer.

Employer's Risks

20.4 The Employer's risks are:

- (a) war, hostilities (whether war be declared or not), invasion, act of foreign enemies,
- (b) rebellion, revolution, insurrection, or military or usurped power, or civil war,
- (c) ionising radiations, or contamination by radio-activity from any nuclear fuel, or from any nuclear waste from the combustion of nuclear fuel, radioactive toxic explosive or other hazardous properties of any explosive, nuclear assembly or nuclear component thereof,
- (d) pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speeds,
- (e) riot, commotion or disorder, unless solely restricted to employees of the Contractor or of his Subcontractors and arising from the conduct of the Works ,
- (f) loss or damage due to the use or occupation by the Employer of any Section or part of the Permanent Works , except as may be provided for in the Contract.
- (g) loss or damage to the extent that it is due to the design of the Works, other than any part of the design provided by the Contractor or for which the Contractor is responsible, and
- (h) any operation of the forces of nature against which an experienced contractor could not reasonably have been expected to take precautions.

Insurance of Works and Contractor's Equipment

21.1 The Contractor shall, without limiting his or the Employer's obligations and responsibilities under Clause 20, insure:

- (a) the Works , together with materials and Plant for incorporation therein, to the full replacement cost (the term "cost" in this context shall include profit),
- (b) an additional sum of 15 per cent of such replacement cost, to cover any additional costs of and incidental to the rectification of loss or damage

including professional fees and the cost of demolishing and removing any part of the Works and of removing debris of whatsoever nature, and

- (c) the Contractor's Equipment and other things brought onto the Site by the Contractor, for a sum sufficient to provide for their replacement at the Site.

Scope of Cover

21.2 The insurance in paragraphs (a) and (b) of Sub-Clause 21.1 shall be in the joint names of the Contractor and the Employer and shall cover:

- (a) the Employer and the Contractor against all loss and damage from whatsoever cause arising, other than as provided in Sub-Clause 21.4, from the date of start of Work at the Site until the date of issue of the relevant Taking-Over Certificate in respect of the Works or any Section or part thereof as the case may be, and
- (b) the Contractor for his liability:
 - (i) during the Defects Liability Period for loss or damage arising from a cause occurring prior to the commencement of the Defects Liabilities Period, and
 - (ii) for loss or damage occasioned by the Contractor in the course of any operation carried out by him for the purpose of complying with his obligations under Clauses 49 and 50.
- (c) It shall be the responsibility of the Contractor to notify the insurance company of any change in the nature and extent of the Works and to ensure the adequacy of the insurance coverage at all times during the period of the Contract.

Responsibility for Amounts not Recovered

21.3 Any amounts not insured or not recovered from the insurers shall be borne by the Employer or the Contractor in accordance with their responsibilities under Clause 20

Exclusions

21.4 There shall be no obligation for the insurances in Sub-Clause 21.1 to include loss or damage caused by:

- (a) war, hostilities (whether war be declared or not), invasion, act of foreign enemies,
- (b) rebellion, revolution, insurrection, or military or usurped power, or civil war,
- (c) ionising radiations or contamination by radio-activity from any nuclear fuel, or from any nuclear waste from the combustion of nuclear fuel, radioactive toxic explosive or other hazardous properties of any explosive nuclear assembly or nuclear component thereof, or
- (d) pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speeds.

Damage to Persons and Property

22.1 The Contractor shall, except if and so far as the Contract provides otherwise, indemnify the Employer against all losses and claims in respect of:

- (a) death of or injury to any person, or
- (b) loss of or damage to any property (other than the Works),

which, may arise out of or in consequences of the execution and completion of the Works and the remedying of any defects therein, and against all claims, proceedings, damages, costs, charges and expenses whatsoever in respect thereof or in relation thereto, subject to the exceptions defined in Sub-Clause 22.2.

Exceptions

22.2 The “exceptions” referred to in Sub-Clause 22.1 are :

- (a) the permanent use or occupation of land by the Works , or any part thereof
- (b) the right of the Employer to execute the Works , or any part thereof, on, over, under, in or through any land,
- (c) damage to property which is the unavoidable result of the execution and completion of the Works , or the remedying of any defects therein, in accordance with the Contract, and
- (d) death of or injury to persons or loss of or damage to property resulting from any act or neglect of the Employer, his agents, servants or other

contractors, not being employed by the Contractor, or in respect of any claims, proceedings, damages, costs, charges and expenses in respect thereof or in relation thereto, or where the injury or damage was contributed to by the Contractor, his servants or agents, such part of the said injury or damage as may be just and equitable having regard to the extent of the responsibility of the Employer, his servants or agents or other contractors for the injury or damage.

Indemnity by Employer

22.3 The Employer shall indemnify the Contractor against all claims, proceedings, damages, costs, charges and expenses in respect of the matters referred to in the exceptions defined in Sub-Clause 22.2.

Third Party Insurance (including Employer's Property)

23.1 The Contractor shall, without limiting his or the Employer's obligations and responsibilities under Clause 22, insure, in the joint names of the Contractor and the Employer, against liabilities for death of or injury to any person (other than as provided in Clause 24) or loss of or damage to any property (other than the Works) arising out of the performance of the Contract, other than the exceptions defined in paragraphs (a), (b) and (c) of Sub-Clause 22.2.

Minimum Amount of Insurance

23.2 Such insurance shall be for at least the amount equivalent to 1.2 times the Contract Price.

Cross Liabilities

23.3 The insurance policy shall include a cross liability clause such that the insurance shall apply to the Contractor and to the Employer as separately insured.

Insurance Policy

23.4 All insurance to be effected by the Contractor and/or his sub- contractors (if any) shall be taken out only with the Government Insurance Fund, MAHARASHTRA State.

Accident or Injury to Workmen

24.1 The Employer shall not be liable for or in respect of any damages or compensation payable to any workman or other person in the employment of the

Contractor or any Subcontractor, other than death or injury resulting from any act or default of the Employer, his agents or servants. The Contractor shall indemnify and keep indemnified the Employer against all such damages and compensation, other than those for which the Employer is liable as aforesaid, and against all claims, proceedings, damages, costs, charges and expenses whatsoever in respect thereof or in relation thereto.

Insurance Against Accident to Workmen

24.2 The Contractor shall insure against such liability and shall continue such insurance during the whole of the time that any persons are employed by him on the Works. Provided that, in respect of any persons employed by any Subcontractor, the Contractor's obligations to insure as aforesaid under this Sub-Clause shall be satisfied if the Subcontractor shall have insured against the liability in respect of such persons in such manner that the Employer is indemnified under the policy, but the Contractor shall require such Subcontractor to produce to the Employer, when required, such policy of insurance and the receipt for the payment of the current premium.

It is mandatory for the Contractor that all workmen appointed to complete the Contract work, are insured under Workmen's Compensation Insurance Policy.

Evidence and Terms of Insurances

25.1 The Contractor shall provide evidence to the Employer as soon as practicable after respective insurances has been taken out but in any case prior to the start of Work at the Site that the insurances required under the Contract have been effected and shall, within 84 days of the Commencement Date, provide the insurance policies to the Employer. When providing such evidence and such policies to the Employer, the Contractor shall notify the Engineer of so doing. Such insurance policies shall be consistent with the general terms agreed prior to the issue of the Letter of Acceptance. The Contractor shall effect all insurances for which he is responsible with insurers and in terms approved by the Employer. The Contractor shall pay full premium prior to start of the Work and take out insurance policies for the entire period of Contract including defects liability period and also pay necessary premium for extended period of Contract if any. The Contractor shall prove to the Engineer from time to time that he has taken out all the insurance policies and has paid the necessary premiums for keeping the policies alive till expiry of the Defects Liability Period.

Adequacy of Insurances

25.2 The Contractor shall notify the insurers of changes in the nature, extent or programme for the execution of the Works and ensure the adequacy of the insurances at all times in accordance with the terms of the Contract and shall, when required, produce to the Employer the insurance policies in force and the receipt for payment of the current premiums.

Remedy on Contractor's Failure to Insure

25.3 If the Contractor fails to effect and keep in force any of the insurances required under the Contract, or fails to provide the policies to the Employer within the period required by Sub-Clause 25.1, then and in any such case the Employer may effect and keep in force any such insurances and pay any premium as may be necessary for that purpose and from time to time deduct the amount so paid from any monies due or to become due to the Contractor, or recover the same as a debt due from the Contractor.

Compliance with Policy Conditions

25.4 In the event that the Contractor or the Employer fails to comply with conditions imposed by the insurance policies effected pursuant to the Contract, each shall indemnify the other against all losses and claims arising from such failure.

Compliance with Statutes, Regulations

26.1 The Contractor shall conform in all respects, including by the giving of all notices and the paying of all fees, with the provisions of:

- (a) any National or State Statute, Ordinance, or other Law, or any regulation, or bye-law of any local or other duly constituted authority in relating to the execution and completion of the Works and the remedying of any defects therein, and
- (b) the rules and regulations of all public bodies and companies whose property or rights are affected or may be affected in any way by the Works,

and the Contractor shall keep the Employer indemnified against all penalties and liability of every kind for breach of any such provisions. Provided always that the Employer shall be responsible for obtaining any planning, zoning or other similar permission required for the Works to

proceed and shall indemnify the Contractor in accordance with Sub-Clause 22.3.

Fossils

27.1 All fossils, coins, articles of value or antiquity and structures and other remains or things of geological or archaeological interest discovered on the Site shall, as between the Employer and the Contractor, be deemed to be the absolute property of the Employer. The Contractor shall take reasonable precautions to prevent his workmen or any other persons from removing or damaging any such article or thing and shall, immediately upon discovery thereof and before removal, acquaint the Engineer of such discovery and carry out the Engineer's instructions for dealing with the same. If, by reason of such instructions, the Contractor suffers delay and/or incurs costs then the Engineer shall, after due consultation with the Employer and the Contractor determine:

- (a) any extension of time to which the Contractor is entitled under Clause 44, and
- (b) the amount of such costs, which shall be added to the Contract Price, and shall notify the Contractor accordingly, with a copy to the Employer.

Patent Rights

28.1 The Contractor shall save harmless and indemnify the Employer from and against all claims and proceedings for or on account of infringement of any patent rights, design trademark or name or other protected rights in respect of any Contractor's Equipment, materials or Plant used for or in connection with or for incorporation in the Works and from and against all damages, costs, charges and expenses whatsoever in respect thereof or in relation thereto, except where such infringement results from compliance with the design or Specification provided by the Engineer.

Royalties

28.2 Except where otherwise stated, the Contractor shall pay all tonnage and other royalties, rent and other payments or compensation, if any, for getting soil / earth , stone, sand, gravel, murum, clay or other materials required for the Works , imposed by authorities from time to time and submit to the Engineer, proof of such payment, if so required by the Engineer.

Interference with Traffic and Adjoining Properties

29.1 All operations necessary for the execution and completion of the Works and the remedying of any defects therein shall, so far as compliance with the requirements of the Contract permits, be carried on so as not to interfere unnecessarily or improperly with:

- (a) the convenience of the public, or
- (b) the access to, use and occupation of public or private roads and footpaths to or of properties whether in the possession of the Employer or of any other person.
- (c) the underground utilities services such as water pipes, gas pipes, drains, sewers, cables etc., which shall be protected and properly maintained at his own cost.

The Contractor shall save harmless and indemnify the Employer in respect of all claims, proceedings, damages, costs, charges and expenses whatsoever arising out of, or in relation to, any such matters insofar as the Contractor is responsible therefore.

The Contractor shall have to make all necessary arrangements for regulating traffic day and night, during the period of construction and to the entire satisfaction of the Engineer.

Avoidance of damage to Roads

30.1 The Contractor shall use every reasonable means to prevent any of the roads or bridges communicating with or on the routes to the Site from being damaged or injured by any traffic of the Contractor or any of his Subcontractors and, in particular, shall select routes, choose and use vehicles and restrict and distribute loads so that any such extraordinary traffic as will inevitably arise from the moving of materials, Plant, Contractor's Equipment or Temporary Works from and to the Site shall be limited, as far as reasonably possible, and so that no unnecessary damage or injury may be occasioned to such roads and bridges.

Transport of Contractor's equipment or temporary Works

30.2 Save insofar as the Contract otherwise provides, the Contractor shall be responsible for and shall pay the cost of strengthening any bridges or altering or

improving any road communicating with or on the routes to the Site to facilitate the movement of Contractor's Equipment or Temporary Works and the Contractor shall indemnify and keep indemnified the Employer against all claims for damage to any such road or bridge caused by such movement, including such claims as may be made directly against the Employer, and shall negotiate and pay all claims arising solely out of such damage.

Transport of materials or plants

- 30.3 If, notwithstanding Sub-Clause 30.1, any damage occurs to any bridge or road communicating with or on the routes to the Site arising from the transport of materials or Plant, the Contractor shall notify the Engineer with a copy to the Employer, as soon as he becomes aware of such damage or as soon as he receives any claim from the authority entitled to make such claim. Where under any law or regulation the haulier of such materials or Plant is required to indemnify the road authority against damage the Employer shall not be liable for any costs, charges or expenses in respect thereof or in relation thereto. In other cases the Employer shall negotiate the settlement of and pay all sums due in respect of such claim and shall indemnify the Contractor in respect thereof and in respect of all claims, proceedings, damages, costs, charges and expenses in relation thereto. Provided that if an so far as any such claim or part thereof is, in the opinion of the Engineer, due to any failure on the part of the Contractor to observe and perform his obligations under Sub-Clause 30.1, then the amount, determined by the Engineer, after due consultation with the Employer and the Contractor, to be due to such failure shall be recoverable from the Contractor by the Employer and may be deducted by the Employer from any monies due or to become due to the Contractor and the Engineer shall notify the Contractor accordingly, with a copy to the Employer. Provided also that the Employer shall notify the Contractor whenever a settlement is to be negotiated and, where any amount may be due from the Contractor, the Employer shall consult with the Contractor before such settlement is agreed.

Waterborne Traffic

- 30.4 Where the nature of the Works is such as to require the use by the Contractor of waterborne transport the foregoing provisions of this Clause shall be construed as though "road" included a lock, dock, sea wall or other structure related to a waterway and "vehicle" included craft, and shall have effect accordingly.

Opportunities for Other Contractors

- 31.1 The Contractor shall, in accordance with the requirements of the Engineer, afford all reasonable opportunities for carrying out their work to:
- (a) any other contractors employed by the Employer and their workmen,
 - (b) the workmen of the Employer, and
 - (c) the workmen of any duly constituted authorities who may be employed in the execution on or near the Site of any work not included in the Contract or of any contract which the Employer may enter into in connection with or ancillary to the Works .

Facilities for Other Contractors

- 31.2 If, however, pursuant to Sub-Clause 31.1 the Contractor shall, on the written request of the Engineer :
- (a) make available to any such other contractor, or to the Employer or any such authority, any roads or ways for the maintenance of which the Contractor is responsible,
 - (b) permit the use, by any such, of Temporary Works or Contractor's Equipment on the Site, or
 - (c) provide any other service of whatsoever nature for any such,
- the Engineer shall determine an addition to the Contract Price in accordance with Clause 52 and shall notify the Contractor accordingly, with a copy to the Employer.

Contractor to Keep Site Clear

- 32.1 During the execution of the Works the Contractor shall keep the Site reasonably free from all unnecessary obstruction and shall store or dispose of any Contractor's Equipment and surplus materials and clear away and remove from the Site any wreckage, rubbish or Temporary Works no longer required.

Clearance of Site on Completion

- 33.1 Upon the issue of any Taking-Over Certificate the Contractor shall clear away and remove from that part of the Site to which such Taking-Over Certificate relates all Contractor's equipment, surplus material, rubbish and Temporary Works of every kind, and leave such part of the Site and Works clean and in a

workmanlike condition to the satisfaction of the Engineer. Provided that the Contractor shall be entitled to retain on Site, until the end of the Defects Liability Period, such materials, Contractor's Equipment and Temporary Works as are required by him for the purpose of fulfilling his obligations during the Defects Liability Period.

Labour

Engagement of Staff and Labour

- 34.1 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 employ the unskilled labour to be employed by him on the Works only from locally available labours and shall give preference to those persons enrolled under Maharashtra Government Employment and Self Employment Departments Scheme. provided, however, that if the required unskilled labours are not available locally, the Contractor shall in the first instant employ such number of persons as is available and thereafter may with previous permission, in writing of the Engineer, obtain the rest of the requirement of unskilled labour from outside the above scheme. In such case, the Contractor shall obtain requisite license / registration certificate under the Interstate Migrant Workmen Act and/or Contract Labour Act.

Rates of Wages and conditions of Labour

- 34.2 The Contractor shall pay rates of wages and observe conditions of labour not less favourable than those established for the trade or industry where the work is carried out.

The Contractor shall also comply with the provisions of payment of Wages Act, 1936, Minimum Wages Act, 1948, Employees Liability Act 1938, Workmen's Compensation Act, 1923, Industrial Disputes Act, 1947, Indian Factories Act, 1948, Maternity Benefit Act, 1961, or any modification thereof or any other law relating thereto and rules made thereunder from time to time, he will observe and give effect to the provisions of any law for the time being in force and regulating the rights and privileges of the labourers employed by him directly or indirectly. The Contractor shall indemnify the Corporation against any payments to be made thereunder.

Housing for Labour

- 34.3 Save insofar as the Contract otherwise provides, the Contractor shall provide and maintain such accommodation and amenities as he may consider necessary for all his staff and labour, employed / engaged for the purpose of or in connection with the Contract, including all fencing, water supply (both for drinking and other purposes), electricity supply, sanitation, cookhouses, fire prevention and fire fighting equipment, and other requirements in connection with such accommodation or amenities. On completion of the Contract, unless otherwise agreed with the Employer, the temporary camps or housing provided by the Contractor shall be removed and the site reinstated to its original condition, all to the approval of the Engineer.

Health and Safety

- 34.4 Due precautions shall be taken by the Contractor, and at his own cost, to ensure the safety of his staff and labour and in collaboration with and to the requirements of the local health authorities, to ensure that medical staff, first aid equipment and stores sick bay and suitable ambulance services whenever necessary, including an adequate supply of sterilized dressing materials and sterilized cotton wool, as prescribed in the Factory Rules of the Maharashtra State, are available at the camps, housing, and on the Site at all times throughout the period of the Contract and that suitable arrangements are made for the prevention of epidemics and for all necessary welfare and hygiene requirements.

Measures against Insect and Pest Nuisance

- 34.5 The Contractor shall at all times take the necessary precautions to protect all staff and labour employed on the Site from insect nuisance, rats, and other pests and reduce the dangers to health and the general nuisance caused by the same. The Contractor shall provide his staff and labour with suitable prophylactics for the prevention of malaria, and shall take steps to prevent the formation of stagnant pools of water. He shall comply with all the regulations of the local health authorities in these respects and shall in particular arrange to spray thoroughly with approved insecticide all buildings erected on the Site. Such treatment shall be carried out at least once a year or as instructed by the Engineer. The Contractor shall warn his staff and labour of the dangers of bilharzia and wild animals.

Disorderly Conduct

- 34.6 The Contractor shall at all times take all reasonable precautions to prevent any unlawful, riotous, or disorderly conduct by or among his staff and labour and take all reasonable precautions for the preservation of peace and protection of persons and property in the neighbourhood of the Works against the same. He shall also pay the necessary charges for Police protection, required if any, as the Chief Engineer may deem necessary.

Returns of Labour and Contractor's Equipment

- 35.1 The Contractor shall, if required by the Engineer, deliver to the Engineer a return in detail, in such form and such intervals as the Engineer may prescribe, showing the staff and the number of the several classes of labour from time to time employed by the Contractor on the Site and such information respecting Contractor's Equipment as the Engineer may require.

Records of Safety and Health

- 35.2. The Contractor shall maintain such records and make such reports concerning safety, health and welfare of persons and damage to property as the Engineer may from time to time prescribe.

Reporting of Accidents

- 35.3. The Contractor shall report to the Engineer details of any accident as soon as possible after its concurrence. In the case of any fatality or serious accident, the Contractor shall, in addition, notify the Engineer immediately by the quickest available means.

The Apprentices Act 1961

- 35.4. The Contractor shall duly comply with the provision of the Apprentices Act 1961 (III of 1961) the rules made there under and the order that may be issued from time to time under the said Act and the said Rules and on his failure or neglect to do so he shall be subject to all the liabilities and penalties provided by the said Act and said Rules.

Materials, Plant and Workmanship

Quality of Materials, Plant and Workmanship

36.1 All materials, Plant and workmanship shall be:

- (a) of the respective kinds described in the Contract and in accordance with the Engineer's instructions, and
- (b) subjected from time to time to such tests as the Engineer may require at the place of manufacture, fabrication or preparation, or on the Site or at such other place or places as may be specified in the Contract, or at all or any of such places.

The Contractor shall provide such assistance, transport, labour, electricity, fuels, stores, apparatus and instruments as are normally required for examining, measuring and testing any materials or Plant and shall supply samples of materials, before incorporation in the Works , for testing as may be selected and required by the Engineer.

Cost of Samples

36.2 All samples shall be supplied by the Contractor at his own cost if the supply thereof is clearly intended by or provided for in the Contract.

Cost of Tests

36.3 The cost of making any test shall be borne by the Contractor if such test is:

- (a) clearly intended by or provided for in the Contract, or
- (b) particularized in the Contract (in case only of a test under load or of a test to ascertain whether the design of any finished or partially finished Work is appropriate for the purpose which it was intended to fulfill) in sufficient detail to enable the Contractor to price or allow for the same in his tender.

Cost of Test not Provided for

36.4 If any test required by the Engineer which is:

- (a) not so intended by or provided for,
- (b) (in the cases above mentioned) not so particularised, or

- (c) (though so intended or provided for) required by the Engineer to be carried out at any place other than the Site or the place of manufacture, fabrication or preparation of the materials of Plant tested,

shows the materials, Plant or workmanship not to be in accordance with the provisions of the Contract to the satisfaction of the Engineer, then the cost of such test shall be borne by the Contractor, but in any other case Sub-Clause 36.5 shall apply.

Engineer's Determination where Tests not provided for

36.5 Where, pursuant to Sub-Clause 36.4, this Sub-Clause applies, the Engineer shall, after due consultation with the Employer and the Contractor, determine:

- (a) any extension of time to which the Contractor is entitled under Clause 44, and
- (b) the amount of such costs, which shall be added to the Contract Price, and shall notify the Contractor accordingly with a copy to the Employer.

Use of B.I.S. specifications

36.6 In cases where no particular specifications are given for any articles to be used under the contract, the relevant specification where one exists of the latest version of Bureau of Indian Standards shall apply.

Inspection of Operations

37.1 The Engineer, and any person authorised by him, shall at all reasonable times have access to the Site and to all Works hops and places where materials or Plant are being manufactured, fabricated or prepared for the Works and the Contractor shall afford every facility for and every assistance in obtaining the right to such access.

Inspection and Testing

37.2 The Engineer shall be entitled, during manufacture, fabrication or preparation to inspect and test the materials and Plant to be supplied under the Contract. If materials or Plant are being manufactured, fabricated or prepared in Works hops or places other than those of the Contractor, the Contractor shall obtain permission for the Engineer to carry out such inspection and testing in those Works hops or places. Such inspection or testing shall not release the Contractor from any obligation under the Contract.

Dates for Inspection and Testing

37.3 The Contractor shall agree with the Engineer on the time and place for the inspection and testing of any materials or Plant as provided in the Contract. The Engineer shall give the Contractor not less than 24 hours notice of his intention to carry out the inspection or to attend the test. If the Engineer, or his duly authorised representative, does not attend on the date agreed, the Contractor may, unless otherwise instructed by the Engineer, proceed with the tests, which shall be deemed to have been made in the presence of the Engineer. The Contractor shall forthwith forward to the Engineer duly certified copies of the test readings.

Rejection

37.4 If, at the time and place agreed in accordance with Sub-Clause 37.3, the materials or Plant are not ready for inspection or testing or if, as a result of the inspection or testing referred to in this Clause, the Engineer determines that the materials or Plant are defective or otherwise not in accordance with the Contract, he may reject the materials or Plant and shall notify the Contractor thereof immediately. The notice shall state the Engineer's objections with reasons. The Contractor shall then promptly make good the defect or ensure that rejected materials or Plant comply with the Contract. If the Engineer so requests, the tests of rejected materials or Plant shall be made or repeated under the same terms and conditions. All costs incurred for the tests shall be borne by the Contractor.

Independent Inspection

37.5 The Engineer may delegate inspection and testing of materials or Plant to an independent inspector. Any such delegation shall be effected in accordance with Sub-Clause 2.4 and for this purpose such independent inspector shall be considered as an assistant of the Engineer. Notice of such appointment (not being less than 14 days) shall be given by the Engineer to the Contractor.

Examination of Work before Covering up

38.1 No part of the Works shall be covered up or put out of view without the approval of the Engineer and the Contractor shall afford full opportunity for the Engineer to examine and measure any such part of the Works which is about to be covered up or put out of view and to examine foundations before any part of the Works is placed thereon. The Contractor shall give notice to the Engineer whenever any

such part of the Works or foundations is or are ready or about to be ready for examination and the Engineer shall, without unreasonable delay, unless he considers it necessary and advises the Contractor accordingly, attend for the purpose of examining and measuring such part of the Works or of examining such foundations.

Uncovering and Making Openings

38.2 The Contractor shall uncover any part of the Works or make openings in or through the same as the Engineer may from time to time instruct and shall reinstate and make good such part. If any such part has been covered up or put out of view after compliance with the requirement of Sub-Clause 38.1 and is found to be executed in accordance with the Contract, the Engineer shall, after due consultation with the Employer and the Contractor, determine the amount of the Contractor's costs in respect of such of uncovering, making openings in or through, reinstating and making good the same, which shall be added to the Contractor Price, and shall notify the Contractor accordingly, with a copy to the Employer. In any other case all costs shall be borne by the Contractor.

Materials brought to site

38.3 All materials brought to the site shall become and remains the property of the Corporation and shall not be removed off the site without the prior written approval of the Engineer. But whenever the Works are finally completed and advance paid, if any, in respect of any such material is fully recovered, the Contractor shall at his own expense forthwith remove from the site all surplus materials originally supplied by him and upon such removal, the same shall revert in and become the property of the Contractor.

Materials obtained from excavation

38.4 Materials of any kind obtained from excavation of the site shall remain the property of the Corporation and shall be disposed off as per the Contract and as directed by the Engineer.

Use of Explosives

38.5 The Contractor shall comply with all laws and security regulations in force from time to time, relating to the procurement, importation, movement, storage and use of explosives including the provision of magazines at locations approved by the appropriate authorities. The magazines shall conform in all respects to all laws in

force regarding the erection, maintenance and guarding of magazines.

The Contractor shall obtain all necessary licenses as may be required for the procurement, importation, movement, storage and use of explosives and do all things necessary to ensure compliance with the laws in force relating to dangerous goods.

Removal of Improper Work, Materials or Plant

39.1 The Engineer shall have authority to issue instructions from time to time, for:

- (a) the removal from the Site, within such time or times as may be specified in the instruction, of any materials or Plant which, in the opinion of the Engineer, are not in accordance with the Contract,
- (b) the substitution of proper and suitable materials or Plant, and
- (c) the removal and proper re-execution, notwithstanding any previous test thereof or interim payment therefore, of any Work which, in respect of
 - (i) materials, Plant or workmanship, or
 - (ii) design by the Contractor or for which he is responsible, is not, in the opinion of the Engineer, in accordance with the Contract.

Default of Contractor in Compliance

39.2 In case of default on the part of the Contractor in carrying out such instruction within the time specified therein or, if none, within a reasonable time, the Employer shall be entitled to employ and pay other persons to carry out the same and all costs consequent thereon or incidental thereto shall, after due consultation with the Employer and the Contractor, be determined by the Engineer and shall be recoverable from the Contractor by the Employer, and may be deducted by the Employer from any monies due or to become due to the Contractor and the Engineer shall notify the Contractor accordingly, with a copy to the Employer.

