JAIPUR DEVELOPMENT AUTHORITY

Tender Document

For

Name of work : Rate contract for construction of 200 mm dia tube well, P/L/J of DI pipe line at various locations for one year under zone PHE-I, JDA, Jaipur.

Cost: Rs. 530.75 Lacs

NIT No. 14/2017-18 Due On: 08.05.2018

Volume-I

Envelope 'A' (Technical Bid)

Executive Engineer (PHE-I)
Jaipur Development Authority
Jaipur

जयपुर विकास प्राधिकरण, जयपुर

राम किशोर व्यास भवन, कमरा नं. 135, मुख्य भवन,
इन्दिरा सर्किल जवाहर लाल नेहरू मार्ग, जयपुर–302004

क्रमांक जविप्रा/अधि.अभि. (पीएचई–।)/2017-18/D-208 दिनांक 27.03.18

निविदा सूचना

निविदा सूचना सं0 अधि. अभि. (पीएचई–।)/14/2017–18

जयपुर विकास प्राधिकरण द्वारा "**Rate contract for construction of 200 mm dia tube well, P/L/J of DI pipe line at various locations for one year under zone PHE-I, JDA, Jaipur**" जिसकी अनुमानित लागत रू 530.75 लाख के लिए ऑनलाईन बिड्स दिनांक 08.05.2018 को सायं 6:00 बजे तक आमन्त्रित की जाती है। निविदा बोली का ऑनलाईन आवेदन व भुगतान जविप्रा पोर्टल पर करने की अन्तिम तिथी 08.05.2018 को सायं 6:00 बजे तक है। निविदा बोली के दस्तावेजों का विस्तृत विवरण www.sppp.rajasthan.gov.in, www.eproc.rajasthan.gov.in and www.jda.urban.rajasthan.gov.in पर देखा जा सकता है।

निविदा में भाग लेने वालो को निम्न शर्तो की पूर्ति करनी होगी।

1. निविदा दाता जयपुर विकास प्राधिकरण की वेबसाईट www.jda.urban.rajasthan.gov.in पर पंजीकृत हो एवं निविदा में भाग लेने के लिए बोलीदाता को आवेदन करने के लिए दस्तावेज शुल्क, अमानत राशि, आर.आई.एस.एल. प्रोसेसिंग शुल्क ऑनलाईन जमा करनी होगी।
2. ऑनलाईन निविदा प्रस्तुत करने के लिए निविदा दाताओं का राजस्थान सरकार के ई–प्राक्यूमेंट पोर्टल www.eproc.rajasthan.gov.in पर पंजिकृत हो।

अधिशाषी अभियंता (पीएचई–।)
जविप्रा, जयपुर।

JAIPUR DEVELOPMENT AUTHORITY

Room No. 135, Main Building, Ram Kishore Vyas Bhavan, Indira Circle, JawaharLal Nehru Marg, Jaipur – 302 004
Telephone: +91-141-2569696 E.mail: zephe1jda@yahoo.in

No: - JDA/EE/PHE-I/2017-18/D- 208 **Dated: 27.03.18**

NOTICE INVITING BID

NIB No. : JDA/EE (PHE-I)/14/2017-18

Online Bids are invited up-to 6.00 PM of 08.05.2018 for "**Rate contract for construction of 200 mm dia tube well, P/L/J of DI pipe line at various locations for one year under zone PHE-I, JDA, Jaipur**" Estimated cost of 530.75 Lacs. The last date for Applying Bid and making online payment on JDA portal is up-to 6.00 PM of 08.05.2018. Details may be seen in the Bidding Document at our office or the State Public Procurement Portal website www.sppp.rajasthan.gov.in, www.eproc.rajasthan.gov.in and www.jda.urban.rajasthan.gov.in.

To participate in the bid, bidder has to be:

1. Registered on JDA website www.jda.urban.rajasthan.gov.in, For participating in the Bid, the Bidder has to apply for the Bid and pay the Bidding Document Fee, RISL Processing Fee and Bid Security Deposit, online only.

2. Registered on e-Procurement Portal of Government of Rajasthan www.eproc.rajasthan.gov.in for online e-Bid submission.

(Mukesh Kumar Meena)
Executive Engineer (PHE-I)
JDA, Jaipur

JAIPUR DEVELOPMENT AUTHORITY

Room No. 135, Main Building, Ram Kishore Vyas Bhavan, Indira Circle, JawaharLal Nehru Marg, Jaipur – 302 004
Telephone: +91-141-2569696 E.mail: zephe1jda@yahoo.in

Bid No: - JDA/EE/PHE-I/2017-18/D-208 **Dated: 27.03.18**

NOTICE INVITING BID

NIB No. : JDA/EE(PHE-I)/14/2017-18

Name & Address of the Procuring Entity	➢ Name: Executive Engineer (PHE-I), Jaipur Development Authority Address: Room No. 135, Main Building, Ram Kishore Vyas Bhavan, Indira Circle, JawaharLal Nehru Marg, Jaipur – 302 004 Telephone: +91-141-2569696 E.mail: zephe1jda@yahoo.in
Subject Matter of Procurement	➢ **Rate contract for construction of 200 mm dia tube well, P/L/J of DI pipe line at various locations for one year under zone PHE-I, JDA, Jaipur** ➢ **Job No. : 199/2017-18**
Bid Procedure	➢ Potential Assessment Method Tender (eg. Single-stage Two part (envelope) open competitive) eBid procedure at http://eproc.rajasthan.gov.in
Bid Evaluation Criteria (Selection Method)	➢ Potential Assessment Method L1 (eg.Least Cost Based Selection (LCBS)-L1)
Websites for downloading Bidding Document, Corrigendum's, Addendums, etc.	➢ Websites: www.sppp.rajasthan.gov.in, www.eproc.rajasthan. gov.in, www.jda.urban.rajasthan.gov.in
Website for online Bid application participation and payment *	➢ Website: www.jda.urban.rajasthan.gov.in ➢ For participating in the Bid, the Bidder has to apply for this Bid and pay the Bidding Document Fee, RISL Processing Fee and Bid Security Deposit, online only. o Bidding document fee: Rs. 1000/- Rupees (One thousand only) o RISL Processing Fee: Rs. 1000/- (Rupees One Thousand only) Requisite Bid Security Deposit
Estimated Procurement Cost	➢ INR 5,30,74,612/- (Rupees Five Crore Thirty Lacs Seventy Four Thousand Six Hundred Twelve Only)
Bid Security Deposit	➢ Amount (INR) : 2% (Rs. 10,61,493/-) of Estimated Procurement Cost, 0.5% (2,65,374/-) of S.S.I. of Rajasthan, 1% for Sick Industries, other than S.S.I., whose cases are pending with Board of Industrial & Financial Reconstruction.
Date/Time/Place of Pre-Bid	➢ NA
Applying Bid and making Online Payment on JDA portal (www.jda.urban.rajasthan.gov.in)	➢ Start Date: 02.04.2018 at 9.30 AM ➢ End Date: 08.05.2018 at 06.00 PM ➢ In case EMD in from BG Original Bank Guarantee is to be submitted in Room No MB-SF-225A (Room No. of DD (E&B) of Main Building, Jaipur Development Authority by 09.05.2018 10.00AM to 11.05.2018 upto 5.00 PM
Bid Submission on e-Procurement Portal of GOR	➢ Start Date: 02.04.2018 at 9.30 AM ➢ End Date: 08.05.2018 at 06.00 PM
Date/Time/Place of Technical Bid Opening	➢ 14.05.2018 at 03.00 PM
Date/ Time/ Place of Financial Bid Opening	➢ Will be intimated later to the Technically qualified bidders in case of Two Bid
Bid Validity	➢ 120 days from the bid submission deadline
Completion period of work	➢ 12 Months

* Jaipur Development Authority has decided to receive Earnest Money Deposit (EMD) (Bid Security), Tender Fee and RISL processing fee online through JDA Portal. The bid security options available in tender for participants are as mentioned below:

A. Payment Options:

Option-1: Bank Guarantee (BG) against EMD / Bid Security

Bidder may opt Bank Guarantee (BG) against EMD (Bid Security), for which bidder requires to prepare BG before applying in the tender. The details of BG requires to be fed on JDA portal before paying balance amount (Tender Fee + RISL Processing Fee). This amount will be paid through Payment Gateway only, option to make balance payment through EFT (RTGS/NEFT) will not be available.