Suspension and foreclosure

Suspension of work

40.1 If at any time after acceptance of the Tender the Engineer shall for any reason whatsoever (other than default on the part of the Contractor for which the Corporation is entitled to rescind the contract) desire that the whole or any part of

the Work specified in the tender should be suspended for any period or that the whole or part of the Work should not be carried out at all, he shall give the Contractor a notice in writing of such desire and upon the receipt of such notice the Contractor shall forthwith suspend or stop the Work wholly or in part as required, after having due regard to the appropriate stage at which the Work should be stopped or suspended so as not to cause any damage or injury to the Work already done or endanger the safety thereof provided that the decision of the engineer as to the stage at which the Work or any part of it could be or could have been safely stopped or suspended shall be final and conclusive against the Contractor. The Contractor shall have no claim to any payment or compensation whatsoever by reason of in pursuance of any notice as aforesaid on account of any suspension, stoppage or curtailment except to the extent specified in 40.2 & 40.3.

- 40.2 Where the total suspension of the Work ordered as aforesaid continued for a continuous period exceeding 90 days the Contractor shall be at liberty to withdraw from the contractual obligations under the Contract so far as it pertains to the unexecuted part of the Work by giving 10 days prior notice in writing to the engineer, within 30 days of the expiry of the said period of 90 days, of such intention and requiring the engineer to record the final measurements of the Work already done and to pay final payment. Upon giving such notice the Contractor shall be deemed to have been discharged from his obligation to complete the remaining unexecuted Work under the Contract. On receipt of such notice the engineer shall proceed to complete the measurement and make such payment as may be finally due to the Contractor within a period of 90 days from the receipt of such notice in respect of the Work already done by the Contractor. Such payment shall not in any manner prejudice the right of the Contractor to any further compensation under the remaining provisions of this clause.
- 40.3 Where the Engineer required the Contractor to suspend the Work for a period of excess of 30 days at any time or 60 days in the aggregate, the Contractor shall be entitled to apply to the engineer within 30 days of the suspension of Work after such suspension for payment of compensation to the extent of pecuniary loss suffered by him in respect of working machinery remained idle on the site or on the account of his having had to pay the salary or wages of labour engaged by him during the said period of suspension, provided always that the Contractor shall not be entitled to pay any claim in respect of any such working machinery salary or wages for the first 30 days whether consecutive or in the aggregate of

such suspension or in respect of any suspension whatsoever occasioned by unsatisfactory work or any other default on his part. The decision of the engineer in this regard shall be final and conclusive against the Contractor.

40.3.1 If the suspension is ordered for the reasons other than default of the Contractor then the Contractor shall be entitled to an extension of time equal to period of such suspension plus a reasonable time as decided by the Engineer.

40.3.2 In the event of -

(i) Any stoppage of Work on notice from the Engineer under Sub Clause 40.1

AND / OR

(ii) Withdrawal by the Contractor from the contractual obligation to complete the remaining unexecuted Work under Sub-Clause 40.2 on account of continued suspension of Work for a period exceeding 90 days.

It shall be open to the Contractor, within 90 days from the service of (i) the notice of stoppage of Work or (ii) the notice of withdrawal from the contractual obligations under the Contract on account of the continued suspension of Work or (iii) notice under clause 40(1) resulting in such curtailment, to produce to the Engineer satisfactory documentary evidence that he had purchased or agreed to purchase material for use in the contracted work, before receipt by him of the notice of stoppage, suspension or curtailment and require the Corporation to take over on payment such material at the rates determined by the Engineer, provided, however, that such rates shall in no case exceed the rates at which the same was acquired by the Contractor. The Corporation shall thereafter take over the material so offered, provided the quantities offered, are not in excess of the requirement of the unexecuted work as specified in the accepted tender and are of quality and specifications approved by the Engineer.

Foreclosure of Contract in full or in part

40.4 If at any time after acceptance of the tender the Managing Director shall decide to abandon or reduce the scope of the Works for any reasons whatsoever and hence not require the whole or any part of the Works to be carried out, he shall inform the Contractor in writing to that effect and the Contractor shall have no

claim to any payment or compensation or otherwise whatsoever, on account of any profit or advantage which he might have derived from the execution of the Works in full but which he did not derive in consequence of the foreclosure of the whole or part of the Works .

The Contractor shall be paid at the Contract rates full amount for Works executed at site, and in addition, reasonable amount as certified by the Engineer for the value of such material (which material thereupon become the property of the Corporation) and also such further allowances as the Chief Engineer may think reasonable and fair in respect of (a) any expenditure incurred by the Contractor towards preliminary Works etc., and (b) other reasonable and proper engagement the Contractor may have entered into for carrying out the work.

Commencement and Delays

Commencement of Works

41.1 The Contractor shall commence the Works as soon as is reasonably possible after the receipt by him of a notice to this effect from the Engineer, which notice shall be issued within 30 days after the date of the Letter of Acceptance. Thereafter, the Contractor shall proceed with the Works with due expedition and without delay.

Possession of Site

42.1 Save insofar as the Contract may prescribe:

- (a) the extent of portions of the Site of which the Contractor is to be given possession from time to time.
- (b) the order in which such portions shall be made available to the Contractor, and, subject to any requirement in the Contract as to the order in which the Works shall be executed, the Employer will, with the Engineer's notice to commence the Works , give to the Contractor possession of
- (c) so much of the Site, and
- (d) such access as, in accordance with the Contract, is to be provided by the Employer as may be required to enable the Contractor to commence and proceed with the execution of the Works in accordance with the programme referred to in Clause 14, if any, and otherwise in accordance

with such reasonable proposals as the Contractor shall, by notice to the Engineer with a copy to the Employer, make. The Employer will, from time to time as the Works proceed, give to the Contractor possession of such further portions of the Site as may be required to enable the Contractor to proceed with the execution of the Works with due dispatch in accordance with such programme or proposals, as the case may be.

Failure to Give Possession

42.2 If the Contractor suffers delay and/or incurs costs from failure on the part of the Employer to give possession in accordance with the terms of the Sub-Clause 42.1, the Engineer shall, after due consultation with the Employer and the Contractor, determine:

- (a) any extension of time to which the Contractor is entitled under Clause 44, and
- (b) the amount of such costs, subject to maximum of 5% of Contract Price, which shall be added to the Contract Price, and shall, notify the Contractor accordingly, with a copy to the Employer

Rights of Way and Facilities

42.3 The Contractor shall bear all costs and charges for special or temporary rights of way, required by him in connection with access to the Site. The Contractor shall also provide at his own cost any additional facilities outside the Site required by him for the purpose of the Works .

Time for Completion

43.1 The whole of the Works and, if applicable, any Section required to be completed within a particular time as stated in the Annexure- A, shall be completed, in accordance with the provisions of Clause 48, within the time stated in the Annexure- A, for the whole of the Works or the Section (as the case may be), calculated from the Commencement Date, or such extended time as may be allowed under Clause 44.

Extension of Time for Completion

44.1 In the event of:

- (a) the amount of nature of extra or additional work,
- (b) any cause of delay referred to in these Conditions,
- (c) exceptionally adverse climatic conditions,
- (d) any delay, impediment or prevention by the Employer, or
- (e) other special circumstances which may occur, other than through a default of or breach of Contract by the Contractor or for which he is responsible,

being such as fairly to entitle the Contractor to an extension of Time for Completion of the Works , or any Section or part thereof, the Engineer shall, after due consultation with the Employer and the Contractor, determine the amount of such extension and shall notify the Contractor accordingly, with a copy to the Employer

Contractor to Provide Notification and Detailed Particulars

44.2 Provided that the Engineer is not bound to make any determination unless the Contractor has

- (a) within 28 days after such event has first arisen notified the Engineer, with a copy to the Employer and
- (b) within 28 days, or such other reasonable time as may be agreed by the Engineer, after such notification submitted to the Engineer detailed particulars of any extension of time to which he may consider himself entitled in order that such submission may be investigated at the time.

Interim Determination of Extension

44.3 Provided also that where an event has a continuing effect such that it is not practicable for the Contractor to submit detailed particulars within the period of 28 days referred to in Sub-Clause 44.2(b), he shall nevertheless be entitled to an extension of time provided that he has submitted to the Engineer interim particulars at intervals of not more than 28 days and final particulars within 28 days of the end of the effects resulting from the event. On receipt of such interim particulars, the Engineer shall, without undue delay, make an interim

determination of extension of time and, on receipt of the final particulars, the Engineer shall review all the circumstances and shall determine an overall extension of time in regard to the event. In both such cases the Engineer shall make his determination after due consultation with the Employer and the Contractor and shall notify the Contractor of the determination, with a copy to the Employer. No final review shall result in a decrease of any extension of time already determined by the Engineer.

Restriction on Working Hours

- 45.1 Subject to any provision to the contrary contained in the Contract, none of the Works shall, save as hereinafter provided, be carried on during the night or on locally recognized days of rest without the consent of the Engineer, except when Work is unavoidable or absolutely necessary for the saving of life or property or for the safety of the Works, in which case the Contractor shall immediately advise the Engineer. Provided that the provisions of this Clause shall not be applicable in the case of any Work which it is customary to carry out by multiple shifts.

Rate of Progress

- 46.1 If for any reason, which does not entitle the Contractor to an extension of time, the rate of progress of the Works or any Section is at any time, in the opinion of the Engineer, too slow to comply with the Time for Completion, the Engineer shall so notify the Contractor who shall thereupon take such steps as are necessary, subject to the consent of the Engineer, to expedite progress so as to comply with the Time for Completion. The Contractor shall not be entitled to any additional payment for taking such steps. If, as a result of any notice given by the Engineer under this Clause, the Contractor considers that it is necessary to do any Work at night or on locally recognized days of rest, he shall be entitled to seek the consent of the Engineer so to do. Provided that if any steps, taken by the Contractor in meeting his obligations under this clause, involve the Employer in additional supervision costs, such costs shall, after due consultation with the Employer and Contractor, be determined by the Engineer and shall be recoverable from the Contractor by the Employer, and may be deducted by the Employer from any monies due or to become due to the Contractor and the Engineer shall notify the Contractor accordingly, with a copy to the employer.

Compensation for Delay

47.1 If the Contractor fails to comply with the Time for Completion in accordance with Clause 48, for the whole of the Works or, if applicable, any Section within the relevant time prescribed by Clause 43, then the Contractor shall pay to the Employer, as agreed compensation, amount calculated at ¼ percent per week of Contract price of the whole Work or of the Section for which separate period of Completion are given in the contract and of which completion is delayed, as Compensation for such default and not as a penalty (which sum shall be the only monies due from the Contractor for such default) for every week or part of a week which shall elapse between the relevant Time for Completion and the date stated in a Taking-Over Certificate of the whole of the Works or the relevant Section, subject to the applicable limit stated. The employer may, without prejudice to any other method of recovery, deduct the amount of such damages from any monies due or to become due to the Contractor. The payment or deduction of such damages shall not relieve the Contractor from his obligation to complete the Works, or from any other of his obligations and liabilities under the Contract.

47.1.1 When the delay is not a full week or in multiple of a week but involves a fraction of a week the compensation payable for that fraction shall be proportional to the number of days involved.

47.1.2 Provided always that the total amount of compensation for delay to be paid under this condition shall not exceed 7 ½ percent of the contract price of the whole work or group of items of Work for which a separate period of completion is given.

47.1.3 The amount of compensation may be adjusted or set off against any sum payable to the Contractor under this or any other Contract with the Corporation.

47.1.4 Notwithstanding to any provision of this clause, during the progress of the work till Taking-Over Certificate is issued, Engineer shall be entitled to recover amount towards Compensation for Delay in terms of following provisions, if Contractor fails to proceed as per Works programme i.e. physical and financial programme approved by Engineer

- a) Contractor shall analyze or break down the Contract Work to be executed by him into several parts or items and specify the time for the completion of each part of item, in the form of a works programme, and

- b) Contractor shall complete each part or item on or before such specified time, being intended to be of the essence of the contract, and
- c) If Contractor fails to so complete each part or item of the Work before such specified time, the Contract becomes voidable at the option of the Corporation, and
- d) Contractor shall be liable to pay to the Corporation the compensation under clause 47.1 at the rates provided therein on the Contract price of whole Work or of section for which, the separate period of completion is specified and which has not been completed accordingly, and
- e) If Contractor fails to so complete one part or item of Work within specified time and pays the compensation to the Corporation but completes the delayed part or item of Work and also the next succeeding part or item of Work on or before the time specified for such next succeeding part or item of work, the compensation so paid by the Contractor, shall be refunded to him by the Corporation free of interest.

47.1.5 The original Works programme submitted by the Contractor and approved by Superintending Engineer and subsequent revisions, if any, approved by the Chief Engineer shall be considered for levy of compensation for delay.

47.1.6 This clause shall become operative after completion of 25 percent of Work in financial terms or after elapse of 25 percent of stipulated time period of contract, whichever is earlier.

Reduction of Compensation for Delay

47.2 If, before the Time for completion of the whole of the Works or, if applicable, any Section, a Taking-Over Certificate has been issued for any part of the Works or of a Section, the Compensation for delay in completion of the remainder of the Works or of that Section shall, for any period of delay after the date stated in such Taking-Over Certificate, and in the absence of alternative provisions in the Contract, be reduced in the proportion with the value of the part so certified bears to the value of the whole of the Works or Section, as applicable. The provisions

of this Sub-Clause shall only apply to the rate of Compensation and shall not affect the limit thereof.

Taking-Over Certificate

48.1 When the whole of the Works have been substantially completed and have satisfactorily passed all Tests on Completion prescribed by the Contract, the Contractor may give a notice to that effect to the Engineer, with a copy to the Employer, accompanied by a written undertaking to finish with due expedition any outstanding Work during the Defects Liability Period. Such notice and undertaking shall be deemed to be a request by the Contractor for the Engineer to issue a Taking-Over Certificate in respect of the Works. The Engineer shall, within one month of the date of delivery of such notice, either issue to the Contractor, with a copy to the Employer, a Taking-Over Certificate, stating the date on which, in his opinion, the Works were substantially completed in accordance with the Contract, or give instructions in writing to the Contractor specifying all the Work which, in the Engineer's opinion, is required to be done by the Contractor before the issue of such Certificate. The Engineer shall also notify the Contractor of any defects in the Works affecting substantial completion that may appear after such instructions and before completion of the Works specified therein. The Contractor shall be entitled to receive such Taking-Over Certificate within one month of completion, to the satisfaction of the Engineer, of the Works so specified and remedying any defects so notified.

Taking Over of Sections or Parts

48.2 Similarly, in accordance with the procedure set out in Sub-Clause 48.1, the Contractor may request and the Engineer shall issue a Taking-Over Certificate in respect of :

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

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

Substantial Completion of Parts

48.3 If any part of the Permanent Works has been substantially completed and has satisfactorily passed any Tests on Completion prescribed by the Contract, the Engineer may issue a Taking-Over Certificate in respect of that part of the Permanent Works before completion of the whole of the Works and, upon the issue of such Certificate, the Contractor shall be deemed to have undertaken to complete with the expedition any outstanding Work in that part of the Permanent Works during the Defects Liability Period.

Surface Requiring Reinstatement

48.4 Provided that a Taking-Over Certificate given in respect of any Section or part of the Permanent Works before completion of the whole of the Works shall not be deemed to certify completion of any ground or surfaces requiring reinstatement, unless such Taking-Over Certificate shall expressly so state.

Defects Liability

Defects Liability Period

49.1 In these Conditions the expression "Defects Liability Period" shall mean the defects liability period named in the Annexure A, calculated from:

- a) the date of Taking-Over of Works certified by the Engineer in accordance with Clause 48, or
- b) in the event of more than one certificate having been issued by the Engineer under Clause 48, the respective dates so certified,

and in relation to the Defects Liability Period the expression "the Works" shall be construed accordingly.

Completion of Outstanding Work and Remedying Defects

49.2 To the intent that the Works, shall, at or as soon as practicable after the expiration of the Defects Liability Period, be delivered to the Employer in the condition required by the Contract, fair wear and tear excepted, to the satisfaction of the Engineer, the Contractor shall:

- a) complete the work, if any, outstanding on the date stated in the Taking-Over Certificate as soon as practicable after such date, and
- b) execute all such work of amendment, reconstruction, and remedying defects, shrinkage or other faults as the Engineer may, during the Defects Liability Period or within 14 days after its expiration, as a result of an inspection made by or on behalf of the Engineer prior to its expiration, instruct the Contractor to execute.

Cost of Remedying Defects

49.3 All Work referred to in Sub-Clause 49.2(b) shall be executed by the Contractor at his own cost if the necessity thereof is, in opinion of the Engineer, due to:

- a) the use of materials, Plant or workmanship not in accordance with the Contract,
- b) where the Contractor is responsible for the design of part of the Permanent Works , any fault in such design, or
- c) the neglect or failure on the part of the Contractor to comply with any obligation, expressed or implied, on the Contractor's part under the Contract.

If, in the opinion of the Engineer, such necessity is due to any other cause, he shall determine an addition to the Contract Price in accordance with Clause 52 and shall notify the Contractor accordingly, with copy to the Employer.

Contractor's Failure to Carry Out Instructions

49.4 In case of default on the part of the Contractor in carrying out such instruction within a reasonable time, the Employer shall be entitled to employ and pay other persons to carry out the same and if such work is work which, in the opinion of the Engineer, the Contractor was liable to do at his own under the Contract, then all costs consequent thereon or incidental thereto shall, after due consultation with the Employer, be determined by the Engineer and shall be recoverable from the Contractor, including supervision charges thereupon as per Annexure 'A', by the Employer, and may be deducted by the Employer from any monies due or to become due to the Contractor and the Engineer shall notify the Contractor accordingly, with a copy to the Employer.

Contractor to Search

50.1 If any defect, shrinkage or other fault in the Works appears at any time prior to the end of the Defects Liability Period, the Engineer may instruct the Contractor, with copy to the Employer, to search under the directions of the Engineer for the cause thereof. Unless such defect, shrinkage or other fault is one for which the Contractor is liable under the Contract, the Engineer shall, after due consultation with the Employer and the Contractor, determine the amount in respect of the costs of such search incurred by the Contractor, which shall be added to the Contract Price and shall notify the Contractor accordingly, with a copy to the Employer. If such defect, shrinkage or other fault is one for which the Contractor is liable, the cost of the work carried out in searching as aforesaid shall be borne by the Contractor and he shall in such case remedy such defect, shrinkage or other fault at his own cost in accordance with the provisions of Clause 49.

Alterations, Additions and Omissions**Variations**

51.1 The Engineer shall make any variation of the form, quality or quantity of the Works or any part thereof that may, in his opinion, be necessary and for that purpose, or if for any other reason it shall, in his opinion, be appropriate, he shall have the authority to instruct the Contractor to do and the Contractor shall do any of the following:

- a) increase or decrease the quantity of any Work included in the Contract,
- b) Omit any such Work (but not if the omitted Work is to be carried out by the Employer or by another contractor),
- c) Change the character or quality or kind of any such work,
- d) Change the levels, lines, position and dimensions of any part of the work,
- e) Execute additional Work of any kind necessary for the completion of the Works , or
- f) Change any specified sequence or timing of construction of any part of the Works.

No such variation shall in any way vitiate or invalidate the Contractor, but the effect, if any, of all such variations shall be valued in accordance with Clause 52. Provided that where the issue of an instruction to vary the Works is necessitated by some default of or breach of Contract by the Contractor or for which he is responsible, any additional cost attributable to such default shall be borne by the Contractor.

Instructions of Variations

51.2 The Contractor shall not make any such variation without an instruction of the Engineer. Provided that no instruction shall be required for increase or decrease in the quantity of any Work where such increase or decrease is not the result of an instruction given under this Clause, but is the result of the quantities exceeding or being less than those stated in the Bill of Quantities.

Valuation of Variations

52.1 All variations referred to in Clause 51 and any additions to the Contract Price which are required to be determined in accordance with Clause 52 (for the purposes of this Clause referred to as "varied work"), shall be valued as detailed below :

- i. If rate for varied item of Work is specified in the Bill of Quantities, the Contractor shall carry out the varied item at the same rate.
- ii. If the rate for any varied item of Work is not specified in the schedule of work/items quantities, the rate for the such item shall be derived from the rate for the nearest similar item specified therein. In case of Bills of Quantities forming part of the contract, the rate shall be derived from the nearest similar item in the Bill of Quantities of Works in which the variation is involved, failing that from the lowest of the nearest similar items in other Bills of Quantities of the same Contract.
- iii. If the rates of any varied item of Work is not included in the Bill of Quantities, such item of Work shall be carried out as per the latest Schedule of rates of particular department, based on which the estimate is framed, prevailing at the time of execution of such quantities of the item including mark up quoted by the Contractor.
- iv. If the rate for any varied item of Work cannot be determined in the manner specified in (i) to (iii) above, then the Contractor will be paid at such fair

and reasonable rates as worked out by the Engineer on the basis of material and labour required to execute the item and allowing 12 percent (twelve percent) towards overhead charges and Contractor's profit.

- 52.1.1. On receipt of letter of award of work, the Contractor shall carefully study the tender specifications, the architectural drawings, the detailed description of item as well as the site conditions and bring to the notice of the Engineer the inadequacies in the above, within a period of two months for consideration of varied items. The Contractor shall communicate the approximate quantities of varied item. The decision in this regard shall be communicated to the Contractor within 3 months from the date of submission of his letter.
- 52.1.2 In case of Lump-sum contract, the rates for varied item shall be derived in accordance with paragraphs (iii) or (iv) of Sub-Clause 52.1 as applicable. For this purpose, the quoted amount vis-à-vis estimated cost put to tender would be considered for deciding the quoted mark up of the Contractor.
- 52.1.3 Price variation, as per Clause No. 70, for varied items becomes operative when the rate for varied item is derived only in accordance with paragraphs (i) or (ii) of Sub-Clause 52.1.

Variations Exceeding 15 percent

52.2 If, on the issue of the Final payment Certificate for the whole of the Works , it is found that as a result of:

- a) all varied work valued under Sub-Clauses 52.1 and
- b) all adjustments upon measurement of the estimated quantities set out in the Bill of Quantities, excluding Provisional Sums and adjustments of price made under Clause 70,

but not from any other clause, there have been additions to or deductions from the Contract Price which taken together are in excess of 15 percent of the "Effective Contract Price" (which for the purposes of this Sub-Clause shall mean the Contract Price, excluding Provisional Sums if any) then in such event the rates for variations beyond 15% shall be derived in accordance with paragraphs (iii) or (iv) of Sub-Clause 52.1.

Procedure for Claims

Notice of Claims

- 53.1 Notwithstanding any other provision of the Contract, if the Contractor intends to claim any additional payment pursuant to any Clause of these Conditions or otherwise, he shall give notice of his intention to the Engineer, with a copy to the Employer, within 28 days after the event giving rise to the claim has first arisen.

Contemporary Records

- 53.2 Upon the happening of the event referred to in Sub-Clause 53.1, the Contractor shall keep such contemporary records as may reasonably be necessary to support any claim he may subsequently wish to make. Without necessarily admitting the Employer's liability, the Engineer shall, on receipt of a notice under Sub-Clause 53.1, inspect such contemporary records and may instruct the Contractor to keep any further contemporary records as are reasonable and may be material to the claim of which notice has been given. The Contractor shall permit the Engineer to inspect all records kept pursuant to this Sub-Clause and shall supply him with copies thereof as and when the Engineer so instructs.

Substantiation of Claims

- 53.3 Within 28 days, or such other reasonable time as may be agreed by the Engineer, of giving notice under Sub-Clause 53.1, the Contractor shall send to the Engineer an account giving detailed particulars of the amount claimed and the grounds upon which the claim is based. Where the event giving rise to the claim has a continuing effect, such account shall be considered to be an interim account and the Contractor shall, at such intervals as the Engineer may reasonably require, send further interim accounts giving the accumulated amount of the claim and any further grounds upon which it is based. In cases where interim accounts are sent to the Engineer, the Contractor shall send a final account within 28 days of the end of the effects resulting from the event. The Contractor shall, if required by the Engineer so to do, copy to the Employer all accounts sent to the Engineer pursuant to this Sub-Clause.

Failure to Comply

- 53.4 If the Contractor fails to comply with any of the provisions of this Clause in respect of any claim which he seeks to make, his entitlement to payment in respect thereof shall not exceed such amount, as the Engineer with the approval

of Employer, assessing the claim considers to be verified by contemporary records (whether or not such records were brought to the Engineer's notice as required under Sub-Clauses 53.2 and 53.3).

Payment of Claims

53.5 The Contractor shall be entitled to have included in any interim payment certified by the Engineer pursuant to Clause 60 such amount in respect of any claim as the Engineer, after due consultation with the Employer and the Contractor, may consider due to the Contractor provided that the Contractor has supplied sufficient particulars to enable the Engineer to determine the amount due. If such particulars are insufficient to substantiate the whole of the claim, the Contractor shall be entitled to payment in respect of such part of the claim as such particulars may substantiate to the satisfaction of the Engineer. The Engineer shall notify the Contractor of any determination made under this Sub-Clause, with a copy to the Employer.

Contractor's Equipment, Temporary Works and Materials

Contractor's Equipment, Temporary Works and Materials; Exclusive use for the Works

54.1 All Contractors Equipment, Temporary Works and materials provided by the Contractor shall, when brought on to the Site, be deemed to be exclusively intended for the execution of the Works and the Contractor shall not remove the same or any part thereof, except for the purpose of moving it from one part of the Site to another, without the consent of the Engineer. Provided that consent shall not be required for vehicles engaged in transporting any staff, labour, Contractor's Equipment. Temporary Works, Plant or materials to or from the Site.

Employer not liable for Damage

54.2 The Employer shall not at any time be liable, save as mentioned in Clauses 20 and 65, for this loss of or damage to any of the said Contractor's Equipment, Temporary Works or materials.

Customs Clearance

- 54.3 The Employer will use his best endeavours in assisting the Contractor, where required, in obtaining clearance through the Customs of Contractor's Equipment, materials and other things required for the Works.

Condition of Hire of Contractor's Equipment

- 54.4 With a view to securing, in the event of termination under Clause 63, the continued availability, for the purpose of executing the Works , of any hired Contractor's Equipment, the Contractor shall not bring on to the Site any hired Contractor's Equipment unless there is an agreement for the hire thereof (which agreement shall be deemed not to include an agreement for hire purchase) which contains a provision that the owner thereof will, on request in writing made by the Employer within 7 days after the date on which any termination has become effective, and on the Employer undertaking to pay all hire charges in respect thereof from such date, hire such Contractor's Equipment to the Employer on the same terms in all respects as the same was hired to the Contractor save that the Employer shall be entitled to permit the use thereof by any other contractor employed by him for the purpose of executing and completing the Works and remedying any defects therein, under the terms of the said Clause 63.

Cost for the Purpose of Clause 63

- 54.5 In the event of the Employer entering into any agreement for the hire of Contractor's Equipment pursuant to Sub-Clause 54.4, all sums properly paid by the Employer under the provisions of any such agreement and all costs incurred by him (including stamp duties) in entering into such agreement shall be deemed, for the purpose of clause 63, to be part of the cost of executing and completing the Works and the remedying of any defects therein.

Incorporation of Clause in Subcontracts

- 54.6 The Contractor shall, where entering into any subcontract for the execution of any part of the Works , incorporate in such subcontract (by reference or otherwise) the provisions of this Clause in relation to Contractor's Equipment, Temporary Works or materials brought on to the Site by the Subcontractor.

Approval of Materials not implied

- 54.7 The operation of this Clause shall not be deemed to imply any approval by the Engineer of the materials or other matters referred to therein nor shall it prevent the rejection of any such materials at any time by the Engineer.

Measurements**Quantities**

- 55.1 The quantities set out in the Bill of Quantities are the estimated quantities for the Works, and they are not to be taken as the actual and correct quantities of the Works to be executed by the Contractor in fulfilment of his obligations under the Contract.

Works to be measured

- 56.1 The Engineer shall, except as otherwise stated, ascertain and determine by measurement the value of the Works in accordance with the Bill of Quantities and the Contractor shall be paid that value in accordance with Clause 60. The Engineer shall, when he requires any part of the Works to be measured, give reasonable notice to the Contractor's authorised representative, who shall:

- (a) forthwith attend or send a qualified representative to assist the Engineer in making such measurement, and
- (b) supply all particulars required by the Engineer.

Should the Contractor not attend, or neglect or omit to send such representative, then the measurement made by the Engineer or approved by him shall be taken to be the correct measurement of such part of the Works. For the purpose of measuring such Permanent Works as are to be measured by records and drawings, the Engineer shall prepare records and drawings as the work proceeds and the Contractor, as and when called upon to do so in writing, shall, within 14 days, attend to examine and agree such records and drawings with the Engineer and shall sign the same when so agreed. If the Contractor does not attend to examine and agree such records and drawings, they shall be taken to be correct. If, after examination of such records and drawings, the Contractor does not agree the same or does not sign the same as agreed, they shall

nevertheless be taken to be correct, unless the Contractor, within 14 days of such examination, lodges with the Engineer notice of the respects in which such records and drawings are claimed by him to be incorrect. On receipt of such notice, the Engineer shall review the records and drawings and either confirm or vary them.

Method of Measurement

- 57.1 The Works shall be measured net, notwithstanding any general or local custom, except where otherwise provided for in the Contract.

Measurement shall be taken in accordance with the procedure set forth in the schedule of rates/ specifications, notwithstanding any provisions in the relevant standard method of measurement or any general or local custom. In the case of items which are not covered by the schedule of rates/specifications, measurement shall be taken in accordance with relevant Standard Method of Measurement of Bureau of Indian Standards.

Provisional Sums

Definition of “Provisional Sum”

- 58.1 “Provisional Sum” means a sum included in the Contract and so designated in the Bill of Quantities for the execution of any part of the Works or for the supply of goods, materials, Plant or services, or for contingencies, which sum may be used, in whole or in part, or not at all, on the instructions of the Engineer. The Contractor shall be entitled to only such amounts in respect of the work, supply or contingencies to which such Provisional Sums relate as the Engineer shall determine as accordance with this Clause. The Engineer shall notify the Contractor of any determination made under this Sub-Clause, with a copy to the Employer.

Use of Provisional Sums

- 58.2 In respect of every Provisional Sums the Engineer shall have authority to issue instructions for the execution of work or for the supply of goods, materials, Plant or services by:
- a) the Contractor, in which case the Contractor shall be entitled to an amount equal to the value thereof determined in accordance with Clause 52, and

- b) a nominated Sub-contractor, as hereinafter defined, in which case the sum to be paid to the Contractor thereof shall be determined and paid in accordance with Sub-Clause 59.4.

Production of Vouchers

- 58.3 The Contractor shall produce to the Engineer all quotations, invoices, vouchers and accounts or receipts in connection with expenditure in respect of Provisional Sums, except where work is valued in accordance with rates or prices set out in the Tender.

Nominated Subcontractors

Definition of “Nominated Subcontractor”

- 59.1 All specialists, merchants, tradesmen and others executing any work or supplying any goods, materials, Plant or services for which Provisional Sums are included in the Contract, who may have been or be nominated or selected or approved by the Employer or the Engineer, and all persons to whom by virtue of the provisions of the Contract the Contractor is required to sub-contract shall, in the execution of such work or the supply of such goods, materials, Plant or services, be deemed to be sub-contractors to the Contractor and are referred to in this Contract as “nominated Sub-contractors”.

Nominated Subcontractors; Objection to Nomination

- 59.2 The Contractor shall not be required by the Employer or the Engineer, or be deemed to be under any obligation, to employ any nominated Sub-contractor against whom the Contractor may raise reasonable objection or who declines to enter into a sub-contract with the Contractor containing provisions:
- (a) that in respect of the work, goods, materials, Plant or services the subject of the sub-contract, the nominated Sub-contractor will undertake towards the Contractor such obligations and liabilities as will enable the Contractor to discharge his own obligations and liabilities towards the Employer under the terms of the Contract and will save harmless and indemnify the Contractor from and against the same and from all claims proceedings, damages, costs, charges and expenses whatsoever arising out of or in

connection therewith, or arising out or in connection with any failure to perform such obligations or to fulfil such liabilities, and

- (b) that the nominated Sub-contractor will save harmless and indemnify the Contractor from and against any negligence by the nominated Sub-contractor, his agents, workmen and servants and from and against any misuse by him or them of any Temporary Works provided by the Contractor for the purposes of the Contract and from all claims as aforesaid.

Design Requirements to be Expressly Stated

- 59.3 If in connection with any Provisional Sum the services to be provided include any matter of design or specification of any part of the Permanent Works or of any Plant to be incorporated therein, such requirement shall be expressly stated in the Contract and shall be included in any nominated Subcontractor. The nominated Sub-contractor shall specify that the nominated Sub-contractor providing such services will save harmless and indemnify the Contractor from and against the same and from all claims, proceedings, damages, costs, charges and expenses whatsoever arising out of or in connection with any failure to perform such obligations or to fulfil such liabilities.

Payments to Nominated Subcontractors

- 59.4 For all work executed or goods, materials, Plant or services supplied by any nominated Sub-contractor, the Contractor shall be entitled to:
- (a) the actual price paid or due to be paid by the Contractor, or the instructions of the Engineer, and in accordance with the Sub-contractor;
 - (b) in respect of labour supplied by the Contractor, the sum, if any, entered in the Bill of Quantities or, if instructed by the Engineer pursuant to paragraph (a) of Sub-Clause 58.2, as may be determined in accordance with Clause 52; and
 - (c) in respect of all other charges and profit, a sum being a percentage rate of the actual price paid or due to be paid calculated, where provision has been made in the Bill of Quantities for a rate to be set against the relevant Provisional Sum, at the rate inserted by the Contractor against that item or, where no such provision has been made, at the rate inserted by the

Contractor and repeated where provision for such is made in special item provided in the Bill of Quantities for such purpose.

Certification of Payments to Nominated Subcontractors

59.5 Before issuing, under Clause 60, any certificate, which includes any payment in respect of work done or goods, materials, Plant or services supplied by any nominated Sub-contractor, the Engineer shall be entitled to demand from the Contractor reasonable proof that all payments, less retentions, included in previous certificates in respect of the work or goods, materials, Plant or services of such nominated Sub-contractor have been paid or discharged by the Contractor. If the Contractor fails to supply such proof then, unless the Contractor:

- (a) satisfies the Engineer in writing that he has reasonable cause for withholding or refusing to make such payments, and
- (b) produces to the Engineer reasonable proof that he has so informed such nominated Sub-contractor in writing,

the Employer shall be entitled to pay to such nominated Sub-contractor direct, upon the certificate of the Engineer, all payments, less retentions, provided for in the nominated Sub-Contract, which the Contractor has failed to make to such nominated Sub-contractor and to deduct by way of set-off the amount so paid by the Employer from any sums due or to become due from the Employer to the Contractor.

Provided that, where the Engineer has certified and the Employer has paid direct as aforesaid, the Engineer shall, in issuing any further certificate in favour of the Contractor, deduct from the amount thereof the amount so paid, direct as aforesaid, but shall not withhold or delay the issue of the certificate itself when due to be issued under the terms of the Contract.

Certificates and Payments

Monthly Statements

60.1 The Contractor shall submit to the Engineer after the end of each month two copies, each signed by the Contractor's representative, a statement, in such form

as the Engineer may from time to time prescribe, showing the amounts to which the Contractor considers himself entitled up to the end of the respective month in relation to:

- (a) the value of the Works executed along with detailed measurements of various items in Bill Of Quantities,
- (b) adjustments under Clause 70 (to be submitted quarterly), and
- (c) any other sum to which the Contractor consider himself to be entitled under the Contract or otherwise.

Monthly Payment

60.2 The Engineer shall within 28 days of receiving such statement, deliver to the Employer an Interim payment Certificate stating the amount of payment to the Contractor which the Engineer considers due and payable in respect of such statement, subject:

- (a) firstly, to the retention of the amount calculated by applying the Percentage of Retention stated in Clause 10.1 to the amount to which the Contractor is entitled and
- (b) secondly, to the deduction, other than pursuant to Clause 47, of any sums which may have become due and payable by the Contractor to the Employer.

Notwithstanding the terms of this Clause or any other Clause of the Contract no amount will be certified by the Engineer for payment until the performance security, if required under the Contract, has been provided by the Contractor and approved by the Employer.

Refund of Performance Security

- 60.3
- (a) Upon the issue of Taking-Over Certificate with respect to the whole of the Works, the Contract Deposit, or upon the issue of Taking-Over certificate with respect of a Section or part of Permanent Works only such proportion thereof as the Engineer determines having regard to the relative value of such Section or part of the Permanent Works, shall be certified by the Engineer for payment to the Contractor.
 - (b) Upon the expiration of the Defects Liability Period for the Works, the Retention Money shall be certified by the Engineer for payment to the

Contractor. Provided that, in the event of different Defects Liability Period having become applicable to different Sections or parts of the Permanent Works pursuant to Clause 48, the expression “expiration of the Defects Liability Period” shall, for the purpose of this Sub-Clause, be deemed to mean the expiration of the latest of such period. Provided also that if at such time there shall remain to be executed by the Contractor any work instructed, pursuant to Clauses 49 and 50, in respect of the Works, the Engineer shall be entitled to withhold certification until completion of such work of so much of the balance of the Retention money as shall, in the opinion of the Engineer, represent the cost of the work remaining to be executed.

Correction of Certificates

- 60.4 The Engineer may by any Interim Payment Certificate make any correction or modification in any previous Interim Payment Certificate which shall have been issued by him and shall have authority, if any work is not being carried out to his satisfaction, to omit or reduce the value of such work in any Interim Payment Certificate.

Advance against material

- 60.5 Advance may, from time to time, if the Engineer thinks fit, be made to the Contractor to the extent of 90 percent of the value of such material, worked out on the basis of Schedule of Rates prevailing at the time of estimation as indicated in tender or procurement value, whichever is lower, against indenture bond, provided such material is brought to the works and Engineer is satisfied that they are the bona fide property of the contractor, suitable in quantity for use in the permanent work and properly housed and protected. The Engineer shall however have the right to reject any such material of which he may thereafter disapprove and order the removal, and in case of such rejection, disapproval or order for removal, all loss resulting therefrom shall be borne by the contractor, it being the intention of this clause that any such materials shall continue to be subject to all the provisions of the contract.

The advance payment so made shall be recovered from the subsequent interim payment towards monthly statement of the contractor. However, a fresh advance will be recommended once in a month through the interim payment depending upon the physical stock of material, lying at site.

Final Statement

60.6 Not later than 84 days after the issue of the Taking-Over Certificate in respect of the whole of the Works, the Contractor shall submit to the Engineer two copies of a Statement at Completion with supporting documents showing in detail, in the form approved by the Engineer:

- a. the final value of all work done in accordance with the Contract up to the date stated in such Taking-Over Certificate,
- b. any further sums which the Contractor considers to be due, and
- c. an estimate of amounts which the Contractor considers will become due to him under the Contract.

If the Engineer disagrees with or cannot verify any part of the Statement at Completion, the Contractor shall submit such further information as the Engineer may reasonably require and shall make such changes in the Statement as may be agreed between them. The Contractor shall then prepare and submit to the Engineer the final statement as agreed (for the purpose of these Conditions referred to as the "Final Statement").

If, following discussions between the Engineer and the Contractor and any changes to the final statement which may be agreed between them, it becomes evident that a dispute exists, the Engineer shall deliver to the Employer a Final Payment Certificate for those parts of the draft final statement, if any, which are not in dispute. The dispute may then be settled in accordance with Clause 67.

Discharge

60.7 Upon submission of the Final Statement, the Contractor shall give to the Engineer, a written discharge confirming that the total of the Final Statement represents full and final settlement of all monies due to the Contractor arising out of or in respect of the Contract Provided that such discharge shall become effective only after payment due under the Final Payment Certificate issued pursuant to Sub-Clause 60.8 has been made. Provided further that Contractor's liability does not cease till issue of Defect Liability Certificate.

Final Payment Certificate

60.8 Within 60 days after receipt of the Final Statement, and the written discharge, the Engineer shall issue to the Contractor, a Final Payment Certificate stating :

- (a) the amount which, in the opinion of the Engineer, is finally due under the Contract or otherwise, and
- (b) after giving credit to the Employer for all amounts previously paid by the Employer and for all sums to which the Employer is entitled, the balance, if any, due from the Employer to the Contractor or from the Contractor to the Employer as the case may be.

Cessation of Employer's Liability

60.9 The Employer shall not be liable to the Contractor for any matter or thing arising out of or in connection with the Contract or execution of the Works, unless the Contractor shall have included a claim in respect thereof in his Final Statement and (except in respect of matters or things arising after the issue of the Taking-Over Certificate in respect of the whole of the Works) in the Statement at Completion referred to in Sub-Clause 60.5.

Time for Payment

60.10 Up to 75% of the amount due to the Contractor under any Interim Payment Certificate issued by the Engineer pursuant to this Clause, or to any other term of the Contract, shall, subject to Clause 47, be paid by the Employer to the Contractor within 7 working days and the balance amount within 21 working days of receipt of Interim Payment Certificate. In the case of the Final Payment Certificate referred to in Sub-Clause 60.8, within 60 days, of receipt of such Final Payment Certificate. In the event of the failure of the Employer to make payment within the times stated, the Employer shall pay to the Contractor interest at the rate stated in the Annexure - A upon all sums unpaid but payable from the date by which the same should have been paid. The provisions of this Sub-Clause are without prejudice to the Contractor's entitlement under Clause 69 or otherwise.

No interest for delayed payments due to disputes etc.

60.11 No claim for interest or damage will be entertained by the Employer with respect to any money, or balances which may be in his hands owing to any dispute or difference.

Recovery of dues from the Contractor

60.12 All amounts whatsoever which the Contractor is liable to pay to the Corporation in connection with the Works shall be recovered from any other contract or account

of the Contractor or as arrears of Land Revenue under Paragraph 6 of 1st Schedule of the Maharashtra Regional Town Planning Act, 1966

Crèche Facility for the Children of Construction Labour

60.13 CIDCO has undertaken to provide crèche facilities for children of construction labour through one of the volunteer agency. The facility is open to children of construction labourers employed by the Contractor. In order to meet the expenses of providing crèche facility, the following charges shall be levied on the Contractor.

a.	For Contract Price up to Rs.20,000/- to Rs.50,000/-	NIL
b.	For Contract Price from Rs.50,001/- to Rs.75,000/-	0.5% of Contract Price with a minimum of Rs. 500.00
c.	For Contract Price ranging from Rs.75,001/- to Rs.2,00,000/-	1% of Contract Price with a minimum of Rs.750/-
d.	For Contract Price ranging from Rs.2,00,001/- to Rs.5,00,000/-	1.5% of Contract Price with a minimum of Rs.3,000/-
e.	For Contract Price above Rs.5,00,000/-	1.5% of Contract Price or Rs.1,00,000/- whichever is less.

- i) The aforesaid amount shall be recoverable even if such facility is not made available by the Corporation in the particular node.
- ii) The amount shall be recovered, from first three Interim Payment Certificates, in full.

Approval only by Defects Liability Certificate

61.1 Only the Defects Liability Certificate, referred to in Clause 62, shall be deemed to constitute approval of the Works.

Defects Liability Certificate

62.1 The Contract shall not be considered as completed until a Defects Liability Certificate shall have been signed by the Engineer and delivered to the Contractor, stating the date on which the Contractor shall have completed his obligations to execute and complete the Works and remedy any defects therein to the Engineer's satisfaction. The Defects Liability Certificate shall only be given by the Engineer after the inspection of work, made prior to expiry of defects liability period & shall be issued within 28 days after the expiration of the Defects Liability Period, or, if different defects liability periods shall become applicable to different Sections or parts of the Permanent Works, the expiration of the latest such period, or as soon thereafter as any Works instructed, pursuant to Clause 49 and 50, have been completed to the satisfaction of the Engineer.

Unfulfilled Obligations

62.2 Notwithstanding the issue of the Defects Liability Certificate the Contractor and Employer shall remain liable for the fulfilment of any obligation incurred under the provisions of the Contract prior to the issue of the Defects Liability Certificate which remains unperformed at the time such Defects Liability Certificate is issued and, for the purpose of determining the nature and extent of any such obligation, the Contract shall be deemed to remain in force between the parties to the Contract.

Remedies**Default of Contractor**

63.1 If the Contractor is deemed by law unable to pay his debts as they fall due, or enters into voluntary or involuntary bankruptcy, liquidation or dissolution (other than a voluntary liquidation for the purposes of amalgamation or reconstruction), or becomes insolvent, or makes an arrangement with, or assignment in favour of, his creditors, or agree to carry out the Contractor under a committee of inspection of his creditors, or if a receiver, administrator, trustee or liquidator is appointed over any substantial part of his assets, or if, under any law or regulation relating to reorganisation, arrangement or readjustment of debts, proceeding are commenced against the Contractor or resolutions passed in connection with dissolution or liquidation or if any steps are taken to enforce any security or

interest over a substantial part of the assets of the Contractor, or if any act is done or event occurs with respect to the Contractor or his assets which, under any applicable law has a substantially similar effect to any of the foregoing acts or events, or if the Contractor has contravened Sub-Clause 3.1, or has an execution levied on his goods, or if the Engineer certifies to the Employer, with a copy to the Contractor, that, in his opinion, the Contractor:

- (a) has repudiated the Contract,
- (b) without reasonable excuse has failed,
 - (i) to commence the Works in accordance with Sub-Clause 41.1, or
 - (ii) to proceed with the Works, or any Section thereof, within 28 days after receiving notice pursuant to Sub-Clause 46.1,
- (c) has failed to comply with a notice issued pursuant to Sub-Clause 37.4 or an instruction issued pursuant to Sub-Clause 39.1 within 28 days after having received it,
- (d) despite previous warning from the Engineer, in writing, is otherwise persistently or flagrantly neglecting to comply with any of his obligations under the Contract,
- (e) has contravened Sub-Clause 4.1
- (f) is an individual or a proprietary concern and the individual or the proprietor died or the Contractor is a partnership concern and one of the partners has died and the legal representative of the deceased contractor or surviving partners of the partnership concern, in opinion of the Employer, cannot carry out and complete the Contract.

then the Employer may, after giving 14 days notice to the Contractor, enter upon the Site and the Works and terminate the employment of the Contractor without thereby releasing the Contractor from any of his obligations or liabilities under the Contract, or affecting the rights and authorities conferred on the Employer or the Engineer by the Contract, and may himself complete the Works or may employ any other contractor to complete the Works. The Employer or such other contractor may use for such completion so much of the Contractor's Equipment, Temporary Works and materials as he or they may think proper.

Valuation at Date of Termination

- 63.2 The Engineer shall, as soon as may be practicable after any such entry and terminations by the Employer, fix and determine ex parte, or by or after reference to the parties or after such investigation or enquiries as may think fit to make or institute, and shall certify:
- (a) what amount (if any) had, at the time of such entry and termination, been reasonably earned by or would reasonably accrue to the Contractor in respect of work then actually done by him under the Contract, and
 - (b) the value of any of the said unused or partially used materials, any Contractor's Equipment and any Temporary Works .

Payment after Termination

- 63.3 If the Employer terminates the Contractor's employment under this Clause, he shall not be liable to pay to the Contractor any further amount (including damages) in respect of the Contract until the expiration of the Defects Liability Period and there after until the costs of execution, completion and remedying of any defects, damages for delay in completion (if any) and all other expenses incurred by the Employer have been ascertained and the amount thereof certified by the Engineer. The Contractor shall then be entitled to receive only such sum (if any) as the Engineer may certify would have been payable to him upon due completion by him after deducting the said amount. If such amount exceeds the sum which would have been payable to the Contractor on due completion by him, then the Contractor shall, upon demand, pay to the Employer the amount of such excess and it shall be deemed a debt due by the Contractor to the Employer and shall be recoverable accordingly.

Assignment of Benefit of Agreement

- 63.4 Unless prohibited by law, the Contractor shall, if so instructed by the Engineer within 14 days of such entry and termination referred to in Sub-Clause 63.1, assign to the Employer the benefit of any agreement for the supply of any goods or materials or services and/or for the execution of any work for the purposes of the Contract, which the Contractor may have entered into.

Urgent Remedial Work

- 64.1 If, by reason of any accident, or failure, or other event occurring to, in, or in connection with the Works or any part thereof, either during the execution of the

Works , or during the Defects Liability period, any remedial or other work is, in the opinion of the Engineer, urgently necessary for the safety of the Works and the Contractor is unable or unwilling at once to do such work, the Employer shall be entitled to employ and pay other persons to carry out such work as the Engineer may consider necessary. If the work of repair so done by the Employer is work which, in the opinion of the Engineer, the Contractor was liable to do at his own cost under the Contract, then all costs consequent thereon or incidental thereto shall, after due consultation with the Employer and the Contractor, be determined by the Engineer and shall be recoverable from the Contractor by the Employer, and may be deducted by the Employer from any monies due or to become due to the Contractor and the Engineer shall notify the Contractor accordingly, with a copy to the Employer. Provided that the Engineer shall, as soon after the occurrence of any such emergency as may be reasonably practicable, notify the Contractor thereof.

Special Risks

No Liability for Special Risks

65.1 The Contractor shall be under no liability whatsoever in consequence of any of the special risks referred to in Sub-Clause 65.2, whether by way of indemnity or otherwise, for or in respect of:

- (a) Destruction of or damage to the Works, save to work condemned under the provisions of Clause 39 prior to the occurrence of any of the said special risks.
- (b) Destruction of or damage to property, whether of the Employer or third parties, or
- (c) Injuries or loss of life.

Special Risks

65.2 The special risks are:

- (a) the risks defined under paragraphs (a), (c) (d) and (e) of Sub-Clause 20.4, and
- (b) the risks defined under paragraphs (b) of Sub-Clause 20.4 insofar as these relate to the country in which the Works are to be executed.

Damage to Works by Special Risks

65.3 If the Works or any materials or Plant on or near or in transit to the Site, or any of the Contractor's Equipment, sustain destruction or damage by reason of any of the said special risks, the Contractor shall be entitled to payment in accordance with the Contract for any permanent Works duly executed and for any materials or Plant so destroyed or damaged and, so far as may be required by the Engineer or as may be necessary for the completion of the Works, to payment for:

- (a) rectifying and such destruction or damage to the Works, and
- (b) replacing or rectifying such materials or Contractor's Equipment and the Engineer shall determine an addition to the Contract Price in accordance with Clause 52 (which shall in the case of the cost of replacement of Contractor's Equipment include the fair market value thereof as determined by the Engineer) and shall notify the Contractor accordingly, with a copy to the Employer.

Projectile, Missile

65.4 Destruction, damage, injury or loss of life caused by the explosion or impact, whenever and wherever occurring, of any mine, bomb, shell, grenade, or other projectile, missile, munitions, or explosive of war, shall be deemed to be a consequence of the said special risks.

Increased Costs arising from Special Risks

65.5 Save to the extent that the Contractor is entitled to payment under any other provision of the Contract, the Employer shall repay to the Contractor any costs of the execution of the Works (other than such as may be attributable to the cost of reconstructing work condemned under the provisions of Clause 39 prior to the occurrence of any special risk) which are howsoever attributable to or consequent on or the result of or in any way whatsoever connected with the said special risks, subject however to the provisions in this Clause hereinafter contained in regard to outbreak of war, but the Contractor shall, as soon as any such cost comes to his knowledge, forthwith notify the Engineer thereof. The Engineer shall, after due consultation with the Employer and the Contractor, determine the amount of the Contractor's cost in respect thereof which shall be added to the Contractor Price and shall notify the Contractor accordingly, with a copy to the Employer.

Outbreak of War

65.6 If, during the currency of the Contract, there is an outbreak of war, whether war is declared or not, in any part of the world which, whether financially or otherwise, materially affects the execution of the Works, the Contractor shall, unless and until the Contract is terminated under the provision of this Clause, continue to use his best endeavours to complete the execution of the Works. Provided that the Employer shall be entitled, at any time after such outbreak of war, to terminate the Contract by giving notice to the Contractor and, upon such notice being given, the Contract shall, except as to the rights of the parties under this Clause and Clause 67, terminate, but without prejudice to the rights of either party in respect of any antecedent breach thereof.

Removal of Contractor's Equipment on Termination

65.7 If the Contract is terminated under the provisions of Sub-Clause 65.6, the Contractor shall, with all reasonable dispatch, remove from the Site, all Contractor's Equipment and shall give similar facilities to his Subcontractors to do so.

Payment if Contract Terminated

65.8 If the Contract is terminated as aforesaid, the Contractor shall be paid by the Employer, insofar as such amounts or items have not already been covered by payments on account made to the Contractor, for all work executed prior to the date of termination at the rates and prices provided in the Contract and in addition:

- (a) the amounts payable in respect of any preliminary items referred to in the Bill of Quantities, so far as the work or service comprised therein has been carried out or performed, and a proper proportion of any such items which have been partially carried out or performed;
- (b) the cost of materials, Plant or goods reasonably ordered for the Works which have been delivered to the Contractor or of which the Contractor is legally liable to accept delivery, such materials, Plant or goods becoming the property of the Employer upon such payments being made by him;
- (c) a sum being the amount of any expenditure reasonably incurred by the Contractor in the expectation of completing the whole of the Works

insofar as such expenditure has not been covered by any other payment referred to in this Sub-Clause;

- (d) any additional sum payable under the provisions of Sub-clause 65.3 and 65.5;
- (e) such proportion of the cost as may be reasonable, taking into account payment made or to be made for work executed, of removal of Contractor's Equipment under Sub-Clause 65.7 and, if required by the Contractor, return thereof to the Contractor's main plant yard in this country of registration or to other destination, at no greater cost; and
- (f) the reasonable cost of repatriation of all the Contractor's staff and workmen employed on or in connection with the Works at the time of such termination.

Provided that against any payment due from the Employer under this Sub-Clause, the Employer shall be entitled to be credited with any outstanding balance due from the Contractor for advances in respect of Contractor's Equipment, materials and Plant and any other sums which, at the date of termination, were recoverable by the Employer from the Contractor under the terms of the Contract. Any sums payable under this Sub-Clause shall, after due consultation with the Employer and the Contractor, be determined by the Engineer who shall notify the Contractor accordingly, with a copy to the Employer.

Release from Performance

Payment in Event of Release from Performance

- 66.1** If any circumstance outside the control of both parties arises after the issue of the Letter of Acceptance which renders it impossible or unlawful for either or both parties to fulfil his or their contractual obligations, or under the law governing the Contract the parties are released from further performance, then the parties shall be discharged from the Contract, except as to their rights under this Clause and Clause 67 and without prejudice to the rights of either party in respect of any antecedent breach of the Contract, and the sum payable by the Employer to the Contractor in respect of the work executed shall be the same as that which would

have been payable under Clause 65 if the Contract had been terminated under the provisions of Clause 65.

Settlement of Disputes

67.1 If a dispute of any kind whatsoever arises between the Employer and the Contractor in connection with, or arising out of, the Contract or the execution of the Works, whether during the execution of the Works or after their completion and whether before or after repudiation or Foreclosure or termination of the Contract, including any dispute as to any opinion, instruction, determination, certificate or valuation of the Engineer, the matter in dispute shall, in the first place, be referred in writing to the Engineer, with a copy to the other party. Such reference shall state that it is made pursuant to this Clause. Not later than the Ninetieth day after the day on which he received such reference the engineer shall give notice of his decision to the Employer and the Contractor. Such decision shall state that it is made pursuant to this Clause.

Unless the Contract has already been repudiated or foreclosed or terminated, the Contractor shall, in every case, continue to proceed with the Works with all due diligence and the Contractor and the Employer shall give effect forthwith to every such decision of the Engineer unless and until the same shall be revised, as hereinafter provided.

67.2 In case, the Contractor or Employer is dissatisfied with any decision of the Engineer or Appellate authority or as the case may be, he may appeal within 30 days of such decision, in accordance with the provisions in Sub-Clause 67.3, to the appellate authorities, and on payment of a Claim deposit equivalent to 5 percent of total Claim amount. The appeal shall also lie if no decision is given within time specified in clause 67.1 and 67.3

In case of failure of such an appeal, the decision of the Engineer or the appellate authority shall become final and binding upon the Employer and the Contractor without further appeal to any authority.