If bidder does not opt for BG against EMD, options of making complete payment through Payment Gateway or through EFT (NEFT / RTGS) will be available.

Option-2: Electronic Fund Transfer (EFT: NEFT/RTGS)

If the bidder selects payment mode as EFT (NEFT/RTGS), "Paying Slip for EFT (NEFT/RTGS)" will be generated by the system for the complete amount. The payment can be made from any Bank any Branch using this Paying Slip through NEFT/RTGS (Claim against payment made through EFT in any other JDA bank account will not be acceptable and bidder stands disqualified from participation in the bid applied for). After successful transaction through NEFT/RTGS, as per the standard procedures it may take 4 to 24 hours in process of confirmation of EFT through Auto-Process depending on the time of EFT done. Therefore, option to make payment through EFT (NEFT/RTGS) will be available till 48 hours prior to closing date of bid participation.

Option-3: Payment Gateway (Aggregator)

The facility to make payment through Debit Card, Credit Card, Net banking etc., will be available. User can use this facility from anywhere any time till the closing date & time of bid participation.

B. Bid Participation Receipt

After confirming payment, the bidder will get Bid Participation Receipt on the basis of which user will get the payment details along with other details for bidding on e-Procurement portal of GOR.

- In case of BG as the remaining payment will be done through Payment Gateway, on successful transaction the "Bid Participation Receipt" will be generated on real time basis.
- In case complete payment is done through Payment Gateway, on successful transaction the "Bid Participation Receipt" will be generated on real time basis.
- In case complete payment is done through EFT (NEFT/RTGS), on confirmation of payment from ICICI Bank (Auto Process) "Bid Participation Receipt" will be available on Login of Bidder on JDA portal.

Note:

1. Bidder (authorised signatory) shall submit their offer on-line in Electronic formats both for technical and financial proposal.
2. In case, any of the bidders fails to pay the Tender Fee, BSD, and RISL Processing Fee, online (subject to confirmation), its Bid shall not be accepted.
3. To participate in online bidding process, Bidders must procure a Digital Signature Certificate (Type III) as per Information Technology Act-2000 using which they can digitally sign their electronic bids. Bidders can procure the same from any CCA approved certifying agency, i.e. TCS, Safecrypt, Ncode etc. Bidders who already have a valid Digital Signature Certificate (DSC) need not procure a new DSC. Also, bidders must register on http://eproc.rajasthan.gov.in (bidders already registered on http://eproc.rajasthan.gov.in before 30-09-2011 must register again).
4. JDA will not be responsible for delay in online submission due to any reason. For this, bidders are requested to upload the complete bid well advance in time so as to avoid 11th hour issues like slow speed; choking of web site due to heavy load or any other unforeseen problems.
5. Bidders are also advised to refer "Bidders Manual Kit" available at eProc website for further details about the e-Tendering process.
6. Training for the bidders on the usage of e-Tendering System (eProcurement) is also being arranged by DoIT&C, GoR on a regular basis. Bidders interested for training may contact e-Procurement Cell, DoIT&C for booking the training slot.
   Contact No: 0141-4022688 (Help desk 10 am to 6 pm on all working days) e-mail: eproc@rajasthan.gov.in Address : e-Procurement Cell, JDA, Yojana Bhawan, Tilak Marg, C-Scheme, Jaipur
7. The procuring entity reserves the complete right to cancel the bid process and reject any or all of the Bids.
8. No contractual obligation whatsoever shall arise from the bidding document/ bidding process unless and until a formal contract is signed and executed between the procuring entity and the successful bidder.
9. Procurement entity disclaims any factual/ or other errors in the bidding document (the onus is purely on the individual bidders to verify such information) and the information provided therein are intended only to help the bidders to prepare a logical bid-proposal.
10. The provisions of RTPPA Act 2012 and Rules 2013 thereto shall be applicable for this procurement. Furthermore, in case of any inconsistency in any of the provisions of this bidding document with the RTPP Act 2012 and Rules thereto, the later shall prevail.

(Mukesh Kumar Meena)
Executive Engineer (PHE-I)
JDA, Jaipur

Section A-1
Instructions to Bidders

JAIPUR DEVELOPMENT AUTHORITY, JAIPUR

TECHNICAL BID

(POST QUALIFICATION)

Envelop A

SCHEDULE AND SPECIFICATIONS

Name of work **:- Rate contract for construction of 200 mm dia tube well, P/L/J of DI pipe line at various locations for one year under zone PHE-I, JDA, Jaipur**.

1.	NIB No.	:- E.E.(PHE-I)/14/2017-18
2.	Approximate cost	:- Rs. 530.75 Lacs
3.	Cost of the tender documents	:- Rs 1,000.00
4.	MD RISL Fees	:- Rs 1,000.00
5.	Earnest Money	:- Rs. @ ½% Rs. 2,65,374.00 (For Contractors Enlisted in JDA, Jaipur, AA category)
		:- Rs. @ 2 % Rs. 10,61,493.00 (For Contractors Enlisted in other Govt.Deptts. AA category)
6.	Sale of tender documents	: 02.04.2018 to 08.05.2018
7.	Date & Time of receiving tenders	: 02.04.2018 to 08.05.2018
8.	Date & Time of opening tenders	: 14.05.2018
9.	Completion period of work	: - 12 Months.

SCHEDULE 'A' : INFORMATION USEFUL FOR THE CONTRACTORS :

The tenderer should see the site and fully understand the condition of the site before tendering and include all lead, lifts etc. **Percentage above/Below or equal to be quoted on the rates as given in the 'G' Schedule and rate to be quoted by the tenderer in 'H' schedule.** The work shall be carried out in accordance with the Rajasthan PWD & PHED detailed specification and to the entire satisfaction of the Engineer-In charge of the work.

SCHEDULE 'B' : LIST OF THE DRAWING TO BE SUPPLIED BY THE DEPARTMENT:

The drawings may also be seen in the office of undersigned if any related to the work.

SCHEDULE 'C' : LIST OF THE DRAWING TO BE SUPPLIED BY THE CONTRACTOR:

List of the drawing to be supplied by the contractor NIL. But the contractor shall have to arrange at his own cost drawings required for the work after depositing necessary cost within JDA.

SCHEDULE 'D' : TEST OF THE MATERIALS :

The test of the material and workmanship shall be conducted by the JDA staff as necessary, The result of such tests should confirm to the standard laid down in the Indian standards and or the standards laid down in the detailed specification of the Public Works Deptt,. Proper quality control is required to be maintained by the contractor. Qualified personnel as required under the contractor enlistments rules duly approved by the Deptt. shall have to be engaged at site by the contractor. The deptt. reserves the right to engage such staff and recover the expenses from the contractor on such account in case of his failure to do so.

SCHEDULE 'E' : SAMPLES OF THE MATERIALS :

The samples of the material to be used by the contractor shall be deposited 15 days in advance with the Engineer In charge and be got approved by him before use.