67.3 The appeal pursuant to sub-clause 67.2 shall be dealt with in accordance with the provisions given hereunder.

Order of Appeal	Appellate authority	Period allowed for the decision
i) for the Contracts up to 10 Crores		
1st appeal	Superintending Engineer	30 days
2nd & Final appeal	Chief Engineer	60 days
ii) for the Contracts above 10 Crores and up to 25 Crores		
1st appeal	Chief Engineer	45 days
2nd & Final appeal	Managing Director	60 days
iii) for the Contracts above 25 Crores		
1st appeal	Managing Director	60 days
2nd & Final appeal	Dispute Review Board	90 days

- a) On receipt of the appeal, the appellate authority shall give a hearing to the Contractor, the Employer and the Engineer, before delivering his decision.
- b) The decision of appellate authority on final appeal shall be final, conclusive and binding on both the parties and without further appeal to any authority.
- c) No professional lawyer shall be allowed to appear at any level of hearing including in the proceedings before the Dispute Review Board.
- d) Out of Claim deposit made under sub-clause 67.2, the amount in proportion to the claims granted shall be refunded to the Contractor.

67.4 Procedure for Settlement of Dispute through Dispute Review Board

67.4.1 If the contractor is dissatisfied with any decision of the Managing director or if the Managing director fails to give decision within a period allowed for decision as per sub-clause 67.3, the Contractor shall communicate his dissatisfaction to the Managing Director, within 30 days from receipt of the notice of such decision or the expiry of such period, as the case may be, with a request to start the process of Settlement of Dispute through Dispute Review Board or to start the process of constitution of Dispute Review Board, if the Dispute Review Board is not constituted.

67.4.2 The Dispute Review Board ("the Board") shall comprise of three members experienced with the type of construction involved in the works and with the interpretation of contractual documents. One member each shall be selected by Employer and Contractor and approved by the other. If either of these members is not so selected and approved within 180 days of the letter of acceptance or such other reasonable time as may be mutually agreed by the contractor and the Engineer, then upon the request of either or both the parties such members shall be selected as soon as practicable by the President of the Institute of Engineers (I). The 3rd member shall be selected by the other two and approved by the parties. If the two members selected by or on behalf of the parties fail to select the 3rd member within 30 days after the letter of their selections, or if within 30 days, on selection of the 3rd Member, the parties fail to approve that member, then upon the request of either or both parties such 3rd member shall be selected promptly by the President of the Institute of Engineer (I), who shall seek the approval of the proposed 3rd Member by the parties before selection but failing such approval, nevertheless select the 3rd member. The 3rd member shall serve as Chairman of the Board.

In the event of death, disability or resignation of any Member, such Member shall be replaced in the same manner as the Member being replaced was selected. If for whatever other reason, a Member shall fail or be unable to serve, the Chairman (or failing the action of Chairman then either of the other Member) shall inform the parties and such non serving member shall be replaced in the same manner as the Member being replaced was selected. Any replacement made by the parties shall be completed within 28 days after the event giving rise to the vacancy on the Board, failing which the replacement shall be made by the above appointing authority in the same manner as described above. Replacement shall be considered completed when the new Member signs the Board members declaration of acceptance. Throughout the replacement process, the Members not being replaced shall continue to serve and the Board shall continue to function except, however, that the Board shall not conduct a hearing in order to issue a recommendation until the replacement is completed.

67.4.3 Either the Employer or the Contractor may refer the dispute to the Board in accordance with the provisions of Appendix-I to Sub-Clause 67.4.

Payment to the Board members shall be shared equally by the Employer and the Contractor as prescribed in Paragraph 7 of Appendix-I to Sub-Clause 67.4.

The decision of the Board will be final, conclusive and binding on both the parties and is not appealable. If either the Employer or the Contractor is dissatisfied with any recommendation of the Board, then in that case either of the party can proceed in the matter as per the legal remedy available to that party.

If the Board fails to issue its recommendation within 90 days after receipt by the Chairman of the Board of the written request for recommendation then in that case also either of the party can proceed with legal action for getting resolved the matter. If the Board has issued recommendations to the Engineer and the Contractor within the said 90 days and no notice of intention to proceed with the legal action to resolve the dispute has been given by the Employer as well as the Contractor within 14 days after the parties received such recommendation from the Board, the recommendation shall become final, conclusive and binding on both the parties. All the recommendation which have become final, conclusive and binding shall be implemented by the parties forthwith, such implementation to include any relevant action of the Engineer.

Unless the contract has already been repudiated or terminated, the contractor shall, in every case continue to proceed with the work with all due diligence and the contractor and Employer shall give effect forthwith to every decision of the engineer unless and until the same shall be revised as a result of operation of this sub clause.

67.4.4 If during the contract period, the Employer and Contractor are of the opinion that the Board is not performing its function properly; the Employer and Contractor may together disband the Board. In such an event, the dispute will have to be resolved by taking legal recourse. The Employer and the contractor shall jointly sign a notice specifying that the Board shall stand dissolved with effect from the date specified in the notice. The notice shall be posted by Registered letter or delivered personally to each member of the Board.

Notices

Notice to Contractor

68.1 All certificates, notices or instructions to be given to the Contractor by the Employer or the Engineer under the terms of the Contract shall be sent by post, cable, telex or facsimile transmission to or left at the Contractor's principal place of business or at the works Site office or such other address as the Contractor shall nominate for that purpose.

Notice to Employer and Engineer

68.2 Any notice to be given to the Employer or to the Engineer under the terms of the Contract shall be sent by post, cable, telex or facsimile transmission to or left at the respective addresses nominated for that purpose in Annexure 'A' of these conditions.

Change of Address

68.3 Either party, may change a nominated address to another address in the country where the Works are being executed by prior notice to the other party, with a copy to the Engineer, and the Engineer may do so by prior notice to both parties.

Default of Employer

Default of Employer

69.1 In the event of the Employer :

- (a) failing to pay to the Contractor the amount due under any certificate of the Engineer within 28 days after the expiry of the time stated in the Sub-Clause 60.10 within which payment is to be made, subject to any deduction that the Employer is entitled to make under the Contract,
- (b) interfering with or obstructing or refusing any required approval to the issue of any such certificate.
- (c) becoming bankrupt or, being a company, going into liquidation, other than for the purpose of a scheme of reconstruction or amalgamation, or
- (d) giving notice to the Contractor that or unforeseen economic reasons it is impossible for him to continue to meet his contractual obligations,

the Contractor shall be entitled to terminate his employment under the Contract by giving notice to the Employer, with a copy to the Engineer. Such termination shall take effect 28 days after the giving of the notice.

Removal of Contractor's Equipment

69.2 Upon the expiry of the 28 days notice referred to in Sub-Clause 69.1, the Contractor shall, notwithstanding the provisions of Sub-Clause 54.1, with all reasonable dispatch, remove from the Site all Contractor's Equipment brought by him thereon.

Payment on Termination

69.3 In the event of such termination, the Employer shall be under the same obligations to the Contractor in regard to payment as if the Contract had been terminated under the provision of Clause 65, but, in addition to the payments specified in Sub-Clause 65.8, the Employer shall pay to the Contractor the amount of any loss or damage to the Contractor arising out of or in connection with or by consequence of such termination.

Contractor's Entitlement to Suspend Work

69.4 Without prejudice to the Contractor's entitlement to interest under Sub-Clause 60.10 and to terminate under Sub-Clause 69.1, the Contractor may, if the Employer fails to pay the Contractor the amount due under any certificate of the Engineer within 28 days after the expiry of the time stated in Sub-Clause 60.10 within which payment is to be made, subject to any deduction that the Employer is entitled to make under the Contract, after giving 28 days prior notice to the Employer, with a copy to the Engineer, suspend work or reduce the rate of work.

If the Contractor suspends work or reduce the rate of work in accordance with the provisions of this Sub-Clause and thereby suffers delay or incurs costs the Engineer shall, after due consultation with the Employer and the Contractor, determine any extension of time to which the Contractor is entitled under Clause 44, and shall notify the Contractor accordingly, with a copy to the Employer.

Resumption of work

69.5 Where the Contractor suspends work or reduces the rate of work, having given notice in accordance with Sub-Clause 69.4, and the Employer subsequently pays the amount due, including interest pursuant to Sub-Clause 60.10, the Contractor's entitlement under Sub-Clause 69.1 shall, if notice of termination has

not been given, lapse and the Contractor shall resume normal working as soon as is reasonably possible.

Changes in cost and Legislation

Price variation clause

70.1 The amounts payable to the contractor and valued at base prices in accordance with Schedule shall be adjusted for rises or falls in the cost of labour, materials, fuel, cement, steel, bitumen, CI/DI pipes etc. by addition or deduction of the amounts determined by the formulae prescribed in this sub clause. 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 Contractor's quoted Price shall be deemed to include amounts to cover the contingency of such other rise or fall in costs.

The amount to be added to or deducted from the Payment Certificates (PC) for changes in Cost shall be determined from the following formula.

$$V_N = V_L + V_m + V_f + V_c + V_s + V_{st} + V_d + V_b$$

Where,

V_N = Amount to be added to or deducted from payment certificate (PC)

V_L = Amount to be added to or deducted from PC for changes in cost
due to labour

V_m = Amount to be added to or deducted from PC for changes in cost
due to all materials excluding base materials mentioned in
Annexure-A

V_f = Amount to be added to or deducted from PC for changes in cost
due to POL

V_c = Amount to be added to or deducted from PC for changes in cost
due to Cement

V_s = Amount to be added to or deducted from PC for changes in cost
due to HYSD / TMT Steel

V_{st} = Amount to be added to or deducted from PC for changes in cost

due to Structural Steel

$V_d =$ Amount to be added to or deducted from PC for changes in cost

due to CI / DI pipes

$V_b =$ Amount to be added to or deducted from PC for changes in cost

due to Bitumen

The percentages in respect of Labour, Materials and POL mentioned in Annexure 'A' will govern the price adjustment for the entire contract.

(A) Formula for Labour Component:

$$V_L = 0.85 \times \frac{P_L}{100} \times (R - B) \times \frac{(L_1 - L_0)}{L_0}$$

Where,

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

$L_0 =$ The average Consumer price index for industrial workers for centre specified in Annexure-A for the month preceding the date of opening of Bids, as published by Labour Bureau, Ministry of Labour, Government of India.

$L_1 =$ The average Consumer price index for industrial workers for the centre specified in Annexure-A for the month under consideration as published by Labour Bureau, Ministry of Labour, Government of India.

$P_L =$ Percentage of labour component of the work.

$R =$ Cost of work done during the period under consideration.

$B =$ Cost of all base materials at base rates consumed in the work during the period under consideration

(B) Formula for Materials Component:

$$V_m = 0.85 \times \frac{P_m}{100} \times (R - B) \times \frac{(M_1 - M_0)}{M_0}$$

Where,

V_m = Increase or decrease in the cost of work during the month under consideration due to changes in rates for local materials other than base materials

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

M_1 = The all India average wholesale price index (all commodities) for the month under consideration as published by Ministry of Industrial Development Government of India, New Delhi.

P_m = Percentage of local materials component (other than base materials) of the work.

R = Cost of work done during the period under consideration.

B = Cost of all base materials at base rates consumed in the work during the period under consideration

(C) Formula for Petrol, Oil and Lubricant (POL) Component:

$$V_f = 0.85 \times \frac{P_f}{100} \times (R - B) \times \frac{(F_1 - F_0)}{F_0}$$

Where,

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

F_0 = Average price of HSD at Center specified in Annexure-A including all taxes and levies for the month preceding the date of opening of bids.

F_1 = The average official retail price of HSD at Center specified in Annexure-A during the period under consideration, including all taxes and levies

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

R = Cost of work done during the period under consideration.

B = Cost of all base materials at base rates consumed in the work during the period under consideration

70.1.2 The price adjustment for variation in cost of base mentioned in Annexure-A shall be made in accordance with the following formulae subject to condition mentioned below:

Price adjustment for Cement Component

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

$$V_c = Q_c \times (C_1 - C_0)$$

Where

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

Q_c = Quantity of Cement procured during the period under consideration

C_0 = Base rate of cement as stated in Annexure 'A'

C_1 = Average rate of cement during the period under consideration This shall be the average rate during the period under consideration for ACC/ Ambuja / Birla Super, of 43 grade cement published in Economic Times, Mumbai, from time to time, including all taxes, levies or actual procurement price, based on purchase order & invoice vouchure as produced by contractor whichever is less.

In order to make the Price Variation Clause applicable to the cement component used in the ready mix concrete, following procedure will be adopted :

- a) In case of ready mix concrete produced in the batching plant installed at site, the cement procurement and consumption records are maintained in the register as per the normal practice and price adjustment is calculated based on the formula.
- b) In case the ready mix concrete is procured from outside agency, the calculation of the procurement of cement will be based on the cement constant approved in the mix design adopted and the quantum worked out on the basis of actual quantity of concrete consumed during the period under consideration and Price Variation thereafter shall be calculated based on the above formula.

Price adjustment for HYSD / TMT steel component

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

$$V_s = Q_s \times (S_1 - S_0)$$

Where

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

Q_s = Quantity of HYSD / TMT Steel procured during the period under consideration

S_0 = Base rate of HYSD / TMT Steel as stated in Annexure 'A'.

S_1 = Average rate of HYSD / TMT Steel during the period under consideration This shall be the average rate during the period under consideration of RINL/ SAIL / TATA Steel at Mumbai including all taxes, levies etc. or actual procurement price, based on purchase order & invoice vouchure produced by contractor whichever is less.

Price adjustment of structural 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:

$$V_{st} = Q_{st} \times (St_1 - St_0)$$

Where

V_{st} = Increase or decrease in the cost of work during the month under consideration due to changes in the rates for structural steel

Q_{st} = Quantity of Structural Steel procured during the period under consideration

St_0 = Base rate of Structural Steel as stated in Annexure 'A'.

St_1 = Average rate of Structural Steel during the period under consideration This shall be the average rate during the period under consideration of RINL/ SAIL / TATA Steel at Mumbai including all taxes, levies etc. or actual procurement price, based

on purchase order & invoice voucher produced by contractor whichever is less.

Price Adjustment for C.I. / D.I. pipes

$$V_d = Q_d \times (P_1 - P_0)$$

Where

V_d = Amount of price variation in rupees to be allowed for C.I./D.I. pipes component

Q_d = Tonnage of C.I./D.I. pipes and specials, excluding appurtenances procured in the Works during the quarter under consideration

P_0 = Pig Iron basic price in rupees per tonne stipulated as base rate for CI/DI pipes in Annexure 'A'.

P_1 = Average pig iron price in rupees per tonne during the quarter under consideration (Published by Kudremukh Iron Ore Co. Ltd. Bangalore) or actual procurement price, based on purchase order & invoice voucher produced by contractor whichever is less.

Price Adjustment for Bitumen

$$V_b = Q_b \times (B_1 - B_0)$$

Where,

Q_b = Quantity of Bitumen procured during the period under consideration in MT.

B_1 = official price (the price declared by the I.O.C. / H.P. / B.P. Depot) of bitumen at Mumbai for the day on which price rise is announced during the period under consideration or actual procurement price, based on purchase order & invoice vouchure produced by contractor whichever is less.

B_0 = Official price (the price declared by the I.O.C. / H.P. / B.P. Depot) of bitumen at Mumbai for the day 30 days preceding the last date prescribed for receipt of tender/ Final offer).

V_b = Price adjustment on account of variation in price of bitumen.

NOTE: For calculation of price adjustment for Bitumen:

- (a) For arriving basic & current rates, the actual taxes as levied by Govt., as applicable at that time shall be considered.
- (b) For calculation of price adjustment for Bitumen, price list of Mumbai only shall be considered, irrespective of places where Contractor purchases Bitumen.
- (c) The rate of one specific Company (for e.g. IOC, HP or BP Depot) shall be considered for calculation of Bitumen price adjustment payment to the Contractor and rates of same Company shall be considered for entire period of Contract.

70.1.3 Conditions applicable to Sub-Clause 70.1.1 & 70.1.2

- (i) The Operative Period of the Contract shall mean the period from Commencement Date and ending on the date when the time allowed for the work specified in the work order expires, taking into consideration the extension of time, if any, for completion of the Work granted by Engineer under the relevant clause or the conditions of Contract in cases other than those where such extension is necessitated on account of default of the Contractor. The decision of the Engineer as regards the Operative Period of the Contract shall be final, conclusive and binding on the Contractor. Where any Compensation for delay is levied on the Contractor on account of delay in completion or inadequate progress under the relevant Contract provisions, the price variation amount for the balance Work from the date of levy of such compensation shall be worked out as follows :
 - a) The Indices and average rates of the base materials will be pegged to the levels corresponding to the date from which such compensation for delay is levied.
 - b) Pegged indices/ rates as well as actual indices/rates prevailing at the time of calculation of price variation for the period under consideration will be compared and lower of the two will be taken for the calculating actual price variation amount.
- (ii) This price variation clause shall be applicable to all contracts of Contract price more than Rs. 10 Lacs.

- (iii) Price variation for varied items becomes operative when varied item is derived in accordance with paragraphs (i) or (ii) of Sub-Clause 52.1 only. The price variation under this clause shall not be applicable for the varied items executed in the Work and rate of which are calculated in accordance with paragraphs (iii) or (iv) of Sub-Clause 52.1 and also on the excess quantities payable under the provisions of Sub-Clause 52.2, if any.
- (iv) This clause is operative both ways, i.e. if the price variation in the said Wholesale Price Index for all commodities, Consumer Price Index (New Series) or price of HSD for Mumbai or cost of cement or steel or bitumen or CI/DI pipes is on the plus side, payment on account of the price variation shall be allowed to the Contractor and if it is on the negative side the Corporation shall be entitled to recover the same from the Contractor and the amount shall be deductible from the Interim Payment Certificates for the respective period in which there are fluctuations.
- (v) In order to facilitate computation of price variation to be made under this clause, the contractor shall submit copy of original purchase order and procurement invoices of all base materials. The Contractor shall also keep such books of accounts and other documents as are necessary. The Contractor shall allow inspection of the same by a duly authorised representative of the corporation and shall at the request of the Engineer furnish in such a manner as the Engineer may require, true copies of any document so kept and such other information as the Engineer may require for verification.
- (vi) Total quantity of procurement of base materials for calculation of price variation shall be restricted to the quantity of base materials actually consumed in the Work.
- (vii) Calculation of price variation at the time of preparation of Final statement will be based on confirmed indices.

70.1.4 Save and except for what is provided in the foregoing clause, nothing herein shall be construed to entitle the Contractor to reimbursement of any increase in the price of materials or in the wages of labour occurring at any time and for any reason whatsoever or increase in any current tax, duty or fee by the operation of any law or enactment, or increase in the price of any petroleum product, coal,

electricity or water effected by or under the order of the Central Government or a State Government or local authority or its instrumentality, except those admissible in accordance with provisions of Sub-Clause 70.2

Reimbursement of taxes and duties

- 70.2 (i) a. All tendered rates shall be inclusive of all taxes and levies payable under respective statutes. However, if any new tax or levy is imposed by Central/State Government/Local body, after the date of submission of tenders for the Contract including extensions if any, the Contractor shall be reimbursed, subject to compliance of provisions of paragraphs (ii) and (iii) of this Sub-clause.
- b. Any increase or decrease in Royalty charges, Octroi, Cess Tax in lieu of Octroi, Service tax and Custom duties on imports shall be reimbursed to or recovered from the Contractor, subject to compliance of provisions of paragraphs (ii) and (iii) of this Sub-clause.
- (ii) The Contractor shall be reimbursed against proof of payment, the amount so paid, provided such payments, if any, is not, in the opinion of the Employer attributable to delay in execution of work within the control of the Contractor. The Contractor shall keep necessary books of accounts and other documents for the purpose of this condition as may be necessary and shall allow inspection of the same by a duly authorized representative of the Employer and shall furnish such other information/document as the Employer may require from time to time.
- (iii) The Contractor shall, with in a period of 30 days of the imposition of any new tax or levy or of changes in existing structure of taxes or levies mentioned in paragraph (i), give a written notice thereof to the Engineer that the same is given pursuant to this condition, together with all necessary information relating thereto.
- (iv) This clause is not applicable for variations in base materials mentioned in Annexure- A

Tax Registrations

- 71.1 For the various taxes levied in respect of the Contract under provisions of local authorities or law of the state, if the Contractor is required to register with the tax authorities, the Contractor shall obtain such registration and furnish the

registration number, in writing with required proof, to the Engineer. The Contractor shall also produce a valid tax clearance certificate before the Final payment under Final Payment Certificate, failing which, the payment may be withheld.

If the Contractor is not liable to any of such tax registration or assessment, a certificate to this effect from competent tax authority shall be produced by the Contractor, failing which, the payment due to the Contractor may be withheld.

ANNEXURE 'A'

Clause No.

1.1(a)(iv) The Engineer for the Contract Name

Designation

43.1 Time for completion (inclusive / exclusive of monsoon)

A. Contract as whole months

B. Sections (Part or Groups of items)

i) : months

ii): months

49.1 Defects Liability Period

i) Months / Years

ii) Months / Years

49.4 Percentage to be charged as

supervision charges for the work

got executed through other means%

60.10 The rate of interest applicable for

payment delayed% p.a.

70.1 i) Centre for price variation Indices :

ii) Price variation clause factors :

P_L : _____ %

P_m : _____ %

P_f : _____ %

Total	100.00	%
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iii) Base Materials and Base Rates applicable: *

Base Rate of Cement : Rs. _____/M.Tonne

Base Rate of TMT/ HYSD Steel : Rs. _____/M.Tonne

Base Rate of Bitumen : Rs. _____/M.Tonne

Base Rate of Structural Steel : Rs. _____/M.Tonne

Base Rate of CI/DI pipes : Rs. _____/ M.Tonne

Signature of Issuing Officer

Signature of Contractor

Date :

Date :

* Strike out if not necessary.

ANNEXURE 'B'

(See Sub-Clause 19.1)

SAFETY PROVISIONS

1. Suitable scaffolds shall be provided for workmen for all works that cannot safely be done from the ground or from solid construction except such short period work as can be done safely from ladders. When a ladder is used an extra mazdoor shall be engaged for holding the ladder and if the ladder is used for carrying materials as well, suitable footholds and holds shall be provided on the ladder and the ladder shall be given an inclination not steeper than 1/4 to 1 (1/4 horizontal and 1 vertical).
2. Scaffolding or staging more than 3.25 metres above the ground or floor swung or suspended from an overhead support or erected with stationary support, shall have a guard rail properly attached, bolted, braced and otherwise secured at least 1 metre high above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends thereof with only such openings as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the building or structure.
3. Working platform, gangways, and stairways shall be so constructed that they do not sag unduly or unequally, and if height of a platform of gangway or stairway is more than 3.25 metres above ground level or floor level, it shall be closely boarded, have adequate width and be suitably fenced, as described in 2 above.
4. Every opening in floor of a building or in a working platform shall be provided with suitable means to prevent fall of persons or materials by providing suitable fencing or railing with a minimum height of 1 metre.
5. Safe means of access shall be provided to all working platforms and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9 metres in length. Width between side rails in a rung ladder shall in no case be less than 30 cm for ladders up to and including three metres in length for longer ladders this width shall be increased by at least 6 mm. for each additional 30 cm. of length. Uniform step spacing shall not exceed 30 cm.

- 5.1 Adequate precautions shall be taken to prevent danger from electrical equipment. No materials on any of the sites shall be so stacked or placed as to cause danger or inconvenience to any person or the public. The Contractor shall provide all necessary fencing and lights to protect public from accidents and shall be bound to bear expenses of defence of every suit, action, other proceedings at law that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay any damages and costs which may be awarded in any such suit, action or proceedings to any such person or which may with the consent of the Contractor be paid to compromise any claim by any such person.
6. Excavation and Trenching : All trenches, 1.5 metres or more in depth, shall at all times be supplied with at least one ladder for each 30 metres in length or fraction thereof. Ladder shall be extended from bottom of trench to at least 1 metre above surface of the ground. Sides of a trench which is 1.5 metres or more in depth shall be stepped back to give suitable slope, or securely held by timber bracing, so as to avoid the danger of sides collapsing. Excavated material shall not be placed within 1.5 metres of edge of trench or half of depth of trench, whichever is more. Cutting shall be done from top to bottom. Under no circumstances shall undermining or undercutting be done.
7. Demolition : Before any demolition work is commenced and also during the process of the Work :
- a) All roads and open areas adjacent to the Work site shall either be closed or suitably protected.
 - b) No electric cable or apparatus which is liable to be a source of danger over a cable. or apparatus used by operator shall remain electrically charged.
 - c) All practical steps shall be taken to prevent danger to persons employed, from risk of fire or explosion, or flooding. No floor, roof, or other part of a building shall be so overloaded with debris or materials as to render it unsafe.
8. All necessary personal safety equipment as considered adequate by the Engineer shall be available for use of persons employed on the site and maintained in a condition suitable for immediate use, and the Contractor shall take adequate steps to ensure proper use of equipment by those concerned.

- (a) Protective head wear shall be provided to workers on the site or in quarries etc. to protect them against accidental fall of materials from above.
- (b) The workmen shall be supported with proper belts, ropes etc. where working on any mast, cranes crib, hoist etc.
- (c) Necessary steps towards training the workers concerned on the use of machinery shall be taken before they are allowed to handle it independently and taking all necessary precautions in and around the area where machines, hoists and similar units are working.
- (d) Life belts, protective railings and /or Jali shall be provided for safety of all workers, working at such situations from where they may accidentally fall.
- (e) Sufficient first aid trained staff and equipments shall be quickly available at the work site to render immediate first aid treatment in case of accidents due to scaffolding, drowning and other injuries.
- (f) Workers employed in mixing asphaltic material, cement and lime mortars/concrete shall be provided with protective footwear, hand-gloves and goggles.
- (g) Those engaged in handling materials, which is injurious to eyes shall be provided with protective goggles.
- (h) Those engaged in welding Works shall be provided with welder's protective eye shields.
- (i) Stonebreakers shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.
- (j) When workers are employed in sewers and manholes, which are in use, the Contractor shall ensure that manhole covers are opened and manholes are ventilated at least for an hour before workers are allowed to get into them. Manholes so opened shall be cordoned off with suitable railing and provided with warning signals or boards to prevent accident to public.
- (k) The Contractor shall not employ men below the age of eighteen and women on the work of painting with products containing lead in any form.

Whenever men above the age of eighteen are employed on the work of lead painting the following precautions shall be taken;

- i) No paint containing lead products shall be used except in the form of paste or ready made paint.
- ii) Suitable face masks shall be supplied for use by workers when paint is applied in the form of spray or a surface having lead paint dry rubbed and scrapped.
- iii) Overalls shall be supplied by the Contractor to workmen and adequate facilities shall be provided to enable working painters to wash during and on cessation of work.

9. When Work is done near any place where there is risk of drowning, all necessary equipment shall be provided and kept ready for use and all necessary steps taken for prompt rescue of any person in danger and adequate provision made for prompt first aid, treatment of all injuries likely to be sustained during the course of the work.

10. Use of hoisting machines and tackle including their attachments, anchorage and supports shall conform to the following:

- a)
 - (i) These shall be good mechanical construction, sound material and adequate strength and free from patent defects and shall be kept in good repair and in good working order.
 - (ii) Every rope used in hoisting or lowering materials or as a means of suspension shall be of durable quality and adequate strength, and free from patent defects.
- b) Every crane driver or hoisting appliance operator shall be properly qualified and no person under the age of 21 years shall be in-charge of any hoisting machine including any scaffold winch or give signals to operator.
- c) In case of every hoisting machine and of every chain ring hook, shackle, swivel and pulley block used in hoisting or lowering or as means of suspension, safe working load shall be ascertained by adequate means. Every hoisting machine and all gear referred to above shall be plainly

marked with safe working load. In case of a hoisting machine having a variable safe working load, each safe working load and the conditions under which it is applicable shall be clearly indicated. No part of any machine or of any gear referred to above in this paragraph shall be loaded beyond safe working load except for the purpose of testing.