SCHEDULE 'F' : TIME OF COMPLETION :

The work should start within Ten days of issue of work order and complete within 12 **months.**

SCHEDULE 'G' : ATTACHED SEPARATELY BASED ON JDA PHE AND PWD BSR JAIPUR.

SCHEDULE 'E' : DLP CONDITION.

SCHEDULE 'H' :: ATTACHED SEPARATELY.

SCHEDULE 'I' : SPECIAL TERMS & CONDITION FOR DRINKING WATER PIPE LINE WORKS/construction of TW works/construction of HP works : ATTACHED SEPARATELY.

Annexure A : Compliance with the code of Integrity and No Conflict of Interest

Annexure B : Declaration by the Bidder regarding Qualifications

Annexure C : Grievance Redressal during Procurement Process

Annexure D : Additional Conditions of Contract

SIGNATURE OF CONTRACTOR **EXECUTIVE ENGINNER (PHE-I)**

Jaipur Development Authority,

with full address & Mobile No. : **Jaipur**

JAIPUR DEVELOPMENT AUTHORITY JAIPUR

SPECIAL CONDITION OF THE CONTRACT FOR POST QUALIFICATION OF CONTRACTORS

Name of work : Rate contract for construction of 200 mm dia tube well, P/L/J of DI pipe line at various locations for one year under zone PHE-I, JDA, Jaipur.

Special conditions of contract for POST QUALIFICATION as detailed here under, shall be applicable in addition to all other terms and condition already prescribed under standard agreement forms/rules and regulations to contract.

1. Procedure:

Procedure for Pre- Qualification would be as follow:

(a) Tender documents shall be submitted on line e-procurement website http://www.eproc.rajasthan.gov.in with their digital Signature. The Bid is to be submitted in 3 Covers which shall comprise of –

Cover-1 Scanned copy of DD/BC of Tender Cost & Earnest Money in the name of Secretary, JDA and e-procurement fees Rs.1000 in the name of MD, RISL.

Cover-2 Complete Tender Document along with addendums/ amendments issued and uploaded by the Department on the above website, Tender form and schedules for pre-qualification Bid and scanned copies of supporting Documents as required for qualification as detailed herein after.

Cover-3 Financial offer (BOQ).

(b) The technical bid will be opened online only of those bidders whose proper Earnest money, Tender fee, e-procurement fee, VAT clearance certificate (Valid up to Six months back from the opening of Technical Bid) and copy of registration of contractor in required category are found to be in order. The earnest money will be accepted only in form of demand draft/ banker cheque in the name of Secretary JDA, Jaipur and shall have to be deposited on or before 08.05.2018

(c) The Technical Bid would be opened online on the date 14.05.2018

(d) The Financial Bid would be opened only of those bidders who fulfill all the Pre-Qualification criteria.

Note:- If VAT clearance certificate is not applicable in any State then appropriate proof is to be enclosed by bidder with certificate which is applicable in place of VAT.

2. Criteria:

Criteria for POST QUALIFICATION would be as follows:-

(a) The bidder should have executed following quantities of work in any one financial year of the last five financial years. However the bidder may opt current year in the said financial assessment period.

S.No.	Item	Quantity
1	Major Item of Schedule - G	50% Quantities
	Pipe line work	
a	Providing Laying & Jointing of DI pipe line 100 mm and above	9361 RM
b	Providing Laying & Jointing of HDPE pipe line 90 mm and above	2500 Mtr.
c	Construction of 200 mm dia Tube well	8 Nos
d	House connection(15 mm or more)	900 nos.

Note :-

(i) The Bidder should enclose the certificate having quantities Financial year wise otherwise the certificate will not be considered.

(ii) Quantities of all the items mentioned in criteria 2 (a) should be executed in any one financial year of the last five financial year.

(iii) Certificate issued by Govt. of India, State Govt., Union Territory, Govt. Undertakings, Autonomous Bodies shall only be considered.

(b) The bidder should have completed at least one similar nature work in last five financial year (including current year, if opted by the bidder) of value not less than 50 % of the Estimated Cost of the work (bid cost) updated to present price level)

Note :-

(i) The starting & completion date of the work is to be in between above said financial years. If no then maximum work (70%) is to be completed in above said financial years.

(ii) If bidder is submitted certificate having different components / nature of work then proper completion certificate of required similar nature component is to be enclosed.

(c) The bidder should have achieved an annual financial turnover of at least 60 % of the Estimated Cost of the work (bid cost) in any one of last five financial years (including current year, if opted by the bidder)

Note :-

(i) The bidder should enclose certificate of Turn Over from Chartered Accountant for last five financial year & audited balance sheet of the year which is considered by the bidder in criteria 2 (c).

(ii) If current year or last year has been opted by bidder whose balance sheet is not submitted till the submission of bid then certificate from Chartered Accountant should be enclosed.

(d) The bidder should give Affidavit to deploy the machinery and equipment as specified in Schedule – III, for the execution of this work.

(e) Bid Capacity: Bidders who meet the minimum qualification criteria will be qualified only if available bid capacity is equal to or more than the total Bid value.

The available bid capacity will be calculated as under:

Bid Capacity = (A x N x 3 – B)

Where A = Maximum value of civil engineering work executed in any one year during the last 5 financial years (updated to present Price level) taking in to account the completed as well as works in progress. However, the bidder may opt current year in the five year assessment period

N = Number of year prescribed for completion of the work for which bids are invited. In present case value of N shall be 1.0

B = Value, at present price level of existing commitments and on going works to be executed during 'N' period (period prescribed for completion of the works for which the bids are invited)

Note:-

(i) Certificate from Chartered Accountant should be enclosed by bidder clearly indicated maximum value of Civil Engineering Work in one Financial Year.

(f) Litigation History:- Bidder should provide an accurate information on any litigation or arbitration resulting from contracts completed or under execution by him over the last five years. The maximum value (updated at the present price level) of disputed amount claimed in the litigation / arbitration resulting from contracts executed in last five years shall be deducted from the calculated Bid Capacity of the bidder. The details shall be furnished in Schedule VI.

Note :-

(i) The present price level for turnover, cost of completed work & disputed amount of similar nature, the previous years value shall be given weight age of 10% per year as follows :-

(a)	**For current year**	**1.00**
(b)	**For last year**	**1.00**
(c)	**For one year before**	**1.10**
(d)	**For two year before**	**1.21**
(e)	**For three year before**	**1.33**
(f)	**For four year before**	**1.46**

3. <u>Documentation</u> :

The bidder should furnish the following documents along with the technical bid:

(a) Information regarding financial resources and capability in Schedule –I.
(b) Information regarding works executed in the last five years in Schedule–II
(c) Certificates from the concerned Engineer–In–Charge in support and verification of the information furnished in Schedule–II
(d) Affidavit regarding machinery and equipment required for deployment, as detailed in scheduled – III.
(e) Information regarding details of maximum value of civil engineering works executed in any one year during the last five years taking into account the completed as well as works in progress in schedule – IV.
(f) Information regarding existing commitments and ongoing works to be completed in schedule – V.
(g) Information regarding details of litigation or arbitration contracts to be furnished in schedule – VI.
(h) Calculation of Bid capacity in schedule – VII.
(i) Affidavit as per Annexure I.

4. <u>Important</u>:

(a) The bidder must ensure that all the information required in the Documents is furnished by him complete in all respects. He would not be allowed to withdraw any document, or to rectify any information furnished therein, after submitting the bid.

(b) The bidder should give an affidavit that the information furnished in schedule I to VII is correct. If any information is found incorrect, the offer of the bidder shall be rejected and action be taken as per rules.

(c) Bidders must do paging of all enclosure of bid documents.

5. <u>Rejection of bids</u>

The department reserves the rights to reject any bid or to disqualify any or all the bidders, without assigning any reasons at any stage.

(i) If Bid is not accompanied with the requisite documents mentioned in clauses 3 (a) to 3 (i) or is not in accordance with procedure specified in Para 1, or is not accompanied with earnest money & VAT clearance Certificate and registration of contractor in required category it would be liable for rejection

(ii) Furnishing of incorrect or incomplete or concealment of any information required in the bid documents would render the bid liable for rejection.

(iii) If all the copies enclosed in support or affidavit is not duly attested by notary public/ gazetted officer then bid of the bidder is to be rejected.

Executive Engineer (PHE-1)
JDA, Jaipur

TENDER FOR WORKS

I/We hereby tender for the execution for the Jaipur Development Authority, Jaipur of the work specified in the underwritten memorandum within the time specified in such memorandum at the rates, (in figure) .....% (as well as in words) ..... Percent below/above the amount, entered in the schedule G in all respects in accordance with the specifications, designs, drawings and instructions in writing referred to in Rule I in all respects in accordance conditions with such conditions so far as applicable. I/We have visited the site of work and am/are fully aware of all the difficulties and conditions likely to affect carrying out the work, I/We have fully acquainted myself/ourselves about the conditions in regard to accessibility of site and quarries/kilns nature and the extent of ground, working conditions including stacking, of materials, installation of tools & plant, conditions effecting accommodation and movement of labour etc. required for the satisfactory execution of contract.

Memorandum

(a) **General description of work..-** :

(b) **Estimated cost** : **Rs. 530.75 Lacs**

(c) **Earnest money** : **Rs. 10,61,493.00** for enlisted contractors outside JDA , AA category

: **Rs. 2,65,374.00** @1/2% within JDA enlistment. , AA category

(d) **Security Deposit :**

(i) "The security deposit @ 10% of the gross amount of the running bill shall be deducted from each running bill and shall be refunded as per rules on completion of the contract as per terms and conditions. However, the amount of security deposit deducted from running bills shall not be converted into any mode of securities like bank guarantee. FDR etc. The earned money deposited shall however be adjusted while deducting security deposit from first running bill of the contractor. There will be no maximum limit of security deposit.

However, a contractor may elect to deposit of full amount of 10% security deposit in the shape of bank guarantee or any acceptable form of security before or at the time of executing agreement. In that case earnest money may be refunded only after deposition of full 10% as above. However, in case during execution cost of works exceeds as shown at the time of depositing 10% as above, balance security deposit shall be deducted from the Running Account Bills."

(ii) Bank Guarantee shall in all cases be payable at the headquarter of the Division or the nearest District Headquarters.

(e) Time allowed for the completion of work (to be reckoned from the 10th day after the date of written order to commence the work) in 24 months. Should this tender be accepted in whole or in Part, I/We hereby agree to abide by and fulfill all the terms and provisions of the conditions of contract annexed here to and of the Notice Inviting Tender, or in default thereof, to forfeit and pay to the Governor of Rajasthan or his successors in office, the sum of money mentioned in the said conditions.

Validity of rates 120 days.

A sum of Rs. ..... is forwarded herewith in the form of Cash, Bank Draft, Bankers Cheque as Earnest Money. This amount of earnest money shall absolutely be forfeited to the Governor of Rajasthan or his successor in office without prejudice to any other right or remedies of Governor of Rajasthan or his successor in his office, should I/We fail to commence the work specified in the above memorandum.

Signature of Witness — Signature of Contractor

Witness's address & Occupation — Address of Contractor

Date:

The above tender is hereby accepted by me on behalf of the Governor of Rajasthan

Date:

Executive Engineer PHE-I,

Section A-2

General Conditions of Contract

(Appendix XI of PWF & AR. Govt. of Rajasthan effective up to date shall be applicable)

GENERAL CONDITIONS OF CONTRACT

Copy of appendix XI of PWF&AR, Govt. of Rajasthan effective from 01.07.1999 & subsequent addendum upto 01.03.2012 in case of any typographical error or alteration the original version of the same shall be valid.

Clause 1: Security Deposit:

"The security deposit @ 10% of the gross amount of the running bill shall be deducted from each running bill and shall be refunded as per rules on completion of the contract as per terms and conditions. The earnest money deposited shall However, be adjusted while deducting security deposit.

A contractor may However, elect to furnish bank guarantee or any acceptable form of security for an amount equal to the deposit of 10% of the work order or at the time of executing the agreement. In that case earnest money may be refunded only after furnishing of the bank guarantee as above. During the execution of the work or after completion of the work, also a contractor may replace the security deposit by furnishing bank guarantee for an equal amount. However, during execution of the work if cost of works exceeds as shown at the time of furnishing bank guarantee, balance security deposit shall be deducted from the Running Account Bills".

All compensation or other sums of money payable by the Contractor to Government under the terms of his contract may be deducted from or paid by the sale of a sufficient part of his Security Deposit, or from interest arising there from, or from any sums, which may be due or may become due to the Contractor by the Government on any account whatsoever, and in the event of his Security Deposit being reduced by reason of any such deduction or sale as aforesaid, the Contractor shall within ten days thereafter, make good in cash Or Bank Guarantee or Nationalised/Scheduled bank, as aforesaid, any sum of sums which may have been deducted from or raised by sale of his Security Deposit or any part thereof.

In case of Bank Guarantee of any Nationalized/Scheduled Bank is furnished by the Contractor to the Government, as part of the Security Deposit and the bank goes into liquidation or, for any reason, is unable to make payment against the said Bank Guarantee, the loss caused thereby shall fall on the contractor and the Contractor shall forthwith, on demand, furnish additional security to the Government to make good the deficit.

The liability or obligation of the bank under the Guarantee Bond shall not be affected or suspended by any dispute between the Engineer-in-charge and the Contractor, and the payment, under the Guarantee Bond by the bank to the Government shall not wait till disputes and decided. The bank shall pay the amount under the Guarantee, without any demur, merely on a demand from the Government stating that the amount claimed is required to meet the recoveries due or likely to be due from the Contractor. The demand, so made, shall be conclusive as regards, to amount due and payable by the bank, under the guarantee limited to the amount specified in the guarantee Bond. The guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor.

The bank Guarantee shall remain valid upto the specified date unless extended on demand by the Engineer-in-charge, which shall include the period of completion of the contract and the defect removal period as per terms of the Agreement. Bank's liability shall, stand automatically discharged unless a claim in writing is lodged with the Bank within the period stated in the Bank Guarantee including the extended period. After satisfactory completion of the contract and clearance of all dues by the contractor, the Chief Engineer or duly authorized Engineer will discharge the Bank Guarantee after expiry of the original or the extended period, as the case may be. In case the date of expiry of the Bank Guarantee is a holiday, it will be deemed to expire on the close of the next working day.

Government is not concerned with any interest accruing to the Contractor on any form of Security (primary or collateral) lodged by him with the bank or any sums payable to sureties obtained by the Bank as counter guarantee to secure its own position. These will be the matters between the Bank and the Contractor.