- d) In case of a departmental machine, safe working load shall be notified by the Engineer. As regards Contractor's machine the Contractor shall notify safe working load of each machine to the Engineer whenever he brings it to site of Work and get it verified by the Engineer.
11. Motors, gearing, transmission, electric wiring and other dangerous parts of hoisting appliances shall be provided with efficient safe guards, hoisting appliances shall be provided with such means as will reduce to the minimum risk of accidental descent of load, adequate precautions shall be taken to reduce to the minimum risk of any part of suspended load becoming accidentally displaced. When workers are employed on electrical installations which are already energised, insulating mats, wearing apparel such as gloves, sleeves and boots, as may be necessary, shall be provided. Workers shall not wear any rings, watches and carry keys or other materials which are good conductors of electricity.
12. All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in a safe condition and no scaffold, ladder or equipment shall be altered or removed, while it is in use. Adequate washing facilities shall be provided at or near places of work.
13. These safety provisions shall be brought to the notice of all concerned by display on a notice board at a prominent place at the Work spot. Persons responsible for ensuring compliance with the safety provisions shall be named therein by the Contractor.
14. To ensure effective enforcement of the rules and regulations relating to safety precautions, arrangements made by the Contractor shall be open to inspection by the Engineer or his representative and the Inspecting Officers.
15. Notwithstanding the above provision 1 to 14, the Contractor is not exempted from the operation of any other Act or Rule in force.

ANNEXURE 'C'
(As per Clause 48)

FORMAT FOR TAKING OVER CERTIFICATE

CIDCO/EE (____)/____

Date : _____

To,

M/s. _____

Subject : _____

C.A.NO. _____

TAKING OVER CERTIFICATE

Dear Sir,

In pursuance of Clause 48 of General Conditions of Contract, I here by certify that, the Work under C.A. No. _____ for “_____” completed by M/s. _____ on _____ and taken over by CIDCO subject to completion of outstanding Works, rectification of defects as per statement attached at Appendix-“A” and rectification of defects noticed during defects liability period and communicated to the agency by Engineer.

The Contract shall be considered as completed only after issue of Defects liability Certificate by the Corporation.

Encl: As above.

Yours faithfully

Executive Engineer (_____)

APPENDIX-“A” to Annexure ‘C’

1. Name of work : _____
2. C.A.NO. : _____
3. Agency : M/s. _____
4. Contract Price of Work : Rs. _____
5. Value of Work as per execution : Rs. _____
6. Date of start : _____
7. Date of completion : _____
8. Outstanding Works
(if any) : 1. _____
2. _____
9. Defects (If any) : 1. _____
2. _____
10. Defects Liability Period : _____
11. Certified that, Work is completed satisfactorily except the defects listed above and subject to satisfactory completion of Defects Liability Period and attending the defects noticed during Defect Liability Period.

AE (_____)

AEE (_____)

EE (_____)

Appendix I to Sub Clause 67.4**DISPUTES REVIEW BOARDS RULES & PROCEDURE**

1. Except for providing the services required hereunder, the Board members shall not give any advice to either party or to the Engineer concerning conduct of the works. The board members,
 - (a) Shall have no financial interest in any party to the contract or the engineer, or a financial interest in the contract except for payment for services on the Board.
 - (b) Shall have no financial ties to any party to the contract or the Engineer except for fee based consultancy services on other projects, all of which must be disclosed in writing to both the parties prior to appointment to the Board.
 - (c) Shall have no prior involvement in the project to which the contract relates.
 - (d) Shall not, while a Board member, be employed whether as a Consultant otherwise for either party to the Contract, or the Engineer except as a Board Member without the prior consent of the parties and the other Board members.
 - (e) shall be and remain impartial and independent of the parties and shall disclose in wiring to the employer, the Contractor, the engineer and one another any fact or circumstance which might be such as to cause either the employer or the contractor to question the continued existence of the impartially and independence required of Board members and
 - (f) shall be fluent in English i.e. the language of the contract.
2. Except for its participation in the boards activities as provided in the contract and in the agreement none of the employer the contractor and or the engineer shall solicit advice or consultation from the board or Board member on matters dealing with the conduct of the works

3. The Contractor Shall:
 - a) Furnish to each Board member one copy of all documents which the Board may request, including one copy of contract documents, progress reports, variation orders and other documents pertinent to the performance of the contract.
 - b) In co-operation with the employer coordinate the site visits of the board, including conference facilities and secretarial and copying services.
4. The Board shall begin its activities following the signing of board members declaration of acceptance by all three board members, and it shall terminate these activities as set forth below:
 - a) The board shall terminate its regular activities after finalization of their recommendations for the various disputes, if any, referred to the Board in accordance with the clause No. 67 or after the expiry of the Defects Liability Period or the employer have expelled the contractor from the site pursuant and to sub clause 63.1 and when in either case the board has communicated to the parties ,to the Engineer its recommendations on all disputes previously referred to it.
 - b) Once the board has terminated its regular activities as provided by the previous paragraph, the Board shall remain available to process any dispute referred to it either party incase of such a referral, board members shall receive payments as provided in paragraph 7.
5. Board members shall not assign or subcontract any of their work under these rules and procedures.
6. The board members are independent contractors and not employees or agents of either the employer or the contractor.
7. Payments to the Board members for the services shall be governed by the following provisions

- a) Each Board member shall receive the fess for their site visits and meetings required from time to time from the date of establishment of Board on day basis at L.S. fees (Rs.6,000 to 10,000) or as finalized by the employer or and agreed by the contractor in writing. The fees shall include the charges of transportation required for attending meetings and site visits.
- b) The Board members shall be available on 7 days notice for all hearings site visits and other meetings of the board.
- c) The Board members shall be conversant with all the project development and maintaining relevant files.
- d) The board members shall be provided the secretarial services during site visits, meeting & during hearings.
- e) The board member shall be preferably selected from Mumbai / Navi Mumbai or nearby areas. Incase any member of the board is selected out of these areas then the necessary arrangement for their transportation and stay shall be made by the concern party selecting the member.
- f) The remuneration payable shall include the reimbursements of any taxes that maybe levied from time to time as an act of State Govt. / Central Govt. legislature.
- g) Payment to the board member shall be shared equally by the employer and the contractor and the payments shall be released to the board members by the employer and shall be subsequently recovered from the contractor through any interim payment certificate or from the performance security paid by the contractor of the contract.

8. Board site visits

- a) The board shall visit the site and meet with representatives of the employer and the contractor and the engineer at regular intervals or at the times of critical construction event, at the written request of either party, but in any case not less than 3 times in any period of 12 months. The

timing of site visit shall be agreed among the employer, the contractor and the board; failing agreement, shall be fixed by the board.

- b) Site visits shall include an informal discussion of the status of the construction of the works an inspection of the works and the review of any requests of recommendation made in accordance with paragraph 10 below Site visits as shall be attended by personnel from the employer the contractor and the engineer.
- c) At the conclusion of each site visit, the Board shall prepare a report covering its activities during the visit and shall send copies to the parties and to the engineer.

9. Procedure for Dispute Referral to the Board

- a) If either party objects to any action or inaction of the other party or the Engineer the objecting party may file a written Notice of Dispute to the other party with a copy to the Engineer stating that it is given pursuant to Clause 67 and stating clearly and in detail the basis of the dispute.
- b) The party receiving the Notice of Dispute will consider it and respond in writing within 14 days after receipt.
- c) The response shall be final and conclusive on the subject unless a written appeal to the response is filed with responding party within 7 days after receiving the response. Both parties are encouraged to pursue the matter further to attempt to settle the dispute. When it appears that the dispute can not be resolved without assistance of the Board, or if the party receiving the Notice of Dispute fails to provide a written response within 14 days after receipt of such Notice, either party may refer the dispute to the Board by written request for recommendation to the board. The request shall be addressed to the Chairman of the Board, with copies to the other Board Members, the other party ,& the Engineer and it shall state that it is made pursuant to Clause 67.

- d) The request for Recommendation shall state clearly and in full detail the specific issues of the dispute to be considered by the Board.
- e) When a dispute is referred to the Board, and the Board is satisfied that the dispute requires the Board's assistance, the Board shall decide when to conduct a hearing on the dispute. The Board may request that written documentation and arguments from both the parties be submitted to each Board Member before the hearing begins. The parties shall submit insofar as possible agreed statements of the relevant facts.
- f) During the hearing, the Contractor, the Employer, and the Engineer shall each have ample opportunity to be heard and to offer evidence. The Board's Recommendations for resolution of the dispute will be given in writing to the Employer, the Contractor and Engineer as soon as possible and in any event not later than 90 days after receipt by the Chairman of the Board of the written Request for Recommendation.

10. Conduct of hearings

- a) Normally hearings will be conducted at the Site, employer's office but any location that would be more convenient and still provide all required facilities and access to necessary documentation may be utilized by the Board. Private Sessions of the Board may be held at any cost effective location convenient to the Board.
- b) The Employer, the Engineer and the Contractor shall be given the opportunity to have representatives at all hearings.
- c) During the hearings, no Board Member shall express any opinion concerning the merit of the respective arguments of the parties.
- d) After the hearings are concluded, the Board shall meet privately to formulate its Recommendations. All Board deliberation shall be conducted in private, with all Members individual views kept strictly confidential. The Board's Recommendations together with an explanation of its reasoning shall be submitted in writing to both parties and to the

Engineer. The recommendations shall be based on the pertinent Contract provisions, applicable laws and regulations, and the facts and circumstances involved in the dispute.

- e) The Board shall make every effort to reach a unanimous Recommendation, if this proves impossible, the majority shall decide and the dissenting Member may prepare a written minority report for submission to both parties and to the Engineer.

11. In all procedural matters, including the furnishing of written documents and arguments relating to disputes, Site visits and conduct of hearings, the Board shall have full and final authority.

12. After having been selected and where necessary, approved, each Board Member shall sign three copies of the enclosed declaration and make one copy available each to the Employer, to the Contractor and to the Engineer.

Appendix II to Sub Clause 67.4**BOARD MEMBER'S DECLARATION OF ACCEPTANCE**

WHEREAS:

- a) A Construction Contract (the Contract) for the _____ (fill in name of project) has been signed on _____ (fill in date) between _____ (name of Employer) and _____ (name of Contractor) (the Contractor).
- b) Sub-clause 67.4 of the Conditions of the Contract and Appendix- I to Sub-clause 67.4 provide for the establishment and operation of a Dispute Review Board (the Board).
- c) The undersigned has been selected (and where required, approved) to serve as a Board Member on said Board;

NOW THEREFORE, the undersigned Board Member hereby declares as follows:

- 1. I accept the selection as Board Member and agree to serve on the Board and be bound by the provisions of Sub-clause 67.4 of Conditions of the Contract and Appendix- I to Sub-clause 67.4.
- 2. With respect to paragraph 1 of said Appendix- I, I declare;
 - a) that I have no financial interest of the kind referred to in sub-paragraph (a);
 - b) that I have no employment nor financial ties of the kind referred to in sub-paragraph (b); and
 - c) I am not serving as an employee of either party.

- d) that I have made to both parties any disclosures that may be required by sub-paragraphs (b) and (c).

BOARD MEMBER

_____ (insert name of Board Member)

Date: _____

NOTES AND PREAMBLES TO SCHEDULE OF RATES AND
QUANTITIES (SCHEDULE 'A')

NOTES & PREAMBLES :

- (A) On method of measurement and other relevant matters.
- (B) Drafting of Schedule of Rates and Quantities.
- (C) Time of Completion.
- (D) Deduction of Income Tax.

(A) **METHOD OF MEASUREMENT AND OTHER RELEVANT MATTERS**

1.0 **General :**

All works shall be measured net as completed. No allowance shall be made for large or small quantities, narrow width, easy access or difficult positions or other exceptional circumstances. Any work executed over and above the dimensions given in drawings or sketches provided by the Engineer or written instructions by the Engineer shall be ignored and no payment shall be made for such extra work. In other words, payment shall be made for authorized works only.

- 1.1 **Tolerance:** Dimensions shall be measured to the nearest 0.01 M. Area shall be worked out to the nearest 0.01 M² and volume (cubic contents) shall be worked out to the nearest 0.01 M³.
- 1.2 **Transport:** Distance shall be measured by the shortest practicable route as approved by the Engineer.
- 1.3 **Full Provisions:** The rates inserted by CIDCO against various items of work detailed in various parts of Schedule shall be deemed to

include every allowance necessary, without extra measurement or charge for meeting the requirement of various components/parts of the contract documents (viz. particular Specifications, B & C Standard Specifications, B & C Schedule of rates, Special Conditions, Preambles and notes to Schedule of items, description of Schedule of items which shall all be read together and any or all of the following unless specifically provided for the contrary.

- a) Compliance with all the conditions of contract including General Conditions of Contract, Schedule of Quantities, Particular Specifications, Drawings including notes thereon, Specifications in Standard Specifications of B&C Department, relevant Indian Standard where applicable. However, in case of any discrepancy between drawing and bid, the bid item and specification shall prevail.
- b) All labour, materials, tools and plants, equipment's and transport, which may be required in preparation for and in the full and entire execution and completion of the works including waste in materials, carriage and cartage, carrying in, return of empties, hoisting, setting, fittings in position.
- c) **Local conditions:** Nature of works, local facilitates for supply of labour and materials, accessibility's to sites and all other matters, affecting the execution and completion of the works.
- d) **Duties etc:** Payment of any **Goods & Service Tax (GST)**, Royalty, Ground Rent, Environmental Cess or any duties on materials obtained for the works and any duties in respect of patent rights. Cess as per BPMC Act and its amendments.
- e) **Supervision** : Competent supervision of the work.

- f) **Labour** : Reasonable terms and conditions of employment, liability to pay compensation, wages as per statutory enactment's, temporary accommodation, sanitation etc. compliance with Contract Labour Act.
- g) **Water:** Provision of all water required including temporary plumbing and connection.
- h) **Temporary Workshops, Stores, Office, Labour Camps etc.** : Provisions of such structures required for efficient execution of the works and removing and cleaning up site on completion of works.
- i) **Precaution against risk** : Precautions to prevent loss or damage from all or any risk, insurance of sheds or any temporary accommodation provided by CIDCO, watching & lighting, provisions pertaining to the General Conditions of Contract.
- j) **Notices, Fees etc.** : Compliance with statutory provisions of regulations and/or bye-laws of any local authority including NMMC and/or any public service company or authority affected by the works.
- k) Setting the works including all apparatus required.
- l) **Site Drainage:** Removal of all water that may accumulate due to springs, sub soil water, flood/tides and any other causes on the site during the progress of the work.
- m) Execution of work in workmanlike manner, facilities for inspection etc.
- n) **Rectification of Bad Work** : Rectification and/or removal and reconstruction of any work which (as decided by the Engineer) has been executed with unsound or imperfect materials or unskilled workmanship or of a quality inferior to that contracted for, whether

during construction or reconstruction prior to the expiry of the Defect Liability period.

- o) Responsibility for damage and loss of all construction materials etc., at the site until handing over to CIDCO.
- p) **Removal of Rubbish:** Removal of rubbish and debris and cleaning of any dirt before handing over of all completion works.
- q) **Cleaning site and works :** Removal by the Contractor off the site, of any tools, plants and materials and removal of splashes of asphalt leaving the whole site neat and tidy.
- r) **Completion:** Completing the work to the satisfaction of the Engineer on or before the date of completion.
- s) **Difficult position:** Accessibility or otherwise to site, easy or difficult positions in works.
- t) **Errors:** Rectification of all errors to the satisfaction of Engineer.
- u) **Curved work etc. :** Work of any quantity, size or shape whether level, inclined, curved, battered etc.
- v) **Maker's Instructions:** Compliance with maker's instructions in the case of proprietary articles, factory made goods of precast items.
- w) **Waste:** All waste, laps, seams, joints (rough or fair cuttings) straight/raking, circular and making good.
- x) **Artificial Light:** To include all lighting/kerosene or electric power as the case may be when need arises for use of lighting while carrying out works.
- y) Construction of approaches to the site of work. Making arrangement for proper access to works in the form of stairs, ladders, lifts, etc. as ordered by the Engineer for proper supervisions, testing and or inspection of works.

- z) All the expenses required towards testing of materials and/or works. All expenses towards contractor's all risk insurance policy

(B) **BRIEF NOTES ON DRAFTING OF SCHEDULE OF RATES AND QUANTITIES**

1.0 The Bid has been drafted on the basis of quantities for different types of items.

1.1 All the tender items are generally priced as per schedule of rates of PWD Electrical Schedule of Rates for the year 2019-20 and Market Approved Rates.

2.0 The Bidders are requested to work out their own rates based on the detailed description of Schedule 'A' items, the specifications and drawings and finally arrive at the cost of the work in the appropriate place. The Bidder shall insert percentage cost over CIDCO's cost to arrive at the contract value for the work.

(C) **TIME OF COMPLETION**

3.0 The period of completion of works enumerated under Schedule 'A' shall be as mentioned in Annexure 'A' from the date of placing the work order or date of handing over the site whichever is earlier.

(D) **DEDUCTIONS OF INCOME TAX**

4.0 Deduction of Income Tax shall be at the rates stipulated by Income Tax authorities and the amounts shall be deducted from every running bill submitted by contractor.



Signature of Bidder
Date :

Superintending Engineer (Elect-Proj.)
Date :

Name of Work : Providing Pumping arrangement along with Electrical power supply at holding pond near Dungi.

C.A.No. : 01/CIDCO/EE(Elect-AP)/2020-21

SCHEDULE – "A"

Sr. No.	Item Description	Qty	Unit	Rate	Amount
1	Supplying, installing, testing & commissioning compact substation with 3 phase, 22/0.433 kV, 50 Hz., 315 kVA, oil immersed copper wound transformer having indoor type transformer bushings, with HT side (incoming side) load break switches - 2 Nos. of appropriate capacity and LT side (outgoing side) MCCBs (4 pole) of appropriate capacity, with inbuilt metering cubical, standard accessories complete with test certificate with losses below 1077 Watts at 50% load, 3255 Watts at 100% load for transformer, as per IS:1180 - 2014 energy efficiency level II, with necessary permissions of Electrical Inspector, as per specification no SS-TR with required GI plate type earthing as approved by EIC.	1	No.	1579146.00	1579146.00
2	Supplying, erecting and commissioning of diesel generating set with alternator of 200 kVA output continuous rating, 3 Phase, 415 V, 50c/s 0.8 p. f. A.C a totally enclosed	1	Nos.	1308165.00	1308165.00

Sr. No.	Item Description	Qty	Unit	Rate	Amount
	air cooled / liquid cooled multi-cylinder diesel engine developing suitable BHP at 1500 rpm with 10% overload for 1 hour in 12 hours, along with standard accessories, self-excited, self-regulated, screen protected alternator with static excitation system running at 1500 RPM as per IS 4722- 2001 with voltage regulation +/- 5 %. Both the engine and alternator direct coupled on a common fabricated steel base frame and mounted on anti-vibrating pads with standard control panel comprising meters, switchgears, indicators connected with suitable wires/cables, the complete set enclosed in composite acoustic enclosure as fully assembled integral unit made of 16 SWG CRCA Sheet, sound absorbing material to restrict sound level upto 75 dB at 1.0 m, provided with first filling of oil, diesel etc. as per specification no. GEN-DG with required GI plate type earthing as approved by EIC.				
3	Supplying, Erecting, Testing and Commissioning of 25 HP /18.5 KW having of 100 LPS at 10m point head Submersible dewatering pump	5	No.	390100.00	1950500.00

Sr. No.	Item Description	Qty	Unit	Rate	Amount
	set having solid handling capacity of 100mm. including 10m of 3x10 sqmm & 5x1.5 sqmm cable each and all accessories complete with required control cables for commissioning.				
4	<p>Supplying, Erection, Testing and Commissioning of MCC Panel having,</p> <p>INCOMER:</p> <p>2 nos of 400A FP Thermal Magnetic MCCB 36KA including a 400A FP ATS</p> <p>OUTGOINGS:</p> <p>5 Nos. of 80 A TP Thermal Magnetic MCCB 25kA</p> <p>2 Nos. 32A TP C Curve MCB 10kA including contactors and relays</p> <p>5 Nos. Star delta starters</p> <p>5 Nos. 10KVAR capacitor for individual pumps.</p>	1	No.	775188.00	775188.00
5	Supplying & erecting mains with 3x10 sq.mm FRLSH copper PVC insulated wire laid in provided conduit/trunking/ inside pole/Bus bars or any other places as per specification No: WGMA/BW	100	Mtr.	285.00	28500.00
6	Supplying & laying (including excavation) 15 cm dia RCC Hume pipe with coupling collar of standard	100	Mtr.	581.00	58100.00

Sr. No.	Item Description	Qty	Unit	Rate	Amount
	thickness at required depth up to 90 cm below road / ground surface, for enclosing provided cable & necessary back filling with light ramming to make the road/ground surface as it was (Except bitumen carpet).				
7	Supplying, erecting & terminating XLPE armoured cable 3½ core 185 sq. mm. aluminium conductor with continuous 12.97 sq. mm. (8 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	50	Mtr.	929.00	46450.00
8	Supplying, erecting & terminating XLPE armoured cable 3½ core 300 sq. mm. aluminium conductor with continuous 12.97 sq. mm. (8 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	50	Mtr.	1390.00	69500.00
9	Supplying , erecting & terminating 3 x 120 sq. mm. aluminium 22 kV(E), XLPE armoured cable on wall/ceiling or laid in provided trench / pipe in an approved manner as per	500	Mtr.	1703.00	851500.00

Sr. No.	Item Description	Qty	Unit	Rate	Amount
	specification no. CB-HT including required end terminations.				
10	Supplying and erecting iron, sheet metal work consisting of CRCA sheets, various sections of iron, plates, chequered plates, rods, bars, MS pipes, etc. for panel board or any other purpose with bending, cutting, drilling and welding complete erected at the position with necessary materials duly painted with one coat of red oxide and two coats of enamel paint to match the switchgears or as per directions by the authority.	5000	Kg	131.00	655000.00
11	Supplying and erecting static energy meter 440 V 50 Hz. 100A ISI mark meter AC 3 phase 4 wires LCD/LED display complete erected on polished teak wood board duly wired with required size of weather proof PVC wires duly tested for class II accuracy by electric supply company.	1	No.	5638.00	5638.00
12	Providing 250 mm double flange sluice valve confirming for IS- 14846 including worn gear arrangements as per test pressure, stainless steel spindle, caps, including inspection charges, transportation upto	5	Nos.	26848.00	134240.00

Sr. No.	Item Description	Qty	Unit	Rate	Amount
	departmental store, unloading, stacking excluding GST levied by GOI & GOM in all respect etc. complete.				
13	Providing and supplying ISI mark 250 mm CI D/F reflux valves (non-return valves) of following dia including railway freight, inspection charges, unloading from railway wagon, loading into truck, transportation upto departmental stores, unloading, stacking excluding GST levied by GOI & GOM in all respect etc. complete. Reflux valves as per I.S.5312 Part I (1984)	5	Nos.	28312.00	141560.00
14	Supplying and erecting of 13 mtr RSJ pole size 152 x 152 mm and shall be painted completely with two coat of red oxide. The bottom section of the pole shall be painted with black bituminous paint upto 2.5 mtr height and remaining portion painted with two coats of silver enamel paint the rate indicated is for complete work including excavation for the foundation in all type of soils / hard rock etc. duly plastered muffling.	2	No.	27092.00	54184.00
15	Supplying and erecting rolled steel joist (girder) pole 100 x 116 mm (23	1	No.	14971.00	14971.00

Sr. No.	Item Description	Qty	Unit	Rate	Amount
	kg/m) with provided base plate in provided foundation as per specification no. OH-PL/RSJ				
16	Supply and erection of G.I. Channel 100x50x6 mm (9.2 Kg / MTR.) for erection of disc with suitable mounting arrangement and hole on any other purpose as per directives of engineer in charge.	100	Kg	46.50	4650.00
17	Supply and erection of GI channel 75 x 40 x 6 mm (9.2 Kg / mtr.) HDG for erection go disc with suitable mounting arrangement and hole or any other purpose as per directives of Engineer in charge.	90	Kg	58.76	5288.40
18	Supplying and erecting ACSR conductor of size - 6/1-4.72 mm (Dog) complete. (394.00 kg/km) as per specification No. OHCON/ACSR	0.200	Km.	80118.00	16023.60
19	Supplying and erecting anticlimbing devices, fabricated from pole clamps of MS Flat 40x5 mm, with drooping spikes 15 cm. in length, welded to it and erected on pole with danger board.	2	No.	158.00	316.00
20	Supplying and erecting porcelain disc type insulator with necessary hardware suitable for 22kV line, complete as per specification no. OH-INS/DI	12	Nos.	1334.00	16008.00

Sr. No.	Item Description	Qty	Unit	Rate	Amount
21	Strain Hardware for Dog 0.1 or Equ AAC	2	Set	380.41	760.82
22	Supplying and erecting GI strip of required size used for earthing on wall and/or any other purpose with necessary GI clamps fixed on wall painted with bituminous paint in an approved manner with joints required. As per specification No EA-EP.	100	Kg	191.00	19100.00
23	Providing cement concrete foundation including excavation for the poles 60 cm x 60 cm x deep 1/6 of pole length in 1:3:6 cement concrete (20 x 25 mm stone metal) and 45 cm x 45 cm x 45 cm /45 cm dia. x 45 cm. height plinth duly plastered and with necessary curing and finishing in an approved manner. (for above 9 m poles) Each 3317 244 3561 16-3-4 Providing Cement	1	Each	1957.00	1957.00
24	Supplying and erecting Assotated Nut bolts of various size a	30	Kg	109.00	3270.00
25	Providing & erecting epoxy straight through joint outdoor/indoor for LT XLPE armoured cable 120 to 185 sq. mm. cable, with necessary material as per specification no. CB-JT/LT	2	No	3085.00	6170.00

Sr. No.	Item Description	Qty	Unit	Rate	Amount
26	Providing & erecting epoxy outdoor / indoor end termination kit for LT XLPE armoured cable 70 to 120 sq. mm. cable, with necessary material as per specification no. CB-JT/LT	4	No.	2163.00	8652.00
27	Supplying and erecting 6 way Feeder Pillar Panel having, INCOMER: 1 No. of 630A HRC Fuse base with Vertical Fuse Unit OUTGOINGS: 5 Nos. of 400A HRC Fuse with Vertical Fuse Unit including foundation.	1	No.	270911.00	270911.00
28	Providing pipe type earthing with 40mm. dia. G.I. pipe or 20 mm dia. G.I. Rod complete with all materials as per specification no. EA- EP	24	Each	1249.00	29976.00
29	Obtaining all approvals from MSEDCL / Electrical Inspector or any other / statutory bodies and authorities as required of all works covered under the contract including preparation of as built drawings and handing over of entire installation to MSEDCL. Item also includes	1	Job	15000.00	15000.00

Sr. No.	Item Description	Qty	Unit	Rate	Amount
	preparation of shop drawings and submission of same to CIDCO in 5 set and certified from CIDCO.				
	Total of Schedule "A"			Rs.	8070724.82
	ADD/SUBTRACT (+/-) _____% quoted by the contractor to reflect the total cost.			Rs.	
	GRAND TOTAL (A) +/- (B)			Rs.	

(Rupees _____
_____ Only)

NOTES :

- 1) It is compulsory to fill the amount both in words and figures.
- 2) This is to confirm that I have read carefully instruction No. 3.8.1 to 3.9 on **Sl.Pg.No. 10** of the Bid and I understand that my bid is liable to be rejected if I fail to submit the offer in accordance with the various provisions and do not comply with the stipulations.

Signature of Bidder

Date :



Superintending Engineer (Elect-Proj.)

Date :

ANNEXURE - 'A'

Name of Work : Providing Pumping arrangement along with Electrical power supply at holding pond near Dungi.

Revised G.C.C.

Clause No.

1.1(a)(iv) The Engineer for the Contract : Name : Shri. N.U. Nemade
Designation : Executive Engineer
(Elect-AP)

43.1 Time for completion
(inclusive of monsoon)

A. Contract as whole : 02 Months – (Including Monsoon)

B. Sections (Part of Groups of Items) : Not Applicable


49.1 Defect Liability period : 12 (Twelve) Months

49.4 Percentage to be charged as : 24.5%
supervision charges for the work
got executed through other means

60.10 The rate of interest applicable for : 6 % p.a.
payment delayed

70.1 i) Centre for Price Variation Indices : Mumbai.
ii) Price Variation Clause Factors : Applicable
PL – (Labour Component) : 20%
PM – (Material Component) : 77%
PF – (POL Component) : 3%
Total : 100%

Signature of Bidder
Date :


Superintending Engineer (Elect-Proj.)
Date :


SCHEDULE 'B'

(Material to be issued to contractor by CIDCO)

Sr. No.	Particular of Materials	Rate of which material will be issued in Rs. Ps.	Place of issue	Rate of Recovery in case of misuse or excess consumption
<p>===== NIL =====</p> <p>No material will be supplied by CIDCO</p>				

1. This Schedule consists Nil item only.

Signature of Bidder
Date :



Superintending Engineer (Elect-Proj.)
Date :

PARTICULAR SPECIFICATIONS

1.0 GENERAL:

The intent of these specifications is to give general guidelines for the equipment's / components proposed to be used and best efforts are made to cover all relevant requirements and apart intent specification. However if any addition or alternation is necessitated and directed by the competent Authority the same shall be done without any extra cost of financial implication on the CIDCO as per the directives of Engineer.

2.0 APPLICABLE STANDARDS:

All relevant Indian standards shall be made applicable with latest amendments. Also if any other specific application is required by the owners then the same shall be complied too.

3.0 GENERAL REQUIREMENTS:

The supply for the lighting installation shall be with aluminum conductor. XLPE insulated and XLPE sheathed armoured cables laid underground. The cable shall be terminated in the pole terminal boxes provided on each pole and from where the supply to the lighting fitting shall be tapped with copper conductor wires through wireable fused provided in the pole terminal box. The cables shall be looped from pole to pole.

4.0 TRANSFORMER (TR)

Scope:

Supplying and erecting AC three phase 11 or 22 kV / 0.44 kV, 50 Hz, oil immersed and naturally cooled indoor/outdoor type copper wound distribution transformer of specified capacity, connected delta on HV side and star on LV side with additional neutral brought out on load side.

Recommended standards:

The following list shows Indian Standard which are acceptable as good practice and accepted standard.

IS 335:1963	Dielectric Strength
IS 2026 part I 1977	Specification for Transformer
IS 2026 Part II 1977	Specification for type of cooling and Permissible temp. rise of transformer
IS 2026 Part III 1981	Specification for insulation level and dielectric strength of transformer
IS 2026 Part IV 1977	Specification for terminal marking Tapping and connections
IS 1180 Part I 1989	Specification for outdoor type three Phase distribution transformer
IS 10028 Part I 1985	Code of practice for selection installation and maintenance of transformer

Material:

1. Cooper wound Transformer with Delta connection on HV side and star connection on LV side complete with Manufacturer's test certificates
2. Standard mountings required for transformer are shown below. The mountings are to be selected from them and any additional if required.
 - Off load tap changing
 - Oil conservator with fitting holes and cap and plain oil level gauge
 - Silica gel dehydrating breather
 - Oil drain valve
 - Thermometer pockets
 - Oil filter valve
 - Lifting arrangement
 - Two earthing terminals
 - Diagram and rating plate

- Four bi directional plain rollers
- Air vent
- Explosion vent
- Terminal arrangement
- Bushing with lugs and / or cable end box on LV side
- HV cable end box and / or HV bushing
- The transformer losses shall be as mentioned in Table No 10.1/1

Method of Construction:

The contractor should intimate name of manufacturer and make of the Transformer and location of the manufacturer factory to engineer in charge prior to delivery of the transformer. After manufacturing of the transformer, the agency / contractor shall intimate the engineer-in-charge for carrying out the inspection.

After receipt of intimation engineer-in-charge or his representative should inspect the Transformer at manufacturer factory and shall carry out the following test jointly in presence of concern contractor.

- 1) Open Circuit test
- 2) Short Circuit test
- 3) Specific Resistance Test
- 4) Insulation Resistance of HV, LV, in between HV and LV, Winding and Body
- 5) Dielectric Strength and acidity test of Transformer oil.

The test result of joint inspector shall be recorded on the test report of Transformer with its Sr. No. prior to delivery of the Transformer to site. Necessary work of plinth and or for D.P. structure with D.O. set, L.A, A.B switch should be completed before dispatch of the transformer. The channel arrangement on plinth is to be done. Earthing arrangement should be completed. The Transformer should be installed on plinths / double polestructure/floor by arranging chains pulley block, crane etc as per IS Norms.

After installation of Transformer the stopper/lock should be provided to rollers of the Transformer.

The connection of H.T/L.T side should be completed by provided Copperwire/cable with necessary lugs to avoid loose connection. The earthing (2 Nos. for Neutral & 2 Nos for Body) should be connected from distinct electrodes. The earthing should be connected by lugs/proper size of strip.

The Engineer in charge or his representative should check all connections on H.T side, L.T side and earths and insulation and earth resistance test should be carried out and result obtained shall be recorded.

Statutory Permissions to be obtained by the Agency/Contractor:

Before commencement of work, the drawings of installation shall be got approved from the Electrical Inspector, I E & L Department.

The installation should be got inspected from Electrical Inspector and obtain written permission to charge the Transformers.

Commissioning:

After above formalities the Transformer, should be charge/commissioned in presence of Engineer in charge or his representative along with load trails and shall be handed over to the department for beneficial use After charging the Transformer, line, phase voltages and line current shall be measured, and the same shall be submitted.

Following test certificates shall be submitted.

1. Manufacturer's original certificate of Transformer as stipulated in IS
2. Test certificate for dielectric strength of oil as per IS
3. Test result of IR values
4. Test result of all earth electrodes.
5. Readings of Voltages & currents at the time of commissioning.

Table No 10.1/1

Capacity wise maximum losses of Transformer

Sr. No	Transformer Rating kVA	Voltage Ratio in kV	Winding	(At 75°C) Losses at No Load (Watts)	(At 75°C)	(At 75°C)	Short Circuit Current Amp
					Losses at 50 % Load (Watts)	Losses at 100 % Load (Watts)	
1	63	11/0.433	Cu	155	380	1250	
2	63	22/0.433	Cu		362	1193	
3	63	11/0.433	Al	180		1235	84
4	63	22/0.433	Al				
5	100	11/0.433	Cu	220	520	1800	
6	100	22/0.433	Cu		495	1717	
7	100	11/0.433	Al	260		1765	133.34
8	100	22/0.433	Al				
9	160	11/0.433	Cu	400		2400	
10	160	22/0.433	Cu				
11	160	11/0.433	Al				
12	160	22/0.433	Al				
13	200	11/0.433	Cu	500		3000	
14	200	22/0.433	Cu				
15	200	11/0.433	Al	500		3000	266.67
16	200	22/0.433	Al				
17	250	11/0.433	Cu	550		3600	
18	250	22/0.433	Cu				
19	315	11/0.433	Cu	280		4200	420.02
20	315	22/0.433	Cu				
21	500	11/0.433	Cu				
22	500	22/0.433	Cu				
23	630	11/0.433	Cu	1000		7000	840.04
24	630	22/0.433	Cu				

5.0 DIESEL GENERATOR (DG):

Providing D.G. Set at site, carrying out all preparatory works, assembling, installing, making adjustments, confirming all pre-commissioning requirement as per manufacturer's instructions, commissioning, final testing,

putting in to operation and handing over of the complete system of D.G. Set including inspection from inspectorate office. **The agency has to provide initial diesel quantity equivalent to the diesel fuel tank capacity.** The work include necessary minor Civil works including opening on wall/Slab/floor and making good as it was etc. defect liability of the DG set for 5 years from date of commissioning.

Material:

Diesel Generator set with continuous rating, 3 Phase, 415 V., 50 Cycle A.C. Supply of specified capacity, comprising of totally enclosed air/water cooled diesel engine with standard control panel & tool kit.

Diesel Engine:

The engine shall be of standard design of original manufactures. It should be a totally enclosed air/water cooled Diesel engine with 4 stroke multi cylinders developing suitable BHP (As per Table 11/3) for giving power rating of (As per table 11/3) at the load terminals of alternator at 1500 R.P.M., at armature temperature of 40°C for height at 1000 Meter variable loads for P.F. of 0.8 (lag) with 10% over load available in excess of specified output for one hour in every 12 hours. The average load factor of the engine over period of 24 hours shall be 0.85 for power output. The engine shall confirm to IS: 10000 and Amended up to date.

The engine shall be fitted with following accessories:

- 1) Dynamically balanced fly wheel.
- 2) Necessary flexible coupling and guard for alternator and engine applicable.
- 3) Lubricating oil cooler
- 4) Air cleaner Dry/Bath type
- 5) Lubricating oil pressure gauge
- 6) Lubricating oil filter with replicable element
- 7) Dry exhaust manifold with exhausts heavy residential type exhaust silencer and vertical hot air duct both logged with asbestos rope exhaust piping of required length to reduce noise level.

- 8) 12/24 V Electric starting equipment complete with standard batteries, dynamo, cut-out, ammeter, necessary wiring, self starter etc. The system shall be capable of starting D.G. Set within 20 to 30 second even in winter condition with an ambient temperature down to 0°C.
- 9) Mechanical Governor of Class A2 for up to and including 200 KVA capacity and electronic governor of Class A1 for capacity above 200 KVA shall be provide as per standard design of manufacturer. Governor shall be a self contained unit capacity of monitoring speed.
- 10) Radiator
- 11) Daily fuel Tank

Daily fuel service tank of minimum capacity as per Table 11/1, below, fabricated from M.S. sheet with inlet, outlet connections air vent tap, drain plug and level indicator (gauge) M.S. fuel piping from tank to engine with valves, unions, reducers, flexible hose connection and floor mounting pedestals, twin fuel fitter. The location of the tank shall depend on standard manufactures design.

Table 11/1

Minimum capacity of Daily fuel tank for Generators

Sr. No	Capacity of D.G. Set	Minimum Fuel Tank Capacity
1.	Up to 25 KVA	100 Liters
2.	Above 25 KVA to 62.5 KVA	120 Liters
3.	Above 62.5 KVA to 125 KVA	225 Liters
4.	Above 125 KVA to 200 KVA	285 Liters
5.	Above 200 KVA to 380 KVA	520 Liters

Engine Control Panel:

Engine control panel should be fitted with following accessories/indicators and shall have display.

- Start/stop key switch
- Lube oil pressure indication
- Water temperature indication
- RPM indication
- Engine Hours indications

- Battery charging indication
- Low lube oil trip indication
- High water temperature indication
- Over speed indication

Battery charger:

The battery charger shall be of Trickle & Boost type, and suitable to charge required numbers of batteries at 12V/24 complete with, transformer, rectifier, charge rate selector switch, indicating ammeter, voltmeter, battery over charging protection with audible alarm. Connections between the battery charger & batteries shall be provided with suitable copper leads with lugs.

Battery:

Battery capacity and copper cable sizes for various engine capacities shall be as per the details given in Table No. 11/2, Cable sizes shown are for maximum length of 2m length, if higher size of cable is required, it shall be selected in such a way that voltage drop does not exceed 2V.

Table 11/2
Battery Capacity and Copper Cable Sizes for Various Engine Capacities

Sr. No	D G set Capacity	Battery Capacity (AH)	Copper Cable size in mm ²	Electrical System (Voltage)
1	Upto 25 KVA	86	35	12
2	Above 25 KVA to 62.5 kVA	120	50	12
3	Above 62.5 kVA upto 82.5 kVA	150	50	12
4	Above 82.5 kVA upto 125 kVA	180	50	24
5	Above 125 kVA upto 500 kVA	180	70	24

For AMF applications, a static battery charger working on mains supply recommended to keep the batteries charged at all times.

Alternator:

Alternator of specified rating, 415 Volts, 1500 RPM, 3 Ph, 50HZ, A/c Supply with P.F.0.8 lagging at 40°C armature temperature for height 1000 mtr. Above MSL at 50% R.H. alternator shall be brush less type self regulated having static excitation system having capacity of desired output confirming to IS: 4722-1968 WITH AUTOMATIC VOLTAGE Regulation +5% operated voltage from no load to full load, two numbers of earth terminal on opposite sides. Terminal box shall be suitable for underground cables and same shall be with stand mechanical and thermal stresses developed due to any short circuit at the terminals. The alternator shall be in accordance with following standards:

- IS: 4722 The performance of rotating electrical machines
- IS: 4889 Rules for method of declaring efficiency of electrical machines.
- IS: 13364 Part I 1992 Alternator-voltage Regulation up to 20KVA
- IS: 13364 Part II 1992 Alternator Voltage regulation above 20 KVA to 80 KVA

Performance:

Voltage dip shall not exceed 20% of the rated voltage for any step load or transient load as per IS: 8528 (Part I). The winding shall not develop hot spots exceeding safe limits due to unbalance of 20% between characteristics of the alternator shall be as below-

(a) Efficiency at full load 0.8 P.F

- (I) Up to 25 KVA-not less than 82%
- (II) Above 25 KVA and up to 62.5 KVA-not less than 86%
- (III) Above 62.5 KVA/up to 250 KVA-not less than 90%
- (IV) Above 250 KVA-not less than 93%

(b) Total Distortion factor

- (i) 10% Overload One Hour in every 12 hrs of continuous operation
- (ii) 50% overload 15 seconds.

Common Base Plate:

Engine and alternator shall be coupled by means of flex plate/flexible coupling as per manufacture standard design and both units shall be mounted on a common base plate together with all auxiliaries to ensure perfect alignment of engine and alternator with minimum vibrations. The base plate shall be suitable for installation on suitable anti-vibration mounting system comprising of 6 anti-vibration plots duly provided.

Control Panel:

Floor/wall mounted control panel Box comprising of voltmeter, ammeter, selector switches MCCB/MCB of adequate capacity, indicator lamp duly wired with HRC fuses. Alternator & control panel shall be connected with provided suitable capacity armored cable with necessary cable glands & lugs etc.

Exhaust system:

It shall comprise of following parameters:

Exhaust system should create minimum back Pressure.

Smooth bends shall be used for minimizing the back pressure.

Minimum number of bends shall be used for minimizing the back pressure.

Pipe sleeve of larger diameter should be used while passing the pipe through concrete wall & gap shall be filled with felt lining.

Exhaust piping inside the Acoustic enclosure/Generating set room should be lagged with asbestos rope and covered with aluminium sheet cladding to avoid heating of the area.

Class 'B' MS pipes and long bend/elbow should be used.

The exhaust outlet should be in the direction of prevailing winds and should not allow exhaust gases to enter air inlet/windows, etc.

Factory Testing:

D.G. Set shall be tested in presence of Engineer in charge or his authorized.

- Full load trial for 12 hours. Fuel, lubricating oil, etc shall be arranged by the agency.

- 10% overload trial for one hour within 12 hrs. test

Certificates:

- Manufacturer's test certificates for Engine, Alternator and of the set.
- Necessary certificate for the engine modal so selected along with compliance of noise and emission norms as per latest CPCB guidelines of D.G. Set should be furnished from the manufacturer along with manufacture's technical details.
- Permission from Electrical Inspector.

Method of Construction:

The D.G. Set with canopy shall be erected with due care and ensuring the perfect level with the help of Spirit level, on provided cement concrete foundation and connecting the provided earthing connections. The exhaust system shall be connected to the exhaust manifold. After ensuring the filling of fuel, lubricating oil and medium of coolant, the set shall be commissioned, with giving necessary full load trials or with the available load at site. The set shall then be handed over to the department along with the installation report given by the manufacturer and with all the necessary certificates and permissions obtained.

Mode of Measurement: Executed quantity will be counted on number basis. (i.e. each)

Table No.11/3

Rating of Alternator and minimum BHP of Engine

S. No.	KVA Capacity of Alternator	Minimum BHP of Diesel Engine	Average Fuel consumption litre per hour at 100% load
1.	10	12	3.0
2.	15	19	4.1
3.	20	26	6.0
4.	25	2	6.4
5.	30	42	8.3
6.	40	59.5	10.3
7.	50	65.8	13.0
8.	62.5	76	15.6
9.	75	91	16.0

S. No.	KVA Capacity of Alternator	Minimum BHP of Diesel Engine	Average Fuel consumption litre per hour at 100% load
10.	82.5	102	18.6
11.	100	127	22.8
12.	125	154	28.0
13.	140	166	30.0
14.	160	198	34.3
15.	180	235	40.0
16.	200	254	44.0
17.	250	313	54.0

INSTALLATION: SCOPE OF ERECTION FOR 125/62.5 KVA DG SET

- Exhaust piping from Engine to a maximum of 3 / 4mtrs with pipe insulation and installation of silencer with brackets supports.
- Fuel Piping from Engine to Fuel tank & return.
- Painting of polyurethane to the Acoustic Enclosure.
- 3.5 core aluminum armored cable 1 x 70 sq. mm.
- Battery stand & Battery charging. Unloading and shifting of the set on available foundation.
- Commissioning of DG Set on available load.
- Government permissions such as NOC from Electrical Inspector, Drawing approval, Registration of DG Set.
- Consumable such as diesel oil first fill to be done with all the testing .

6.0 MCC PANEL

M S panel fabricated out of 14/16 G CRCA sheet duly powder coated, assembled and wired to terminal in the cable chamber for ease of outgoing cable termination. Panel consists of following electrical Material.

MCC PANEL				
SR NO	DESCRIPTION	MAKE	QTY	UNIT
	INCOMER			
1	400A FP THERMAL MAGNETIC MCCB 36KA (FROM 200 & 320KVA DG SET)	L&T/SCHNEIDER	2	NOS

SR NO	DESCRIPTION	MAKE	QTY	UNIT
	MCC PANEL			
2	400A FP ATS	SOCOMECH	1	NOS
3	MULTIFUNCTION METR	SELEC	1	NOS
4	400/5A CT	ME/NIPPEN	3	NOS
5	INDICATION LAMP (R,Y,B)	LAPTRON	6	NOS
6	CONTROL FUSE	CONNECTWELL	8	NOS
	OUTGOING			
	25HP/18KW S/D STARTER PUMP X 5 NOS			
7	80A TP THERMAL MAGNETIC MCCB 25KA	L&T/SCHNEIDER	5	NOS
8	50A TP CONTACTOR	L&T/SCHNEIDER	5	NOS
9	80A TP CONTACTOR	L&T/SCHNEIDER	10	NOS
10	37-50A THERMAL OVERLOAD RELAY	L&T/SCHNEIDER	5	NOS
11	AUXILLARY CONTACT	L&T/SCHNEIDER	5	NOS
12	ADON	L&T/SCHNEIDER	15	NOS
13	TIMER	SELEC	5	NOS
14	INDICATION LAMP (ON, OFF)	LAPTRON	10	NOS
15	PUSH BUTTON (START/STOP)	LAPTRON	10	NOS
16	6A SP CONTROL MCB 10KA	L&T/SCHNEIDER	5	NOS
	LIGHTING LOAD OF 5KW			
17	32A TP C CURVE MCB 10KA	L&T/SCHNEIDER	1	NOS
	SPARE			
18	32A TP C CURVE MCB 10KA	L&T/SCHNEIDER	1	NOS
19	BUSBAR	ALLUMINIUM		
20	BODY	14/16 SWG		
21	WIRING	POLYCAB/KEI		

NOTE :

- 1) BODY SHALL BE 14/16 SWG SHEET STEEL.
- 2) BODY SHALL BE DULY POWDER BY 9 TANK PROCESS.
- 3) DUST AND VERMIN PROOF.
- 4) DEGREE OF PROTECTION IP-42.
- 5) CONSTRUCTION: NON DRAWOUT TYPE, SINGLE FRONT/ BACK CUBICAL TYPE.

- 6) PAINT SHADE FLAME SEIMENS GRAY (RAL7035).
- 7) INSTALLATION INDOOR TYPE FLOOR MOUNTING.
- 8) WIRE SIZE CT CIRCUIT: 2.5SQMM CU FLEXIBLE / CONTROL:1.5SQMM CU FLEXIBLE / EARTH:2.5SQMM CU.
- 9) DOORS SHALL BE 90 DEGREE OPENIING.
- 10) EARTH BOLT SHALL BE PROVIDED.
- 11) HARDWARE SHALL BE CORROSION RESISTANT.
- 12) ALL DOORS AND COVERS SHALL HAVE RUBBER GASKET THROUGHOUT THE PERIPHERY.
- 13) ALL GLAND PLATES SHALL BE UNDRILLED DETACHABLE TYPE.

7.0 PVC/XLPE CABLES (CB)

ARMOURED CABLES (HT & LT)

1. General

All material shall conform to relevant standard as per BIS and shall carry ISI mark. If any particular category of material for which ISI mark is not available in market, it shall be as included in approved list.

Work shall be carried out as per the method of construction specified by BIS. If there is no reference for particular method of construction in IS, such work shall be carried out as per the approved method of construction specified in chapter 16 of P.W. Dept. Handbook.

Material and Work not qualifying to any provision mentioned above shall be to the satisfaction of the Engineer in Charge.

2. **Cables: (Armoured)**

The following list records those Indian Standards in force, which are acceptable as good practice, and accepted standards.

SP 30: 1984	:	National Electrical Code
SP 7 (Group 4): 2005 :	:	National Building Code
IS 1255: 1983	:	Code of practice of Installation & Maintenance of armored cables up to 33 kv
IS 3961: Part 2: 1967 :	:	Recommended current ratings of PVC cables-

PVC Insulated (Heavy duty) Electrical cables Part1
for working voltages up to and including 1100
Volts.

IS 1554: Part 1, 1988 : : PVC Insulated (Heavy duty) Electric Cables: Part 1
for working voltages up to and including 3.3 kV to
11 kV

IS 10810. Part 63; 1993 : : Method for test of cables Part 63 Smoke density of
electric cables under fire condition.

3. Scope : (Armoured cables) (CB-LT/AL, CB-LT/CU, CB-HT)

Providing armoured cable of specified voltage level, size & specified conducting material Aluminum / Copper) as per **Table** no. 7/3 including required material, hardware's for erection and erecting on wall, ceiling, RCC slab or drawing the same through pole, pipe, laying in provided conduit, trench, ducts, trays as per approved method of construction including glands, lugs, etc.

4. Material:

Cables:

Cables shall be PVC for LT/MP and XLPE for HT as per Table no. 7/3 and of required construction, colour, shall carry ISI mark, IS No, manufacturer's name, size, duly embossed / screen printed at every metre and having the total count of progressive length in meter at each mark.

Earth wire: Galvanized Iron (G I) wire of appropriate gauge as per Table No 7/1.

Cable glands: Flange type heavy duty. Made of high purity brass metal with brass washers, rubber rings, threaded stud with washers and nuts.

Lug: Lug shall be of high purity aluminum/ copper / bimetallic of required type, with required size of hole and smooth finished both from inside and outside.

Saddles: Saddles fabricated from GI sheet of required gauge and size depending on dia of cable either galvanized or painted with superior quality enamel black paint with necessary shearing mechanical strength, semi circular shaped with extended piece having suitable holes for fixing.

G I Strip: 22 g x 25 mm width G I Strip.

Clamps: MS Clamps fabricated of required length and shape, having the size of 3/6 mm thick mild steel having 25/50 mm width (as per size of cable), rounded ends with wooden / resin cast grip for holding the cable.

Identification tags: For identifying root, connection position GI strip with identification mark / name embossed / painted with arrangement to tie should be fix on cable or arrangement of ferrules to be done.

Hardware: Sheet Metal screws of required sizes, plugs / wooden gutties, etc.

5. Method of Construction:

General:

- a) Irrespective of method of construction the cable ends shall be terminated with appropriate size & type of glands with lugs duly crimped, as directed by Site engineer.
- b) Wherever the cable has to be bent, the turning radius shall be as mentioned in Table No 7/2. Grouping of cables shall be done with adequate distance between cables as mentioned in IS so as to minimize de-iating. Cables shall be tagged/ferruled with identification name / mark at the point from where distribution starts and at ends. Bare earth wire of appropriate size -»s per Table no. 7/1 shall run along with the cable. Earth wire running with the cable shall be terminated at the earth terminal nearest io cable termination.

5.1 Erection of Cable on Surface:

Erection shall be done as per the routes and layout finalized, in perfect level and in plumb. Before fixing the cable shall be straightened as far as possible for good aesthetics look, continuous bare GI earth wire of required gauge as per Table'No 7/1 shall be run. Cable with G I wire shall be fixed

by saddles firmly clipped on cable and shall be fixed to wall with minimum 50 x 8 mm SM screws with plugs/wooden gutties', etc. (Distance between two supports / saddles shall be maximum 450 mm). Wooden gutties shall be used wherever required (Especially for stone wall). The entries made in wall, floor slab, etc for laying the cable shall be made good by filling and finishing with plastering the same.

5.2 Erection of Cable on Trusses:

Cable along with bare GI earth wire, while erecting on trusses, shall be firmly clamped by wrapping GI strip of 22 g. 2-5 mm width of required length fixed to truss with nuts and bolts.

5.3 Erection of Cable on Pole:

Cable along with bare GI earth wire, while erecting on pole, shall be firmly clipped by suitable wooden / epoxy resin cast grips, clamped with 25 x 3 mm or 50x6 mm MS strip of required length and fixed to pole with nuts and bolts.

5.4 Laying of Cable in provided Trench/Pole:

While laying Cable along with bare GI earth wire, utmost care shall be taken to prevent damage to the insulation of the cable and to the open end. Cable shall be brought out from trench vertically straight (minimum 1.0 metre above G L). Care shall be taken to inspect the trench so that depth of cable shall not be less than as shown in Table No 7/4. Suitable size of cable loops shall be provided near termination point at adequate depth.

5.5 Erecting cable in constructed Trench / duct:

Erection of cable/s In constructed trench / duct, shall be as per guide lines of IS 1255.

5.6 Erection of cable/s on trays:

Cable/s shall be tied with PVC tags on GI trays. At bending point care shall be taken so that sharp edges of sheet will not damage insulation of cable.

- 5.7 **Mode of Measurement:** Executed quantity shall be measured on the basis of running metre per run of cable.

6. **Dismantling**

Cable laid underground, or fixed on any surface shall be dismantled carefully without damaging complete with all its accessories, making coil and stored as directed. The surface of the dismantled cable shall be made clear by removing of unwanted material, cement mortar, etc. When cable is dismantled from trench refill back the trench and making the surface proper.

7. **Mode of Measurement:** Executed quantity shall be measured on the basis of running metre per run of cable.

Table No 7/1

Size of Bare GI Earth wire to be used with LT Cables upto 1.1 kV

S.No.	Size of cable	Size of bare GI Earth wire to be used with cable
1	2.5 Sqmm to 50 Sqmm of all cores.	12 SWG
2	70 Sqmm to 95 Sqmm of all cores.	10 SWG
3	120 Sqmm and above of all cores.	8 SWG

8.0 Cable Joints & End Termination Kits (LT/HT Cables)
(JT/LT/HT)

Providing straight through cable jointing kit of approved make and jointing cable as per the manufacturer's instructions and duly marking name of jointer and date.

1. **Material:**

Joint kit : Kit manufactured by reputed manufacturer with PVC moulds made in two parts, with epoxy compound, earth continuity lead of appropriate cross section having lugs at both ends, aluminum ferrules

of the size of the cable, cross shaped epoxy spacer, Ms clips for holding the moulds, adhesive for pasting the moulds.

2. Method of Construction:

2.1 Straight through joint Kit: LT/HT Cables

Before providing joint to the cable. The cable ends of the equivalent length of the joint moulds. Shall be prepared by removing the outer PVC insulation along with the steel armouring. The ferrule shall then be inserted over the bare core of the cable, and shall be crimped with hydraulic/ mechanical type heavy duty crimping tool. The crimped portion shall be wrapped first with the PVC insulation tape and then with the insulation tape used got wrapped HT conductor. The above method shall be carried out for all the cores strictly following the colour code. The leads of the both the cables now shall be placed into the mould by using the epoxy spacer, for having sufficient gap in-between the leads. The earth continuity lead shall be clamped to the both ends of the cable. After covering the cable leads with the PVC moulds, the edges shall be clipped after applying the adhesives of the inside face of the moulds. The pasting of moulds shall be rigid and as far as possible leak proof, so that the epoxy compound shall not spill out. Now the duly stirred epoxy compound shall be poured and fill till the compound rises through the risers provided on the moulds. After completing the above procedure, the joint shall be allowed to dry out for at least 8 to 10 hours (for epoxy compound, to get hardened) depending upon the size of cable. Before connecting to supply, the dry and hardened joint shall be tested for its insulation level with 1000V/5000 V Meggar.