Clause 2: Compensation for delay:

The time allowed or carrying out the work, as entered in the tender, shall be strictly observed by the Contractor and shall be reckoned from the 10th day after the date of written order to commence the work given to the Contractor. If the contractor does not commence the work within the period specified in the work order, he shall stand liable for the forfeiture of the amount of Earnest Money, and Security Deposit. Besides, appropriate action may be taken by the Engineer-in-charge/competent authority to debar him from taking part in future tenders for a specified period or black list him. The work shall, through-out the stipulated period of completion of the contract, be proceeded with all due diligence, time being essence of the contract, on the part of the Contractor. To ensure good progress during the execution of work, the contractor shall be bound, in all cases in which the time allowed for any work exceeds one month (save for special jobs), to complete 1/8th of the whole of the work before 1/4th of the whole time allowed under the contract has elapsed, 3/8th of the work before 1/2 of such time has elapsed and 3/4th of the work before 3/4 of such time has elapsed. If the contractor fails to complete the work in accordance with this time schedule in terms of cost in money, and the delay in execution of work is attributable to the contractor, the contractor shall be liable to pay compensation to the Government at every time span as below:-

(A) Time Span of full stipulated period	1/4th (..... days)	1/2th (.....days)	3/4th (..... days)	full (..... days)
(B) Work to be completed in terms of money	1/8th (Rs. .....)	3/8th (Rs. .....)	3/4th (Rs. .....)	full (Rs. .....)
(C) Compensation payable by the contractor for delay attributable to the contractor at the stage:	2.5% of Scheduled work remained unexecuted on the last day of (1/4) time span.	5% of Scheduled work remained unexecuted on the last day of (1/2) time span.	7.5% Scheduled work remained unexecuted on the last day of (3/4) time span.	10% of Scheduled work remained unexecuted on the last day of contracted full period.

Note: In case delayed period over a particular span is split up and is jointly attributable to government and contractor the competent authority may reduce the compensation in proportion of delay attributable to Government over entire delayed period over that span after clubbing up the split delays attributable to government and this reduced compensation would be (I) First time span is of 6 months, delay is of 30 days, which is split over as under:-

5 days (attributable to government) + days (attributable to contractor)+ 5 days (attributable to government) + 5 days (attributable to contractor) + 5 days (attributable to government) +5 days (attributable to contractor)

Total delay is thus clubbed to 15 days (attributable to government) and 15 days (attributable to contractor).

The normal compensation of 30 days as per clause 2 of agreement is 2.5% which can be reduced as 2.5 15/30 1.25" over 30 days with any escalation by competent authority.

The contractor shall, further, be bound to carry out the work in accordance with the date and quantity entered in the progress statement attached to the tender.

In case the delay in execution of work is attributable to the contractor, the span wise compensation, as laid down in this clause shall be mandatory. However, in case the slow progress in one time span is covered up within original stipulated period, then the amount of such compensation levied earlier shall be refunded. The Price escalation, if any, admissible under clause 45 of Conditions of Contract would be admissible only on such rates and cost of work, as would be admissible if work would have been carried out in that particular time span. The Engineer-in-Charge shall review the progress achieved in every time span, and grant stage wise extension in case of slow progress with compensation, if the delay is attributable to contractor, otherwise without compensation.

However, if for any special job, a time schedule has been submitted by the Contractor before execution of the agreement, and it is entered in agreement as well as same has been accepted by the Engineer-in-charge, the Contractor shall complete the work within the said time schedule. In the event of the Contractor failing to comply with this condition, he shall be liable to pay compensation as prescribed in forgoing paragraph of this clause provided that the entire amount of compensation to be levied under the provisions of this Clause shall not exceed 10% of the value of the contract. While granting extension in time attributable to the JDA, reasons shall be recorded for each delay.

Clause 3: <u>Risk & Cost Clause</u>

The Engineer-in-charge or the Competent Authority defined under rules may, without prejudice to his rights against the Contractor, in respect of any delay or inferior workmanship or otherwise, or any claims for damages in respect of any breaches of the contract and without prejudice to any rights or remedies under any of the provisions of this Contract or otherwise, and whether the date for completion has or has not elapsed, by notice in writing, absolutely determine the Contract in any or the following cases:

(i) If the Contractor having been given by the Engineer-in-charge, a notice in writing to rectify, reconstruct or replace any defective work or that the work is being performed in inefficient or otherwise improper or un-workman like manner shall omit to comply with the requirements of such notice for a period of seven days, thereafter, or if the Contractor shall delay or suspend the execution of the work so that either in the judgment of the Engineer-in-charge (which shall be final and binding) he will be unable to secure completion of the work by the date for completion or he has already failed to complete the work by that date,

(ii) If the Contractor, being a company, shall pass a resolution or the court shall make an order that the company shall be bound up or if a receiver or a manager, on behalf of a creditor, shall be appointed or if circumstance shall arise, which entitle the court or creditor to appoint a receiver or a manager or which entitle the court to make a winding up order,

(iii) If the contractor commits breach of any of the terms and conditions of the Contract,

(iv) If the contractor commits any acts mentioned in, clause 19 thereof.

When the Contractor has made himself liable for action under any of the cases aforesaid, the Engineer-in charge on behalf of the J.D.A. shall have powers: -

(a) To determine or rescind the contract, as aforesaid (of which determination or rescission notice in writing to the Contractor under the hand of the Engineer-in charge shall be conclusive evidence), upon such determination or rescission, the earnest money, full security deposit of the contract and performance guarantee of the contractor shall be liable to be forfeited and shall be absolutely at the disposal of JDA.

(b) To employ labour paid by the J.D.A. and to supply materials to carry out the work or any part of the work, debiting the Contractor with the cost of the labour and the price of the materials (of the amount of which cost and price certified by the Engineer-in-charge shall be final and conclusive against the contractor) and crediting him with the value of the work done in all respects in the same manner and at the same rates, as if it had been carried out by the Contractor under the terms of this Contract. The certificate of the Executive Engineer, as to the value of work done, shall be final and conclusive evidence against the Contractor provided always that action under the sub-clause shall only be taken after giving notice in writing to the Contractor. Provided also that; if the expenses incurred by the J.D.A. are less than the amount payable to the Contractor at his agreement rates, the difference shall not be payable to the Contractor.

(c) After giving notice to the contractor to measure up the work of the contractor and to take such part thereof, as shall be unexecuted out of his hands, and to give it to another contractor to complete, in which case any expenses which may be incurred in excess of the sum which would have been paid to the original contractor, if the whole work had been executed by him (of the amount of which excess, the certificate in writing of the Engineer-in-charge shall be final and conclusive) shall be borne and paid by the original Contractor and may be deducted from any money due to him by JDA under this contract or on any other account, whatsoever, or from his Earnest Money, Security Deposit, Performance Guarantee, Enlistment Security or the proceeds of sales thereof, or a sufficient part thereof, as the case may be. In the event of any one or more of the above courses being adopted by the Engineer-in-charge, the Contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials or entered into any engagements or made any advances on account or with a view to the execution of the work or the performance of contract. And, in case action is taken under any of provisions aforesaid, the Contractor shall not be entitled to recover or be paid, any sum for any work thereof or actually performed under this contract unless and until the Engineer-in-charge has certified, in writing, the performance of such work and

the value payable in respect thereof, and he shall only be entitled to be paid the value so certified.

Clause 4: Contractor remains liable to pay compensation, if action not taken under clause 3

(i) In any case in which any of the powers conferred by clause 3 hereof, shall have become exercisable and the same shall have not been exercised. The non-exercise, thereof, shall not constitute waiver of any of the conditions hereof, and such power shall, not withstanding, be exercisable in the event of any future case of default by the Contractor for which, by any clause or clauses hereof, he is declared liable to pay compensation amounting to the whole of his Security Deposit/Performance Guarantee/Earnest Money/Enlistment security and the liability of the Contractor for past and future compensation shall remain unaffected.

Power to take possession of, or require removal, sale of Contractor's plant

(ii) In the event of the Engineer-in-Charge putting in force, powers vested in him under the preceding Clause 3 he may, if he so desires, take possession of all or any tools, plants, materials and stores, in or upon the works or the site, thereof or belonging to the contractor or procured by him and intended to be used for the execution of the work or any part thereof, paying or allowing for the same in account, at the contract rates or, in case of these not being applicable, at current market rates, to be certified by the Director Engineering or duly authorized Engineer (whose certificate thereof, shall be final and conclusive), otherwise the Engineer-in-Charge may, by notice in writing to the contractor or his clerk of the works, foreman or other authorized agent, require him to remove such tools, plant, materials or stores from the premises (within a time to be specified in such notice), and in the event of the contractor failing to comply with any requisition, the Director Engineering or other duly authorized Engineer may remove them at the contractor's expenses, or sell them by auction or private sale on account of the Contractor and at his risk in all respects, and the certificate of the Director Engineering or other duly authorized Engineer, as to the expense of any such removal, and the amount of the proceeds and expense of any such sale shall be final and conclusive against the Contractor.

Clause 5: Extension of time

If the contractor shall desire an extension of the time for completion of the work on the ground of his having been unavoidably hindered in its execution or on any other grounds, he shall apply, in writing, to the Engineer-in-Charge within 30 days of the date of the hindrance, on account of which he desires such extension as aforesaid, and the Authority Competent to grant extension under the rules/delegations of power or other duly authorized Engineer shall, if in his opinion, (which shall be final) reasonable grounds be shown thereof, authorize such extension of time, if any, as may, in his opinion, be necessary or proper. If the period of completion of contract expires before the expiry of the period of one month provided in this clause, the application for extension shall be made before the expiry of the period stipulated for completion of the contract. The competent authority shall grant such extension at each such occasion within a period of 30 days of receipt of application from contractor and shall not wait for finality of work. Such extensions shall be granted in accordance with provisions under clause (2) of this agreement.

Clause 5 A: Monthly Return of Extra Claims

Contractor has to submit a return every month for any work claimed as extra. The Contractor shall deliver the return in the office of the Executive Engineer and obtain Receipt Number of the Receipt Register of the day on or before 10th day of every month during the continuance of the work covered by this contract, a return showing details of any work claimed as extra by the contractor which value shall be based upon the rates and prices mentioned in the contract or in the Schedule of Rates in force in the District for the time being. The contractor shall be deemed to have waived all claims, not included in such return, and will have no right to enforce any such claims not included, whatsoever be the circumstances.

Clause 6: Final Certificate

On completion of the work, the contractor shall send a registered notice to the Engineer-in-charge, giving the date of completion and sending a copy of it to the officer accepting the contract, on behalf of the Governor and shall request the Engineer-in-charge to give him a certificate of completion, but no such certificate shall be given nor shall the work be considered to be complete until the contractor shall have removed from the site on which the work shall be executed, all scaffolding, surplus materials and rubbish and cleared off the dirt from all wood work, doors, walls, floors, or other parts of any building in, upon or about which the work is to be executed or of which he may have possession for the execution thereof, he had filled up the pits. If the contractor shall fail to comply with the requirements of this Clause as to removal of scaffolding, surplus materials and rubbish and cleaning off dirt and filling of pits on or before the date fixed for completion of the work, the Engineer-in-charge may, at the expense of the contractor, remove such scaffolding, surplus materials, and the rubbish and dispose of the same, as he thinks fit, and clean off such dirt and fill the pits, as aforesaid, and the contractor shall forthwith pay the amount of all expenses, so incurred, and shall have no claim in respect of any such scaffolding or surplus materials, as aforesaid, except for any sum actually realized by the sale thereof. On completion, the work shall be measured by the Engineer-in-charge himself or through his subordinates, whose measurements shall be binding and conclusive against the contractor. Provided that, if subsequent to the taking of measurements by the subordinate, as aforesaid, the Engineer-in-charge had reason to believe that the measurements taken by his subordinates are not correct, the Engineer-in-charge shall have the power to cancel the measurements already taken by his subordinates and acknowledged by the Contractor and to take measurements again, after giving reasonable notice to the Contractor, and such re-measurements shall be binding on the Contractor.

Within thirty days of the receipt of the notice, Engineer-in-charge shall inspect the work and if there are no visible defects on the face of the work, shall give the Contractor, a certificate of completion. If the Engineer-in-charge finds that the work has been fully completed, it shall be mentioned in the certificate so granted. If, on the other hand, it is found that there are certain visible defects to be removed, the certificate to be granted by Engineer-in-charge shall specifically mention the details of the visible defects along with the estimate of the cost for removing these defects. The final certificate of work shall be given after the visible defects pointed out as above have been removed.

Clause 7: Payment on Intermediate Certificate to be regarded as advance

No payments shall be made for *works estimated to cost less than rupees twenty five Thousands*, till after the whole of the works

shall have been completed and a certificate of completion given. But in the case of works *estimated to cost more than rupees twenty five thousand ,* the Contractor shall on submitting the bill therefore, be entitled to receive a monthly payment proportionate to the part, thereof, then approved and passed by the Engineer-in-charge, whose certificate of such approval and passing of sum, so payable, shall be final and conclusive. The Running Account Bill shall be paid within 15 days from presentation. But all such intermediate payments shall be regarded as payments by way of advance against the final payment only and not as payments for work actually done and completed, and shall not preclude the requiring of bad, unsound and imperfect or unskillful work to be removed and taken away and re-constructed or re-erected, or considered as an admission of the due performance of the contract, or any part thereof, in any respect, or the accruing of any claim, nor shall it conclude, determine, or effect in any way the powers of the Engineer-in-charge under these conditions or any of them to the final settlement and adjustment of the accounts or otherwise or in any other way vary or affect the contract. The final bill shall be made/submitted by the Contractor within one month of the date fixed for completion of the work, otherwise the Engineer-in-charge's certificate of the measurement and of the total amount payable for the work accordingly shall be final and binding on all parties.

Clause 7A: Time Limit for Payments of Final Bills

The final bill shall be paid within 3 months on presentation by the contractor after issuance of final completion certificate in accordance with clause 6 of the conditions of contract. If, there shall be any dispute about any item(s) of the work, then the undisputed item(s) only, shall be paid within the said period of 3 months. If a final bill (which contains no disputed item or disputed amount of any item) is not paid within the period of three months from presentation of final bill or 6 months from the date of receipt of registered notice regarding completion of work in accordance with clause 6 of the conditions of the contract, the defects, if any, shall be brought to be notice of the higher authority. The period of 3 months shall commence from the date of rectification of the defects. The higher authority shall ensure that in no case final bill should be left unpaid after 9 months from the receipt of registered notice regarding completion of work. The contractor shall submit a memorandum of the disputed items along with justification in support within 30 days from the disallowance thereof, and if he fails to do so, his claims shall be deemed to have been fully waived and absolutely extinguished.

Clause 8: Bills to be submitted monthly

A bill shall be submitted by the Contractor each month on or before the date fixed by the Engineer-in-charge for all work executed in the previous month and the Engineer-in-charge shall take or cause to be taken the requisite measurement for the purpose of having the same verified and the claim, as far as admissible, authorized or paid, if possible, before the expiry of ten days from the presentation of the bill. If the Contractor dose not submit the Bill within the time fixed, as aforesaid, the Engineer-in-charge may depute a subordinate to measure up the said work in the presence of the Contractor, whose signature in the Measurement Book will be sufficient warrant and the Engineer-in-charge may prepare a bill from such Measurement Book, which shall be binding on the contractor in all respects.

Clause 8A: Contractor to be given time to file objection to the Measurements recorded by the J.D.A.

Before taking any measurement of any work, as have been referred to in preceding Clauses 6, 7 & 8, the Engineer-in-charge or a subordinate, deputed by him, shall give reasonable notice to the Contractor. If the Contractor fails to be present at the time of taking measurements after such notice or fails to sign or to record the difference within a week from the date of measurement in the manner required by the Engineer-in-charge, then in any such event, the measurements taken by the Engineer-in-charge or by the subordinate deputed by him, as the case may be, shall be final and binding on the Contractor and the Contractor shall have no right to dispute the same.