The cable should be fixed or laid in such manner that there should not be pressure on end of moulds or on jointing position of cables.

2.2 Outdoor/Indoor end termination Kit: LT/HT Cables

Before providing end termination kit to the cable, the cables end of the equivalent length of the moulds, shall be prepared by removing

the outer PVC insulation along with steel armouring. The ferrule shall then be inserted over the bare core of the cable, and shall be crimped with hydraulic / mechanical type heavy duty crimping tool. The crimping shall be done in such a manner that there shall be no air gap. Then the crimped portion shall be wrapped first with the PVC insulation tape and then with the insulation tape used for wrapping HT conductor. The above method shall be carried out for all the cores strictly following the colour code. The leads of the cable now shall be placed into the mould by using the epoxy spacer, for having sufficient gap in – between the leads. The earth continuity lead shall be clamped to the ends of the cable. After covering the cable leads with the PVC moulds, the edges shall be clipped after applying the adhesive on the inside face of the moulds. The pasting of moulds shall be rigid and as far as possible leak proof, so that the epoxy compound shall not spill out. Now the duly stirred epoxy compound shall be poured and fill till the compound rises through the risers provided on the moulds.

After completing the above procedure, the joint shall be allowed to dry out for at least 8 to 10 hours (for epoxy compound to get harden) depending upon the size of cable. Before connecting to supply, the dry and hardened joint shall be tested for its insulation level with 1000V/5000V meggar.

3. Mode of Measurement:

Executed quantity will be measured on number basis. (i.e.each)

9.0 **Supplying, Erecting, Testing and Commissioning of 25 HP /18.5 KW having of 100 LPS at 10m point head Submersible dewatering pump set having solid handling capacity of 100mm. including 10m of 3x10 sqmm & 5x1.5 sqmm cable each and all accessories complete with required control cables for commissioning.**

I) **SPECIFICATION FOR PUMPS :**

1.1 **GENERAL INSTRUCTIONS:**

The Bidder will have to submit along with his offer head verses discharge curves for the pumps he has quoted.

The rate for the pump Motors are inclusive of all incidental cost incurred for erecting of the submersible pump motor set. The Bidder is instructed to visit the site before submitting his offer in order to estimate the total cost which will require for erection of these pump motor set. Pump motor set will be erected in the wet well. The Bidder will have to ensure erection of this vertical pump motor set to the satisfaction of Engineer-in-charge. The agency will connect the delivery of vertical pump to the existing rising main.

1.2 **ELECTRICAL SPECIFICATIONS**

1.2.1 **PUMP STARTER PANEL:**

A separate pump starter panel shall be provided for individual pump. It incorporate basic safeties such as low voltage protection, overload protection, single phase prevention and specific provision for in built pump safety features, such as thermister protection for motors, reverse rotation protection, seal monitor relay and automatic liquid level controller.

The pump starter panel shall be made 14 / 16 SWG sheet steel with powder coating for long life. This panel shall contain main switch fuse unit with HRC fuses, contactors, and relays of adequate rating considering nature of operation of sewage pumps and of reputed makes.

Ammeter of suitable range, voltmeter, selector switches, auto manual selector switch, phase indicating lamps, fault indication lamps shall also be provided.

1.2.2 EQUIPMENT TESTING :

Each major component of the pumping equipment shall be subjected to shop tests by the pump manufacturer and corresponding test reports / certificates shall be furnished by him alongwith supply documents of the pump.

1.2.3 PUMPS:

Each assembled pump shall be shop tested by the manufacturer to determine the following characteristics within the operating rang as specified.

- Head capacity curve
- Break horse power curve
- Efficiency curve
- Total power consumed
- Vibration (bare pump on no load)
- Balancing (impeller only)

All the test shall be conducted in accordance with the relevant IS / manufacturer's testing standards and shall be witnessed by the representative(s) of CIDCO at manufacturers work. The cost of testing of pump motor set & panel boards will be borne by the successful agency including to & from transportation, accommodation charges etc. complete. Each pump performance test shall be documented by obtaining concurrent readings showing motor voltage and amperage, pump suction head and pump discharge head. Such reading shall be documented for atleast 5 pumping conditions. One test shall be at the shut off head.

1.2.4 TEST CERTIFICATES:

In addition to the above tests / test certificates, manufacturer will also conduct and furnish test certificates for the following :

- Hydrostatic test on casing
- Routine test certificates on motor including H.V. test and megger test.
- Material test certificates for major components certifying the grades of materials used.

1.3 SHOP TEST OF PUMPS:

Testing : The internal shop testing of the pump motor set will have to be carried out in the presence of the representative of CIDCO; wherein design parameters like total head against discharge, input power, efficiency etc. will be examined, computed and plotted for not less than 5 points in the entire head range specified in the tender documents. The duty point will be invariably one of these five or more points. The shop test will be carried out at manufacturers premises.

Remedial action : In case of the testing proves that the behavior / characteristics of the pump are not matching with those offered in the offer plus or minimum specified tolerances then the such modifications, as would be necessary will have to be carried out in shop and testing will have to be done in presence of CIDCO representative till his complete satisfaction.

Shop test and Contractor's responsibility : A satisfactory shop test is first and not the ultimate step in acceptance of the pumps by the Department and successful shop test does not absolve the Bidder / contractor of the responsibility to give successful field test on complete in of erection of the pump motor sets at the site. Failure to give satisfactory field test will attract same line of action as specified for "shop Test".

Field Test : The volumetric measurements in the field test would be with the flow meter. Both the pumping main and the wet well tank will be presumed as water tight. The system head at the site will be computed on the basis of actual static head operating at the time of

test plus the frictional head in the system based on Hazen & Williams Chart with value of frictional constant $C = 100$. The system head will be checked with a precision pressure gauge which will be fitted at the starting point in the system i.e. few meters away from the junction of delivery of the pump with the manifold.

The electrical inputs will be measured with the help of two watt hour meters accurately calibrated and tested. These watt hour meters alongwith C.T.'s and test head will have to be arranged by the contractor.

The no. of points covered in the field test shall not be less than 5 and it shall include the duty point. The Contractor will have to make necessary arrangement for flow measurement of the individual pumps supplied and the total flow when it is operated in parallel with existing pumps. These measurements will be made at five points as specified by Engineer-in-charge. He will have to furnish the flow meter and watt meter calibration certificate duly certified or suitable Government laboratory not more than 3 months ago.

The diagram shows a 400A bus system with the following components and connections:

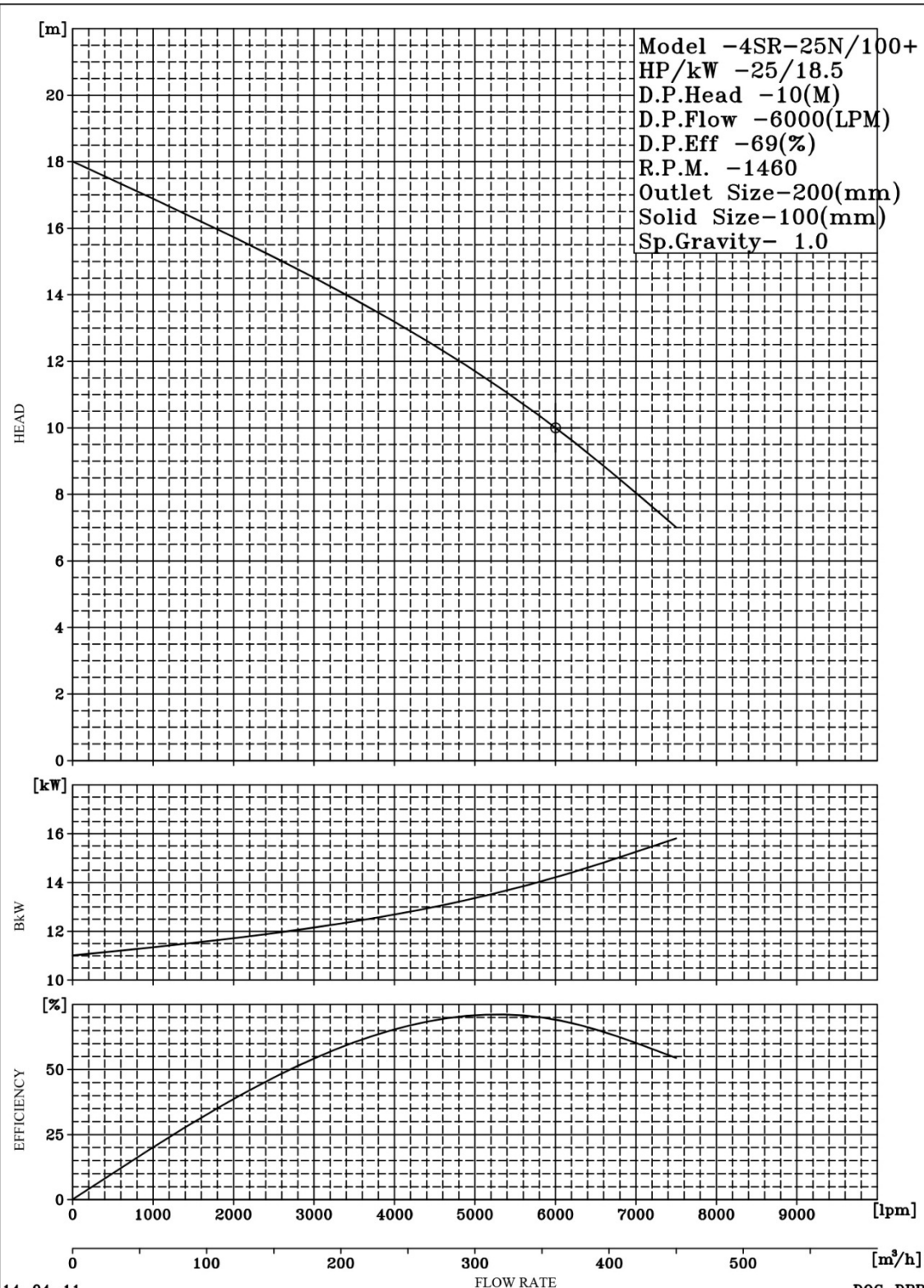
- Bus System:** 400A FP, AL BUS, 38KA, 415V, 50HZ.
- Feeders (5 total):**
 - Each feeder consists of a 37-50A O/L RELAY, a 2 X 80A TP CONTACTOR, and a 1 X 50A TP.
 - Each feeder is protected by an 80A TP MCCB 25KA.
 - Each feeder is connected to a 25HP STAR DELTA STARTER PUMP via 1# 3.5C 25 SQ MM AL XLPE AR. CABLE.
- Lighting Load:** 2R X 3C X 10 Sqmm, Cu. Armoured PVC Cable, LIGHTING LOAD OF 5KW, connected to the bus via a 32A TP MCB 10KA.
- Spare:** 2R X 3C X 10 Sqmm, Cu. Armoured PVC Cable, SPARE, connected to the bus via a 32A TP MCB 10KA.
- ATS (Automatic Transfer Switch):** 400A 4P, CT RATIO: 400/5A, M. CLASS 1, BURDEN: 15 VA, connected to the bus via a 400A 4P ATS.
- Control Panel:** LT WITH STARTER PANEL, connected to the bus via 12X17Y CABLE. It includes a 400A FP TM MCCB 36KA, a CONTROL FUSE, and a 36KA.
- Transformer:** 22/0.433KV, 315KVA INDOOR XMER, connected to the bus via 12X17Y CABLE.
- Generator:** FROM 200KVA DG SET WITH CHANGEOVER SWITCH, connected to the bus via 12X17Y CABLE.

Curve No. SD-224

REV.00

Performance Curves

UNCLOG PUMP PLUS SER



14-04-11

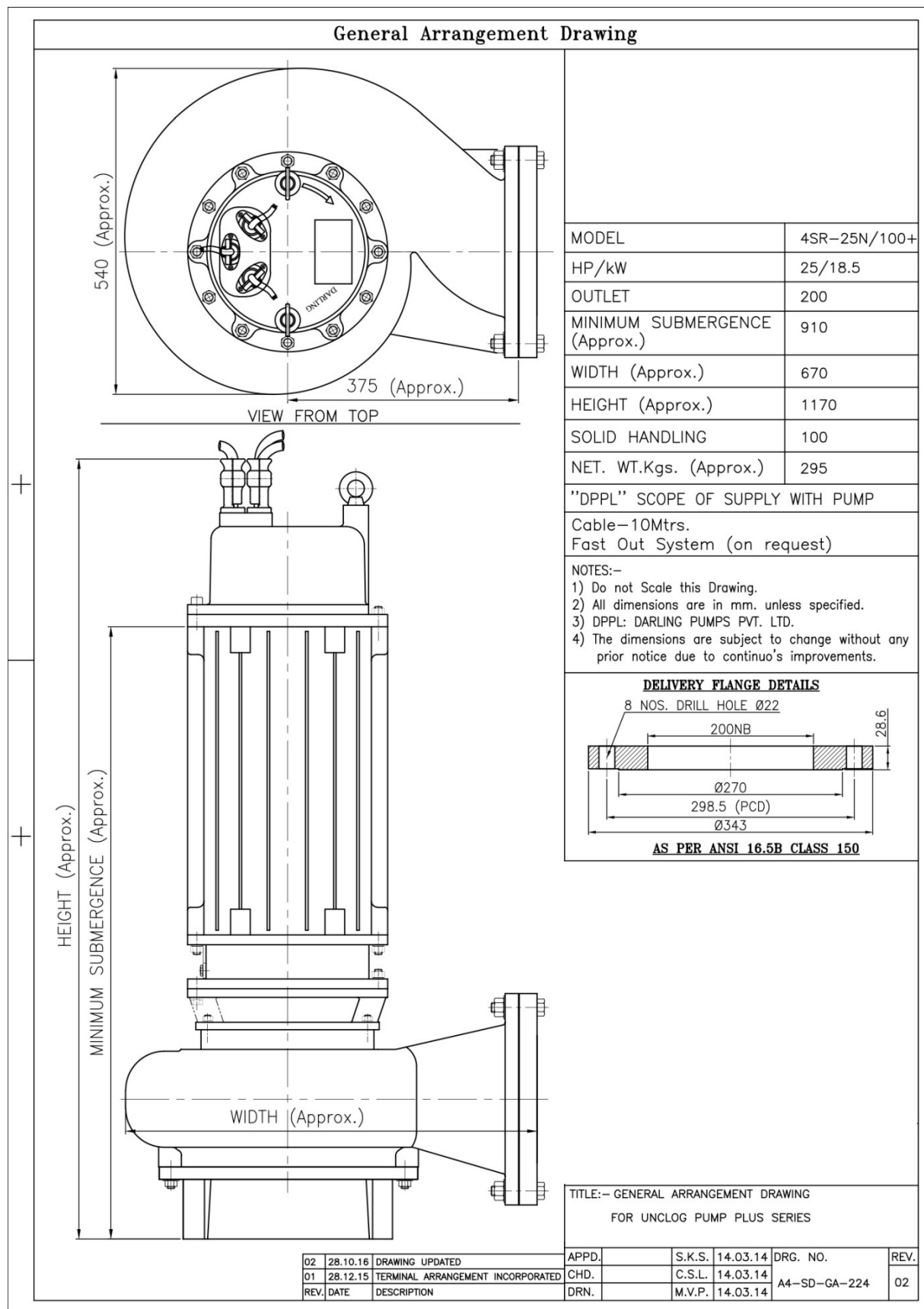
DOC-DPPL-224

DARLING PUMPS PVT. LTD. INDORE

PREPARED BY:-

APPD. BY:-

- Note : 1) This sheet is the property of Darling Pump and is loaned under express condition. It is not to be used detrimental to the interests of Darling Pumps.
2) Above performance is at rated voltage (415 Volts), 3 phase & rated frequency (50 Hz).
3) Above performance is for specific gravity 1 and viscosity as of water.
4) The performance is subject to change without prior notice, due to continuous improvements.



10.0 BUNCH OF WIRES (WG-MA/BW)

Scope:

Providing specified wires and drawing them through provided conduits/ trunking and /or as directed; with coded ferrules, harnessing the bunch of wires with necessary material when used in panel boards, duly connecting/ terminating with lugs, and testing for safely and beneficial use.

Material:

Wires: in conduits/ trunking/panel boards

Mains/Sub-mains/Circuit mains (comprising phase and neutral wires):

PVC insulated wire of specified size, minimum FR grade insulation, copper conductor of electrolytic tough pitch (ETP) grade, having insulation of 1.1 kV grade, ISI marked, of required colour coding as per Table No 1/5

Wire: open

PVC insulated and PVC sheathed wire of specified size, minimum FR grade insulation, copper conductor of electrolytic tough pitch (ETP) grade, having insulation of 1.1kV grade, ISI marked, of required colour coding as per Table No 1/5

Earth Continuity Wire:

PVC insulated wire minimum FR grade insulation copper conductor of electrolytic grade, having insulation of 1.1kV grade, of green/green yellow color ISI marked of specified size but not less than 2.5 sq. mm. as per Table No 1/5

Lugs: Copper lugs of appropriate size & type

Other material : Rubber grommet, bush, harnessing material, flexible conduit etc.

Method of Contruction:

Bunch of wires:

Drawing of wires:

General :

Specified wires shall be drawn with adequate care, Correct color coding as per Table No 1/5 shall be used for phase, neutral and earth. Wires shall not have intermediate joint in between terminals of

the accessories. Earth-wire and Return wire (neutral) may be looped phases shall not be drawn in single pipe. Wires shall be terminated in the terminals of accessories only, with appropriate type and size of lugs.

Drawing of wires : through PVC conduits

Bush shall be used at pipe opening to protect wire insulation from getting damaged due to sharp edges. Number of wires shall not exceed with respect to size of pipe as per Table No 1/2

Drawing of wires: through Rigid Steel conduits

Bush shall be used at pipe opening to protect wire insulation from getting damaged due to burrs/ sharp edges. Number of wires shall not exceed with respect to size of pipe as per Table No 1/1

Open Wire bunch: Open wires shall be erected with due care so as to avoid chances of any mechanical injury. Harnessing shall be done with required material in an approved manner in panel boards of where ever necessary. For covering lead wires flexible conduit shall be used with gland as per necessity.

Testing :

Insulation resistance test:

All wiring shall be tested with 500V Megger between phase, phase-neutral and to Earth, IR value shall not be less than 1M-ohm.

Earth continuity:

Earth continuity shall be ensured between termination points of Earth wire.

Polarity Test:

Test shall be carried out for ensuring the correct polarity in switch and plug.

Mode of Measurement:

Measurement shall be carried out on the basis per running meter length of single wire or bunch as specified

Table No 1/1

**Maximum Number Of Single Core 1.1kV Cables That Can Be Drawn in Rigid Steel
Conduits**

Size of cable mm ²		Size of conduit mm													
Nominal Cross sectional area	No.and dia. of wires	16		20		25		32		40		50		63	
		S	B	S	B	S	B	S	B	S	B	S	B	S	B
1.0	1/1.12Cu	5	4	7	5	13	10	20	14						
1.5	1/1.4	4	3	7	5	12	10	20	14						
2.5	1/1.8 3/1.06 Cu	3	2	0	5	10	8	18	12						
4.0	1/2.24 7/0.85 Cu	3	2	4	3	7	8	12	10						
6	1/2.80 7/1.06 Cu	2		3	2	6	5	10	8						
10	11/3.55 Al 7/1.40 Cu			2		5	4	8	7						
				2		4	3	6	5						
16	7/1.70					2		4	3	7	6				
25	7/2.24							3	2	5	4	8	6	9	7
35	7/2.50							2		4	3	7	5	8	6
50	7/3.0 Al 19/1.80									2		5	4	6	5

note 1: Cu-applicable to only copper cable; Al-applicable to only Aluminum cable

Note 2: The table shows maximum capacity of conduits for the simultaneous drawing of cables. the columns headed 'S' apply to straight runs of conduits which have distance not exceeding 4.25m between draw in boxes and which do not deflect from straight by an angle more than 15°. The columns headed 'B' apply to bent runs of conduit, which deflect from the straight by an angle of more than 15°.

Note 3: In case of inspection type draw in box has been provided and if the cable is first drawn through one straight conduit, then through the draw in box and then through the second straight conduit such system may be considered as that of straight conduit even if the conduit deflects through the straight by more than 15°

Size of cable mm ²		Size of conduit mm					
Nominal Cross sectional area	No. and dia. of wires	16	20	25	32	40	50
1.0	1/1.12Cu	5	7	13	20		
1.5	1/1.4	4	6	10	14		
2.5	1/1.8 3/1.06 Cu	3	5	10	14		
4.0	1/2.24 7/0.85 Cu	2	3	6	10	14	
6	1/2.80 7/1.06 Cu		2	5	9	11	
10	11/3.55 Al 7/1.40 Cu			4	7	9	
16	7/1.70			2	4	5	12
25	7/2.24				2	2	6
35	7/2.50					2	5
50	7/3.0 Al 19/1.80					2 2	5 3

Note 1: Cu-applicable to only copper cable; Al-applicable to only Aluminum cable

Table No 1/3

Maximum Number of Single Core 1.1kV Cable Trunking (Casing and Capping)

Size of cable mm ²		Size of Trunking mm				
Nominal Cross sectional area	12/16x 12mm	20x12mm	25x12 mm	32x12mm	40x20 mm	50x20 mm
1.0						
1.5	3	5	6	8	12	18
2.5	2	4	5	6	9	15

Size of cable mm ²		Size of Trunking mm				
Nominal Cross sectional area	12/16x 12mm	20x12mm	25x12 mm	32x12mm	40x20 mm	50x20 mm
4.0	2	3	4	5	8	12
6		2	3	4	6	9
10		1	2	3	5	8
16			1	2	4	6
25				1	3	5
35					2	4
50					1	3

Note 1: Cu-applicable to only copper cable; Al applicable to only Aluminum cable

Table No 1/4

Colour Coding For Conduits in Wall Entry

Conduit for	colour
Light/Power Circuit	Black
Security wiring	Blue
Fire Alarm wiring	Red
Low voltage circuits	Brown
UPS circuits	Green

Table No 1/5

Colour Code for Wires

Type	Colour
Phase	Red, Yellow, Blue
Neutral	Black
Earth	Green

11.0 Trench in Soft soil/ Hard Murum / Tar road with half round Hume pipe: (For cables of size 25 sqmm. And above shall be covered by min. 150 mm. dia. of RCC Hume pipe)

Before excavating the soil for preparing trench, route of cable laying shall be got finalized from the site in-charge. Trench of minimum required width more than 300mm. shall be excavated up to minimum depth as per Table No 5 , below the ground surface. Bottom of the trench should be carefully leveled and freed from stones. Cables duly

straightened shall be laid flat and embedded in the 200 mm layer of screened sand. The inter-axial distance between two cables shall be between 230 and 400 mm. at the bottom of the trench. Inverted 150mm. dia. Half round RCC Hume pipe shall be laid above full length of cable. For more than one cable higher size or more number of Hume pipes are to be provided.

Remaining portion of the trench shall be back filled with the excavated material after removing stones and sharp / hard material, and making the surface proper. Crown of 150 mm shall be provided over the trench. The remaining excavated material shall be removed from site dumped in scrap yard of Local authorities or at suitable place.

Bricks: Solid Clay bricks of minimum size 225x110x62.5 mm (L x B x H), brunt in the kiln, of good quality.

Sand: Screened sand of good quality.

The cable of size 25 sq.mm and above shall be covered with 150 mm dia. half round Hume pipe.

Mode of Measurement:

Executed quantity shall be measured on the basis of running meter per run of cable.

Table No. 17. 1/1

Minimum laying Depth of cables (IS: 1255)

Sr.No	Voltage level of Cables	Minimum depth from top of the cable
1	Up to 1.1 kV	750 mm
2	3.3 kV to 11 kV	900 mm
3	22 kV to 33 kV	1050 mm
4	At road crossing	1000 mm
5	At railway crossing (from Bottom of sleepers to Top of pipe)	1000mm

12.0 SLUICE VALVE :

1.0 SCOPE:

This specification covers manufacture testing and supply of CI sluice valves, check valve etc.

1.1 STANDARDS & CODES:

The design, manufacture, testing and supply of C.I. sluice valves, check valves shall conform to the applicable standards. The latest edition of following standards shall be followed.

- a. IS : 7780135 - Gunmetal gate, globe and check valves for general purpose.
- b. IS : 780 - Sluice valves for water works purpose (50 to 300 mm)
- c. IS : 2906 - Sluice valves for water works purpose (350 to 1200 mm)
- d. IS : 5312 (Part-I) - Swing check type reflux (non-return) valve.
- e. IS : 2685 - Code of practice for section installation and maintenance of sluice valves.
- f. IS : 3045 - Single faced sluice gats (200 to 1200 m)

1.2 GENERAL REQUIREMENTS:

The general features of construction shall generally confirm to the is standards mentioned above.

All valves shall be capable of withstanding the service condition i.e. flow, fluid, pressure, temperature under which they are required to be operated.

Check valves in water service shall be swing type. Arrow shall be inscribed on these valves to indicate direction of flow. The valve shall have no slow closing characteristics without external damping arrangement.

Sluice valves shall be with hand wheel and suitable for installation with valve shaft in any position.

All valves shall be provided with hand wheel with chain / extended stem so that they can be operated from the ground / floor if required.

All sampling valves shall be of ball / cock type and all stainless steel (AISI 1316) design.

All isolation valves for pressure gauge will be of C.S. with S.S. working parts with zeroing arrangement for water service Drain valve shall be of ball / cock type.

The tolerance on the valve dimensions shall be as per relevant standard / code but not exceeding the following.

- i. Face to Face ± 3 mm.
- ii. OD on Flange ± 3 mm.
- iii. Bolt circle diameter ± 2 mm.
- iv. Thickness of Flange ± 2 mm.

Dimensional tolerance on casting shall be as indicated in IS : 5519

Do sluice valves below flow, suitable floor standards for extension bonnets as required shall be provided. These shall be complete with proper extension stands, valve stem coupling, hand wheels, gearing etc. the floor stand shall be bolted to the floor and height of the hand wheel above flow shall be minimum 600 mm.

Mild steel blind flanges shall be provided on suction line of pumps after sluice valve for total isolation.

All valves shall be tested hydraulically as per relevant IS standards. Body test and seat test shall be carried out and check for water tightness.

Material test certificate physical and chemical analysis certificates of all component of the valve shall be furnished to CIDCO.

Certified hydraulic test reports for all body casting shall be furnished to CIDCO.

1.3 PAINTING AND CORROSION PROTECTION:

A shop coat of paint shall be applied to all steel and cast iron exposed surfaces as required to prevent corrosion, after release has been given for painting and before dispatch. All parts shall be adequately protected for rust prevention. Grease shall not be used on machinery surfaces.

1.4 DRAWINGS AND MANUALS:

Bidder shall furnish alongwith his bid the following drawing.

- a. Dimensional outline drawings.
- b. Cross section drawing.

Instruction manual shall be furnished by Contractor after award of the contract.

1.5 NAME PLATE:

All valves shall have permanent name plates indicating the service for which they will be used and the design temperature, and pressure rating.

1.6 SPECIFICATION FOR VALVES:

Standards : IS 780 for - 50mm - 300mm Class I
IS2906 for - 350mm and above Class I

Ends : Flanged, flat end and drilled in accordance with
IS 538.

1.7 MATERIAL OF CONSTRUCTION:

- a. Body : CI - IS 210 Gr.FG 200
- b. Bolted bonnet : CI - IS 210 Gr.FG 200
- c. Ringing Stem : High tensile brass /bronze.
- d. Solid wedge disc : CI - IS 210 Gr.FG 200
- e. Renewable body and seal : Leaded gun metal or Bronze rings.
- f. Stem packing (renewable : Graphited indicated.
with valve open on stream)
- g. Hand Wheel : Malleable Iron ASIM A 338.
- h. Bonnet Bolts : ASIM A 307 Gr.B.

- i. Bonnet Nuts : ASIM A 307 Gr.B.
j. Bonnet gasket : Compressed asbestos.