Clause 9: Bills to be on printed forms

The Contractor shall submit all bills on the printed forms, to be had on application, at the office of the Engineer-in-charge and the charges in the Bills shall always be entered at the rates specified in the tender or in the case of any extra work ordered in pursuance of these conditions, and not mentioned or provided for in the tender, at the rates hereinafter provided for such work.

Clause 9A: Payments of Contractor's Bills to Banks

Payments due to the Contractor may if so desired by him, be made to this Bank instead of direct to him, provided that the contractor has furnished to the Engineer-in-Charge(I)an authorization in the form of a legally valid document, such as a Power of Attorney conferring authority on the Bank to receive payments, and (ii) his own acceptance of the correctness of the account made out, as being due to him, by JDA, or his signature on the bill or other claim preferred against JDA before settlement by the Engineer-in-Charge of the account or claim, by payment to the Bank. While the receipt given by such bank shall constitute a full and sufficient discharge for the payment, the Contractor should, whenever possible, present his bill duly receipted and discharged through his Banker. Nothing, herein constrained, shall operate to create in favour of the Bank any rights vis-à-vis the Governor.

Clause 10 – Stores supplied by JDA

If the specification or estimate of the work provides for the use of any special description of material, to be supplied from Engineer-in-charge's stores, or if, it is required that contractor shall use certain stores to be provided by the Engineer-in-charge specified in the schedule or memorandum hereto annexed, the Contractor shall be bound to procure and shall be supplied such materials and stores as are, from time to time, required to be used by him for the purpose of the contract only, and the value of the full quantity of materials and stores, so supplied; at the rates specified in the said schedule or memorandum, may be set off or which may be deducted from any sum, then due or thereafter become due, to the contractor under the contract or otherwise or against or from the Performance Guarantee and or Security Deposit or the proceeds of sale, if the same is held in JDA securities, the same or a sufficient portion thereof being in this case, sold for this purpose. All materials supplied to the Contractor, either from departmental stores or with the assistance of JDA, shall remain the absolute property of JDA. The Contractor shall be the trustee of the Stores/Materials, so supplied/procured, and these shall not, on any account, be removed from the site of work and shall be, all times, open to inspection by the Engineer-in-charge. Any such material, unused and in perfectly good condition at the time of completion or determination or rescinding of the contract, shall be returned to the JDA's Stores, if by a notice in writing under his hand, he shall so require, and if on service of such notice, the contractor fails to return the materials, so required, he shall be liable to pay the price of such materials in accordance with the provision of Clause 10 B ibid. But the Contractor shall not be entitled to return any such materials, unless with such consent, and shall have no claim for compensation on

account of any such materials, so supplied to him as aforesaid being unused by him, or for any wastage in or damage to any such materials. For the stores returned by the Contractor, he shall be paid for, at the price originally charged excluding storage charges, in case of materials supplied from JDA stores and actual cost including freight, cartage, taxes etc., paid by the Contractor in case of supplies received with the assistance of JDA which, however, should in no case exceed market rate prevailing at the time the materials are taken back. The decision of the Engineer-in-charge, as to the price of the stores returned, keeping in view its condition etc., shall be final and conclusive. In the event of breach of the aforesaid condition, the Contractor shall, in addition to throwing himself open to account for contravention of the terms of the license or permit and/or for criminal breach of trust, pay to the JDA, all advantages or profits resulting, or which in the usual course, would result to him by reason of such breach. Provided that the Contractor shall, in no case be entitled to any compensation or damage on account of any delay in supply, or non-supply thereof, all or any such materials and stores.

Clause 10A: Rejection of materials procured by the Contractor

The Engineer-in-Charge shall have full powers to require the removal from the premises of all materials which in his opinion, are not in accordance with the specifications and, in case of default, the Engineer-in-Charge shall be at liberty to employ other person(s) to remove the same without being answerable or accountable for any loss of damage, that may happen or arise to such materials to be substituted thereof, and in case of default, Engineer-in-Charge may cause the same to be supplied and all costs, which may attend such removal and substitution, are to be born by the Contractor.

Clause 10 B: Penal rate in case of excess consumption :

The Contractor shall also be charged for the materials consumed in excess of the requirements calculated on the basis of standard consumption approved by the department at double of the issue rate including storage and supervision charges or market rate which ever is higher. A Material Supply and Consumption Statement in prescribed From RPWA 35 A shall be submitted with every Running Account Bill, distinguishing material supplied by the JDA and material procured by the Contractor himself. The recovery for such material shall be made from Running Account Bill next after the consumption and shall not be deferred. Certificate of such nature shall be given in each Running Account Bill.

Clause 10 C: Hire of Plant and Machinery:

Special Plant and Machinery, required for execution of the work, may be issued to the Contractor, if available, on the rates of hire charges and other terms and conditions as per department Rules, as per Schedule annexed to these conditions. Rates of such Plant & Machinery shall be got revised periodically so as to bring them at par with market rate.

Clause 11: Works to be executed in accordance with specifications, Drawings, Orders etc.

The Contractor shall execute the whole and every part of the work in the most substantial and satisfactory manner and both as regards materials and otherwise in every respect, in strict accordance with the Specifications. The Contractor shall also conform exactly fully and faithfully to the designs, drawings (either designed by J.D.A. or designed by contractor and approved by Engineer-in-charge during execution) and instructions in writing relating to the work signed by the Engineer-in-charge and lodged in his office and to which the Contractor shall be entitled to have access at such office or on the site of the work for the purpose of inspection during office hours and the Contractor shall, if he so require, be entitled, at his own expense, to make or cause to be made copies of specifications and of all such designs, drawings and instructions, as aforesaid. A certificate of executing works as per approved design etc. shall be given on each Running Account Bill.

The specifications of work, material, and methodology of execution, drawings and designs shall be signed by the Contractor and Engineer-in-charge while executing agreement and shall form part of agreement.

Clause 12:

The Engineer–in–charge shall have power to make any alterations in or additions to or substitutions for the original specification, drawings, designs and instructions, that may appear to him to be necessary during the progress of the work and the contractor shall carry out the work in accordance with any instructions which may be given to him in writing signed by the Engineer–in-charge and such alterations, omissions, additions or substitutions shall not invalidate the contract and any altered, additional or substituted work, which the contractor may be directed to do in the manner above specified as part of the work, shall be carried out by the contractor on the same conditions in all respects on which he agreed to do the main work. The time for the completion of the work shall be extended in the proportion that the altered, additional or substituted work bears to the original contract work, and the certificate of the Engineer-in-charge shall be conclusive as to such proportion. The rates for such additional, altered or substituted work under this clause shall be worked out in accordance with the following provisions in their respective order:

(i) If the rates for the additional, altered or substituted work are specified in the contract for the work, the contractor is bound to carry out the additional, altered or substituted work at the same rates as are specified in the contract for the work.
(ii) If the rates for the additional, altered or substituted work are not specifically provided in the contract for the work, the rates will be derived from the rates for a similar class of work as are specified in the contract for the work.
(iii) If the rates for the altered, additional or substituted work can not be determined in the manner specified in the sub-clauses (i) to (ii) above, then the rates for such composite work item shall be worked out on the basis of the concerned Schedule of Rates of the District/area specified which the total tendered amount bears to the estimated cost of the entire work put to tender. Provided always that if the rate for a particular part or parts of the item is not in the Schedule of Rates, the rate for such part or parts will be determined by the Engineer-in-Charge on the basis of the prevailing market rates when the work was done.
(iv) If the rates for the altered, additional or substituted work item can not be determined in the manner specified in sub-clauses (i) to (iii) above, then the contractor shall within 7 days of the date of receipt of order to carry out the work, inform the Engineer- in – Charge of the rate which it is his intention to charge for such class of work supported by analysis of the rate or rates claimed and the Engineer-in-Charge shall determine the rate or rates on the basis of prevailing market rates, and pay the contractor accordingly. However, the Engineer-in-Charge, by notice in writing, will be at liberty to cancel his order to carry out such class of work and arrange to carry it out in such manner as he may consider advisable. But under no circumstances, the contractor shall suspend the work on the plea of non-

settlement of rates on items falling under the clause.