Hydrotest Pressure	IS:780 Class I	IS: 3906 Class I
Body	20 Kg/cm ²	14 Kg/cm ²
Seat	10 Kg/cm ²	7 Kg/cm ²

1.8 SPECIFICATIONS FOR REFLUX VALVE:

- Standards : IS 5312 Part-I latest edition.
Ends : Flanged, flat based drilled in accordance with IS 1538.
Type : Swing type.

1.9 MATERIAL OF CONSTRUCTION:

1. Body : CI - IS 210 FG 200
2. Bolted Cover : CI - IS 210 FG200
3. Disc : CI - IS 210 FG200
4. Body Seat : Gun metal.
5. Disc Seat : Natural rubber.
6. Bolts & Nuts : ASIM A - 307 Gr. B.
7. Hydro test : Body - 20 Kg/cm²
Pressure : Seat - 10 Kg/cm²

13.0 ROLLED STEEL JOIST (RSJ) POLES (OH-PL/RSJ)

Scope:

Supply and erection of Rolled Steel Joist (Girder) pole as per IS 2713, including painting in provided foundation as per method of construction.

Material:

Pole: Rolled Steel Joist (Girder) As per Table No. 8.1/2

Base plate: MS Base plate of 30x30x0.6 cms.

Hardware: Nut and bolts for fixing earh wire

Paint: Bituminous paint, Aluminium paint, Red oxide paint.

Method of construction:

Before erection of pole, base plate of size 30x30x0.6 cm shall be full length welded at the bottom of pole, a suitable hole of required diameter and at specified height shall be drilled for earth stud. The pole shall be then painted by 2 coats of red oxide paint as primer for full length and then by one coat of bituminous paint before erection for min. 1/6 length which is to be buried in ground & after erection remaining portion to be painted by two coats of aluminium paint. The pole shall be erected in provided pit with cement concrete foundation and muffing in perfect plumb.

Mode of Measurement:

Executed quantity will be measured on number basis. (i.e. each)

Table No. 8. 1/2

Weight of various sizes of RSJ with 8.5 meter length

RSJ POLE	Size	Weight per Meter
Rolled steel Joist	150x80 / 150x75mm	14.9 Kg/meter
Rolled steel Joist	200x100 mm	25.4 Kg/meter
Rolled steel Joist	175x90 mm	19.3 Kg/meter
Rolled steel Joist	100x116 mm	23.0 Kg/meter
Rolled steel Joist	125x75 mm	12.42 Kg/meter
Rolled steel Joist	152x152 mm	37.0 Kg/meter

14.0 **ALUMINIUM CONDUCTOR STEEL REINFORCED (ACSR)**
(OH-CON/ACSR)

Scope:

Supply and erection of aluminium conductor steel reinforced for overhead line.

Material:

Conductor: All aluminium stranded conductor (As per table 8.5/1)

Binding wire: 12 SWG aluminium binding wire

Clamps: PG clamps as per requirement

Method of construction:

At first the conductor is removed from bundle/ drum straight without knots, bends etc.

Stringing of conductor shall be done with draw vice. conductor shall not be twisted while stringing. Disc insulators shall be used if the line deviates by 30 degree or more, terminal pole and tri-pole or four pole structure at terminal pole and at junction / cut pole.

Parallel double groove clamp having two nuts bolts designated to carry full line current shall be used for making Jumper wire connections, Universal parallel double groove clamp having two nut bolts shall be used for Tap Off point.

On straight line the conductor shall be bounded on top groove of insulator and at angular position binding shall be done in side groove, Binding wire of 12 SWG shall be of the same metal as that of conductor.

Mode of Measurement:

For measurement purpose, sum of the total conductor including Jumper connection shall be considered. (i. e. per Km)

Table No. 8.5/1
Conductor Specifications As Per I.S. 398/1961

Code Name of Conductor	Resistance at 20 ⁰ ohm / km	Approx. Current Carrying Capacity in Amperes.		Number of Strands / Diameter of each Strand in mm	Overall Diameter of Conductor in mm	Weight of Conductor (kg-km)
		At 40 ⁰ C	At 45 ⁰ C			
All Aluminium Conductor						
Rose	1.361	116	108	7/1.96	5.88	58
Gnat	1.071	133	123	7/2.21	6.63	73
Irish	0.850	150	138	7/2.48	7.44	92
Pansy	0.677	178	165	7/2.78	8.34	116
Ant	0.544	204	189	7/3.10	9.30	144
ACSR Conductor						
Squirrel	1.374	115	107	6+1/2.11	6.33	85
Weasel	0.911	150	139	6+1/2.59	7.77	128
Ferret 4.04	0.679	181	618	6+1/3.0	9.00	171
Mink 0.06	0.456	234	217	6+3.66	10.98	255
Raccoon	0.365	270	250	6+1/4.09	12.27	318
Dog 0.1	1.137	520	482	30+7/3.0	21.00	976

15.0 Porcelain Disc Type Insulator 11/22/33 kV
(OH-INS/DI)

Scope:

Supplying porcelain disc type insulator, suitable for 11/22/33 KV and necessary ancillary materials and complete erection on provided cross arm / bracket and connected to the over-head line as per instructions from the site engineer

Material:

Insulator: Distribution class Disc type insulator made form porcelain, suitable for specified voltage level, having ISI mark, with necessary hardware.

Hardware: Nuts, washers, etc.

Binding wire: Bare Copper wire or conductor

Clamps: Ms Clamps

Method of construction:

Distribution class porcelain disc type insulator, suitable for specified voltage level, erected on provided cross arm or bracket with clamps, ancillary materials, and connected to the over-head line. Connection shall be made bare copper wire of specified gauge.

Mode of Measurement:

Executed quantity will be measured on number basis (i.e each)

16.0 PLATE / PIPE TYPE EARTHING

A **Plate type Earthing (With or Without CI Cover, Funnel, etc) (EA-EP)**

Supplying and erecting galvanized cast iron / copper earth plate type / G.I. pipe type earthing with / without C.I. cover as per Instructions from the site engineer.

Material:

Earth Plate: Galvanised cast iron / Copper earth plate or G.I pipe as per specification given in table No 9.1/1

CI Cover: As per specification given in Table No 9.1/1

Earthing Conductor: Copper/ G.I strip/Annealed bare copper wire/G.I. earth wire of size as per specifications given in Table No 9.1/1

GI Pipe: The galvanized iron pipes shall comply with IS: 1239—1973 and 1969 for the specified class. The specified diameter of the pipes shall refer to inside diameter. For watering, and as enclosure for Earth wire, refer specifications given in Table No 9.1/1

Pipe: The galvanized iron pipes shall comply with IS: 1239—1973 and 1969 for the specified class. The specified diameter of the pipes shall refer to inside diameter.

Hardware: Screw / nut bolts with required washer of dimensions, Rawl plug / clip/ 'U' nails and material as per specifications given in Table No 9.1/1

Filling material: Coal / Charcoal / salt as per specification given in Table No 9.1/1

Lugs: Lug shall be of high purity aluminum/ copper / bimetallic of required type, with required size of hole and smooth finished both from inside and outside.

Method of construction:

Pit is to be dug of required dimension and depth for the earthing at site, and laying of Galvanised cast iron / Copper earth plate or G.I pipe shall be as per Table No 9.1/1. The earth connection to equipment / switch gear and earthing electrode shall be connected as shown in the diagram and as per IS 3043 amender up to date. The connections shall be made either by strip or double run of earth wire with drilling, welding, riveting, brazing and nut bolting to plate or pipe, where ever required in an approved manner. As far as possible continuous strip shall be used, but where ever jointing of strip is unavoidable the overlap portion must not be less than $2^{1/2}$ times the width of the strip either welded / brazed / soldered by all sides or 6

inches overlap with two nut bolts / riveting of adequate size with required washers and covered by anti-corrosive paint as per approved jointing practice in the industry and as per directives from site engineer in charge.

Pit shall then be filled with screened soil with alternate layer of coal and salt, and if, necessary brick masonry work (Where ever applicable) shall be done as specified in IS: 3043, with laying wires in PVC/ G.I. pipe and watering arrangement and covered with C.I. cover (Where ever applicable).

Where ever requires or as specified by Site Engineer, a Test link shall be provided for facilitating the testing of resistance of earth electrode.

Testing:

The value of each earth electrode shall be measured by earth tester in presence of site Engineer and record to be submitted.

Mode of Measurement:

Executed quantity will be measured on number basis (i.e each)

Table No 9.1/1

Detailed Specification of various types of Earthing

Type of earthing		Galvanised cast iron earth plate type without C.I cover	Copper earth plate type with C.I cover	Galvanised cast iron earth plate type with C.I cover	Pipe type earthing with out C.I cover
S. No.	Particulars				
1)	Depth from top of plate Up to Ground level	1.5 m Galvanised	1.5 m	1.5 m Galvanised	
2)	Size & type of material for pipe / Plate type earthing.	Cast iron earth plate size 60x60x0.6 cms	Copper earth plate size 60x60x3.15 cms	Cast iron earth plate size 60x60x0.6 cms	'B' grade G.I pipe 40mm dia. 2.5 mtr. Long or 20 mm dia. G.I Rod

Type of earthing		Galvanised cast iron earth plate type without C.I cover	Copper earth plate type with C.I cover	Galvanised cast iron earth plate type with C.I cover	Pipe type earthing with out C.I cover
S. No.	Particulars				
3)	Salt / Charcoal	30 Kg. charcoal and salt each	30 Kg. charcoal and salt each	40 Kg. charcoal and salt each	N.A
4)	Type of Wire	Double G.I wire 8 SWG	Double G.I 8 SWG	Double G.I 6 SWG	Double G.I 8 SWG
5)	Wire enclosure	12mm. dia. G.I pipe 2 mtr Long	12mm. dia. G.I pipe 2. mtr Long	12mm. dia. G.I pipe 2.5 mtr Long	N A
6)	Nut bolts	12 mm dia. Cadmium/ GI	12 mm dia. Cadmium/ GI	12 mm dia. Cadmium/ GI	N A
7)	Washers	GI	GI	GI	N A
8)	Watering Pipe	19 mm dia. G.I pipe	19 mm dia. G.I pipe	19 mm dia. G.I pipe	N A
9)	Lugs	Yes	Yes	Yes	Yes
10)	Funnel	No	Yes	Yes	N A
11)	Brick Masonry	No	Yes	Yes	N A

17.0 L.T. FEEDER PILLARS MS ENCLOSURE

1.0 SCOPE:

1.1 This specification covers design manufacture testing and inspection at manufacturer's works packing and supply of distribution pillars made out of Mild Steel enclosure glass reinforced polyester sheet moulding compound confirming to IS: 13410/1992. The system shall be A.C. 3 phase, 4 wire, 433 V, 50Hz with effectively grounded neutral L.T. distribution feeder pillars shall be 8Way, 6Way, 4Way.

1.2 It is not the intent to specify herein complete details of design and construction. The equipment offered shall conform to relevant

standard and high quality and workmanship capable to perform continuous and satisfactory operations in the actual service conditions at site.

2.0 GENERAL TECHNICAL REQUIREMENTS:

2.1 CUBICLE :

2.1.1 The cubicle of LT feeder pillars and mini pillars shall be made out of either 14 SWG (2 mm thick) cold rolled M.S sheet steel, plates and shaped sections or thermosetting plastic i.e. glass reinforced polyester sheet moulding compound (SMC) conforming IS: 13410-1992 as per the requirements specified . All panel edges and door edges shall be reinforced against distortion by rolling, bending etc. The complete cubical shall be rigid self supporting and free standing. The enclosure shall comply with the requirement of IP- 33 type as per the IS – 13947 or the latest version thereof. The enclosure shall be anti corrosive, dust proof, rust proof, vermin and water proof, ultra violet stabilized and flame retardant property.

2.1.2 The LT feeder pillars shall have front and rear compartments. Front compartment shall be suitable for HRC fuses and the rear for cable terminations. Asbestos sheet of at least 6mm thick shall be provided for separation between front and rear compartments. L. T. Feeder pillar shall have VERTICLE FUSE UNIT WITH HRC fuse links of 630A on incoming circuit as per the requirement and VERTICLE FUSE UNIT WITH HRC fuse 630/400A on outgoing circuits as per the requirement with necessary interconnecting Bus Bars/ Links etc.

2.1.3 The cubicles shall have centre lift up type slanting roof rain hood made up of 14 SWG MS.

The depth and width of the rain hood shall be at least 120% of the depth and width of the pillars. The doors shall not be detachable after fixing the rain hood.

2.1.4 The cubicles shall be provided with water proof non detachable

hinged doors made from good quality thermosetting plastic i. e. glass reinforced plastic sheet moulding compound conforming IS: 13410/1992 & as per the requirement of this specification.

- 2.1.5 Suitable no. of hinges as tabulated below shall be fitted from inside of the box to fix the doors. Hinges shall be 50 mm in length and made from 2mm thick M. S. sheet. Hinge pin diameter shall be minimum 4mm. Doors shall be fixed with three screws in each hinge. The hinges shall not be visible from outside. On closing of doors, right door shall rest on the left door. Hinges shall be of such construction that the doors shall be swung open by not less than 150°
- 2.1.6 Four Louvers (two on each side) shall be provided to L.T. feeder pillars. Louvers with stainless steel wire mesh with shall be provided on both sides of the mini pillars and at the top and bottom of both sides of L.T. pillars. Mounting of components inside the enclosure shall allow free air circulation keeping the clearances as per specification
- 2.1.7 The cubicles shall be provided with pedestal arrangement having suitable no. of bottom holes for grouting bolts at all four corners & at the middle as per requirement.
- 2.1.8 Suitable no.of detachable gland plates shall be provided in the cubicle at the bottom.
Gland plate shall be provided with suitable size cable gland & with four screws for fixing the plate from inside. Size & no. of the glands to be provided will be intimated to the successful Bidder along with approval of drawings.
- 2.1.9 Rigid stand shall be made from M.S.angle or FRP Pultruded sections as per IS: 6146.
- 2.1.10 Two galvanized earthing Bolts of M12 X 50 mm size shall be welded from inside and projecting outside of the box. Two Nuts with washers shall be provided on each bolt.

2.1.11 Enameled name plate of the supplier, type of pillar and M.S.E.D.C.L. Tender Number & date shall be displayed on front door.

2.1.12 Enameled Danger Board with "DANGER 440 VOLTS" mark shall be displayed on the left hand side of front and back doors.

2.3 BUS BAR:

2.3.1 The bus bars shall be made up of electrolytic grade aluminium confirming to grade 63401 WP of IS: 5082.

2.3.2 Electrolytic grade aluminium twin flat cable terminals shall be provided in staggered formation for connecting cable cores for each phase from rear side in all. L. T. pillars (except mini pillar). The arrangement shall be suitable for taking Load current reading with clip on type of meter. Insulated horizontal bakelite bar of at least 50 x 12mm shall be provided to support and take care of weight of cables, jointing etc.

2.3.3 Neutral bus bar shall have one terminal for each circuit way and shall be provided with two nickel plated, nuts, bolts, spring washers and plain washers at each end for earthing. Cross sectional area of neutral bus bar shall be at least 50% of cross sectional area of phase bus bar.

2.3.4 Minimum clearances, wherever shown, shall be as per General Arrangement Indicative Drawing enclosed with this specification. Other clearances shall be as per requirement of IS: 4237/1982 amended up to date.

2.4 VERTICLE FUSE BASE ASSEMBLY:

2.4.1 Fuse bases shall be suitable for HRC fuse. All fuse bases shall be identical and interchangeable and shall be capable to carry rated normal current without exceeding safe temperature as per relevant standard duly tested at CPRI.

- 2.4.2 The base of the HRC Fuse shall be of non-tracking, heat resistant insulating porcelain material of superior electrical and mechanical properties equivalent to Dough Moulding Compound (DMC). The Fuse Base shall be sturdy in construction. The insulation shall not get affected due to dust, moisture etc, at wide fluctuation in temperature. The holes for fasteners shall be plugged by insulating filling compound which shall not drain at operating temperature in service.
- 2.4.3 The contacts shall be made up of electrolytic grade copper alloy with corrugated terminal pad and spring action to yield high contact pressure. G. I. spring ring shall be made out of at least 6 mm dia. Spring steel round. The spring action shall not get affected by operations and variations in operating temperatures in service.
- 2.4.4 The complete assembly shall be so fixed and secured that there shall be no turn, fall out displacement and vibration of any part during inserting and removal of fuses/Links. Load current reading, cable end connection etc
- 2.4.5 HRC Fuse Base should withstand the breaking capacity of the fuse link of 80kA.
- 2.4.6 Separate price shall be quoted for spare fuse base assembly and shall be supplied as per the requirements to be indicated after placement of purchase order.
- 2.5 **FUSE LINKS:**
- The HRC Fuse Links shall be sturdy in construction of "Din Type". Corrugated fuse links shall be made out of electrolytic grade copper flat of at least 4 mm thick and shall be capable of carrying the rated current of the fuse base and shall be suitable for inserting and pulling out by insulated fuse pulling handle. Breaking capacity shall be 80 kA. For fault indication red pop up indicator should come out

instantly on fusing. Manufacturer's name, current rating, breaking capacity and type shall be marked on HRC fuse link.

The successful bidder shall submit the complete type test reports as per specification for approval of CE (Distribution) before commencement of supply.

2.6 PAINTING:

2.6.1 The M.S. cubicles shall be provided with anti corrosive high quality post office red colour paint conforming to shade No 538 of IS:5 from inside and outside to withstand the corrosive and humid atmosphere. The colour of SMC cubicle shall be red conforming to shade No 538 of IS:5

2.6.2 For M.S. Cubicle, all interiors and exteriors of the cubicle shall be degreased in 5% solution at 75°C for 15 minutes. They shall then be washed in hot water bath at 65°C to remove all rust, scale corrosion, grease and other adhering foreign matter and shall be rinsed in cold running water.

2.6.3 M.S. cubicles shall then be pickled in 25% hot sulphuric acid at 65°C for 5 minutes. Care shall be taken to avoid over pickling by addition of adequate quantities of inhibitor and avoid loss of tensile strength. The cubicle shall then be rinsed in cold running water and put in alkaline solution at 65°C for 1 to 2 minutes. The cubicle shall then be immersed in cold water (still agitated) to remove all traces of alkali and untreated salt. The cubicle shall then be dipped in deoxidize chamber to ensure complete removal of moisture

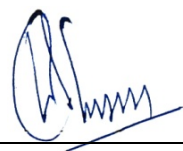
3.0 SUPPLYING AND ERECTING 6 WAY FEEDER PILLAR PANEL

- 1) BODY SHALL BE 10 SWG SHEET STEEL.
- 2) BODY SHALL BE DULY POWDER BY 9 TANK PROCESS.
- 3) DUST AND VERMIN PROOF.

- 4) DEGREE OF PROTECTION IP-54 OUTDOOR TYPE
- 5) CONSTRUCTION: NON DRAWOUT TYPE, SINGLE FRONT/ BACK CUBICAL TYPE.
- 6) PAINT SHADE FRAME RED (RAL 3000).
- 7) INSTALLATION INDOOR/OUTDOOR TYPE FLOOR MOUNTING.
- 8) WIRE SIZE CT CIRCUIT : 2.5 SQMM CU FLEXIBLE / CONTROL : 1.5 SQMM CU FLEXIBLE / EARTH : 2.5 SQMM CU.
- 9) DOORS SHALL BE 130 DEGREE OPENING.
- 10) BUSBAR SUPPORT SHALL BE OF SMC.
- 11) EARTH BUSBAR SHALL BE PROVIDED THROUGH OUT THE LENGTH OF THE PANEL.
- 12) HARDWARE SHALL BE CORROSION RESISTANT.
- 13) ALL DOORS AND COVERS SHALL HAVE RUBBER GASKET THROUGHOUT THE PERIPHERY.
- 14) ALL GLAND PLATES SHALL BE UNDRILLED DETACHABLE TYPE.

6 WAY FEEDER PILLER PANEL		
DESCRIPTION	QTY	UNIT
INCOMER		
630A HRC FUSE BASE	1	NOS
OUTGOING		
400A HRC FUSE WITH VERTICLE FUSE UNIT	5	NOS
BUSBAR : 630A FOR RYB PHASE WITH RED, YELLOW & BLUE INSULATION PVC SLEVE FOR NEUTRAL WITH BLACK INSULATION SLEVE		
BODY (OUTDOOR TYPE, IP 54 WITH 10 SWG GI WITH 3mm GLAND PLATE		
ASBESTOS SHEET SEPERATOR ON THE INNER SIDE OF THE DOOR		

Signature of Bidder
Date :


Superintending Engineer(Elect-Proj.)
Date :

CODES AND STANDARDS

The following codes and standards shall be applicable for continuous performance of all electrical equipments to be supplied, delivered at site, erected, tested and commissioning. The electrical equipments offered shall comply to the relevant Indian Standards Specifications. Fire Insurance Regulations, Tariff Advisory Committee Regulations, and particular to Indian Electricity Rules in all respect with all its latest amendments upto date.

For guidelines to the Bidders, few of the Indian Standards are indicated below :-

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| 1. | IS:116 | - | Circuit breakers for AC System. |
| 2. | IS:159 | - | Bubars and Busbars connections. |
| 3. | IS:3043 | - | Code of practice of earthing. |
| 4. | IS:10116 | - | Code of practice for installation of switchgear. |
| 5. | IS:10116 | - | Code of practice for selection, installation and maintenance of fuse (upto 650 Volts.) |
| 6. | IS:3165 | - | Potential Transformers. |
| 7. | IS:3203 | - | Climate proofing of electrical equipments. |
| 8. | IS:3427 | - | Metal enclosed switchgear and central gear. |
| 9. | IS:3419 | - | Specification for fittings for rigid PVC non-metallic conduit. |
| 10. | IS:3537 | - | Gas separated relays. |
| 11. | IS:3639 | - | Fittings and accessories for power Transformer. |
| 12. | IS:3837 | - | Accessories for rigid steel conduits. |
| 13. | IS:4064 | - | Heavy duty Air Break switches and composite. Switch fuse units for voltage and exceeding 100V. |
| 14. | IS:4064 | - | Switch fuse units for Industries etc. |
| 15. | IS:4237 | - | General requirements for switchgears not exceeding 1000 Volts. |

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| 16. | IS:4615 | - | Switch socket outlet. |
| 17. | IS:5133 (Part-I) | - | Sheet steel boxed. |
| 18. | IS:3070 (Part-I) | - | Lighting Are stores. |
| 19. | IS:2034 | - | L.T. capacitors. |
| 20. | IS:192 | - | Electric power switchgear for indoor and outdoor installation. |
| 21. | IS:PUB 26 | - | Circuit Breakers. |
| 22. | IS:9535 | - | Specification for conduits for electrical installation. |
| 23. | IS:240 (Part-I & II) | - | for H.T. insulator of 33KV grade and above. |
| 24. | IS:335 | - | Insulating Transformer Oil. |
| 25. | IS:374 | - | Ceiling fans. |
| 26. | IS:375 | - | Marking and arrangement for switchgear boards main connections auxiliary wiring |
| 27. | IS:415 | - | Tungsten filament lamps. |
| 28. | IS:692 | - | Paper insulated cables. |
| 29. | IS:694 | - | PVC insulated cables and cords for power lighting. |
| 30. | IS:722 | - | Three phase watt hour meters with MDI |
| 31. | IS:732 | - | Electrical wiring installation (upto 650V) |
| 32. | IS:1087 | - | Single pole tumbler switch 5 Amps. |
| 33. | IS:1248 | - | Direct reading electrical indicating instruments. |
| 34. | IS:1255 | - | installation and maintenance of paper insulated power cables upto 33 KV) |
| 35. | IS:1293 | - | 3 Pin lugs and sockets outlets. |
| 36. | IS:1554 | - | PVC insulated cables – heavy duty. |
| 37. | IS:1567 | - | Metal clad switches upto 100 Amps. |

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| 38. | IS:1651 | - | Lead acid cell batteries. |
| 39. | IS:1653 | - | Rigid steel conduits for electric wiring. |
| 40. | IS:1771 | - | Industrial light fittings with accessories. |
| 41. | IS:6600 | - | Loading of oil immersed transformer. |
| 42. | IS:6946 | - | Reliable (flexible) non-metallic conduits for electrical. |
| 43. | IS:7098 (Part-II) | - | For XLPE type cables. |
| 44. | IS:5216 | - | Guide for safely procedure and practices in electric work. |
| 45. | IS:5578 | - | Guide for marking of insulated conductors. |
| 46. | IS: 5792 | - | 11 kv drop out fuses. |
| 47. | IS:5820 | - | Pre-cast concrete cables covers. |
| 48. | IS:5908 | - | Method of measurement of electrical installation in building. |
| 49. | IS:6381 | - | Specifications for construction and testing of electrical apparatus. |
| 50. | IS:1818 | - | Isolation and earthing switches. |
| 51. | IS:1886 | - | Code practice for installation of transformers. |
| 52. | IS:1947 | - | Flood lights. |
| 53. | IS:2026 | - | Transformers. |
| 54. | IS:9242 | - | Degree of protection provided for enclosure for switchgear. |
| 55. | IS:9242 | - | HRS cartridge fuse units upto 650 Volts. |
| 56. | IS:2251 | - | Code of practice for Danger Notice Plates. |
| 57. | IS:2268 | - | Code bell/buzzers. |
| 58. | IS:2274 | - | Code of practice for wiring installation (exceeding 650 Volts) |
| 59. | IS:3854 | - | Switches for domestic and similar purpose. |

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| 60. | IS:2312 | - | Exhaust fans. |
| 61. | IS:2309 | - | Code of practice for lighting protection. |
| 62. | IS:2418 | - | Tubular fluorescent lamps for general lighting service. |
| 63. | IS:2544 | - | Porcelain post top insulators for BBW Class. |
| 64. | IS:2509 | - | PVC electrical conduits. |
| 65. | IS:2516 | - | A.C. Circuit breakers. |
| 66. | IS:2667 | - | Fittings for rigid steel conduits for electrical wiring. |
| 67. | IS:2692 | - | 11 KV drop out fuses. |
| 68. | IS:2575 | - | Enclosed distribution fuse boards and cutouts for voltage upto 1000 V. |
| 69. | IS:2705 | - | Current transformer. |
| 70. | IS 14930 II | - | Double Walled Corrugated pipes of High Density Polyethylene (HDPE) with couplings, tees, sockets for cable protection. |

The entire electrical installation work shall be strictly complied with the codes, standards, rules and regulations framed under the Indian Electricity Act. Further it shall be strictly carried out as per the regulations and rules set out by "Tariff Advisory Committee and/or Fire Insurance Regulations".

Some of the rules framed under the Indian Electricity Rules, 1956 and all amendments thereof more particularly complied to :

35, 43, 44, 44-A, 45 (Part), 50, 51, 59, 61 (a), 61 (c), 62, 63 (2), 65, 66, 67, 68, 69 and 92(2).

Signature of Bidder
Date :



Superintending Engineer(Elect-Proj.)
Date :


LIST OF APPROVED MAKES OF MATERIAL FOR
ELECTRICAL/MECHANICAL WORKS

The Bidders should invariably use products as per the makes approved by CIDCO and details posted on website www.cidcoindia.com. The validity of the approved vendors shall invariably be confirmed from the website.

NOTE:

- Contractor shall submit samples of materials and obtain prior approval of Engineer In-charge before procurement of any of the materials enlisted above and should ensure that the said product complies with specifications provided in schedule & Technical specification.
- Unless and otherwise mentioned the make/brand mentioned under BOQ item shall only be used. The contractor shall distinctly understand that it will not be their prerogative to insist on a particular brand from the list. The bidders shall quote the rates accordingly.
- In case of delivery of any serious problem which may affect the progress of the work the alternative makes mentioned above or equivalent make other than mentioned above may be approved by the Engineer-In-Charge on a written request if required. However the final decision of the Engineer-In-Charge will be binding on the contractor in this regard.
- Any other vendor not included in the above approved make but having valid registration with CIDCO shall be considered.
- In future any vendor registered /approved products during tender/contract period, the same will be considered subject to valid registration with CIDCO.
- MSEDCL approved makes shall be applicable only for MSEDCL work carried out by CIDCO with the conditions mentioned above.

Signature of Bidder
Date :


Superintending Engineer (Elect-Proj.)
Date :