(v) Except in case of items relating to foundations, provisions contained in sub-clauses(i) to (iv) above shall not apply to contract or substituted items as individually exceed the percentage set out in the tender documents under clause12.A.

For the purpose of operation of clause 12 (v) the following works shall be treated as work relating to foundations:-

(a) For buildings, compound wall plinth level or 1.2 meters (4 ft.) above ground level whichever is lower, excluding items above flooring and D.P.C. but including base concrete below the floors.

(b) For abutments, piers, retaining wall of culverts and bridges, walls of water reservoir and the bed of floor level.

(c) For retaining walls, where floor levels is not determinate 1.2 meters above the average ground level or bed level.

(d) For roads, all items of excavation and filling including treatment of sub base and soling work.

(e) For water supply lines, sewer lines under ground storm water drains and similar work, all items of work below ground level except items of pipe work for proper masonry work.

(f) For open storm water drains, all items of work except lining of drains.

(g) Any other items of similar nature which Engineer-in-Charge may decide relating to foundation.

The rate of any such work, except the items relating to foundations, which is in excess of the deviation limit, shall be determined in accordance with the provisions contained in Clause 12A.

Clause 12A:

The quantum of additional work for each item shall not exceed 50% of the original quantity given in the agreement and the total value of additional work shall not exceed 20% of the total contract value, unless otherwise mutually agreed by the Engineer-in-charge and the Contractor. This limit shall not be applicable on items relating to foundation work which shall be executed as per original rates or provision of clause 12 (i) to (iv).

In case of contract substituted items or additional items, which results in exceeding the deviation limit laid down in this clause except items relating to foundation work, which the contractor is required to do under clause 12 above, the contractor shall within 7 days from the receipt of order, claim revision of the rate supported by proper analysis in respect of such items for quantities in excess of the deviation limit notwithstanding the fact that the rates for such items exist in the tender for the main work or can be derived in accordance with the provision of sub clause (ii) of clause 12 and the Engineer-in-Charge, may revise their rates having regard to the prevailing market rates and the contractor shall be paid in accordance with the rates so fixed. The Engineer-in-Charge shall, however, be at liberty to cancel his order to carry out such increased quantities of work by giving notice in writing to the contractor and arrange to carry it out in such manner as he may consider advisable. But under no circumstances, the contractor shall suspend the work on the plea of non-settlement of rates of items failing under this Clause.

All the provisions of the preceding paragraph shall equally apply to the decrease in rates of items for quantities in excess of the deviation limit notwithstanding the fact that the rates for such items exist in the tender for the main work or can be derived in accordance with the provisions of sub-clause(ii) of the preceding clause 12 and the Engineer-in-Charge may revise such rates having regard to the prevailing market rates unless otherwise mutually agreed by the Engineer-in-Charge and the Contractor..

Clause 13: <u>No compensation for alteration in or restriction of work to be carried out</u>.

If, at any time after the commencement of the work the JDA shall, for any reason, whatsoever, not require the whole work, thereof, as specified in the tender, to be carried out, the Engineer-in-charge shall give notice, in writing, of the fact to the Contractor, who shall have no claim to any payments or compensation, whatsoever, on account of any profit or advantage, which he might have derived from the execution of the work in full but which he did not derive in consequence of the full amount of the work not having been carried out. Neither, shall he have any claim for compensation by reason of alterations having been made in the original specifications, drawings, and design, and instructions, which shall involve any curtailment of the work, as originally contemplated. Provided, that the Contractor shall be paid the charges for the cartage only, of materials actually brought to the site of the work by him for bonafide use and rendered surplus as a result of the abandonment or curtailment of the work or any portion thereof, and taken them back by the Contractor, provided however, that the Engineer-in-charge shall have, in all such cases, the option of taking over all or any such materials at their purchase price or at local market rates whichever may be less. In the case of such stores, having been issued from JDA Stores, charges recovered, including storage charges shall be refunded after taking into consideration any deduction for claim on account of any deterioration or damage while in the custody of the contractor, and in this respect the decision of the Engineer-in-charge shall be final.

Clause 14: <u>Action and compensation payable in case of bad work</u>

If, it shall appear to the Director Engineering or any authorized authority or the Engineer-in-charge or his subordinates in-charge of the work, or to the committee of the retired officers/officers appointed by the J.D.A. JDA for the purpose that any work has been executed with unsound, imperfect or unskillful workmanship, or with material of any inferior description, or that any materials or articles provided by him for the execution of the work are unsound or of a quality inferior to that contracted, or otherwise not in accordance with contract, the Contractor shall on demand in writing from the Engineer-in-charge, specifying the work/materials or articles complained of, notwithstanding that the same may have been inadvertently passed, certified and paid for, will rectify or remove and reconstruct the work, so specified, in whole or in part, as the case may be, remove the materials or articles, so specified, and provide other proper and suitable materials or articles at his own cost, and in the event of his failing to do so, within a period to be specified by the Engineer-in- Charge in his demand as aforesaid, then the Contractor shall be liable to pay compensation at the rate of one percent, on the tendered amount of work for every

week not exceeding ten percent, while his failure to do so shall continue, and in the case of any such failure, the Engineer-in-Charge may rectify or remove and re-execute the work or remove and replace with others, the materials or articles complained of as the case may be, at the risk and expense, in all respects of the contractor.

Clause 15: Work to be opened to inspection: Contractor or his responsible Agent to be present

All work, under or in course of execution or executed in pursuance of the contract shall, at all times, be opened for inspection and supervision of the Engineer-in-charge and his superior officers and his subordinates and any other authorized agency of the JDA and the contractor shall, at all times during the usual working hours, and at all other times at which reasonable notice of the intention of the Engineer-in-charge or his subordinate and any other authorized agency of JDA or committee of retired officers/officers appointed by the JDA for the purpose to visit the works shall have been given to the Contractor, either himself be present to receive orders and instructions or have a responsible agent duly accredited in writing, present for the purpose. Orders given to the Contractor's agent shall be considered to have the same force as if they had been given to the Contractor himself.

Clause 16: Notice to be given before any work is covered up

The Contractor shall give not less than 7 days notice, in writing, to the Engineer-in-charge or his subordinate-in-Charge of the work, before covering up or otherwise placing beyond the reach of measurement, any work in order that the same may be measured, and correct dimensions there of, be taken before the same is so covered up or placed beyond the reach of measurement and shall not cover up or place beyond the reach of measurement any work without the consent in writing of the Engineer-in- Charge of the work, and if, any work shall be covered up or placed beyond the reach of measurement without such notice having been given or consent obtained, the same shall be uncovered at the Contractor's expense or in default, there of, no payment or allowance shall be made for such work, or for the materials with which the same was executed.

Clause 17: Contractor liable for damage done and for imperfections

If the Contractor or his work people or servants shall break, deface, injure or destroy any part of a building, in which they may be working or any building, road, fence, enclosure, or cultivated ground contiguous to the premises on which the work or any part of it is being executed, or if any damage shall happen to the work, while in progress, from any cause, whatsoever, or any imperfections become apparent in it, within a period specified in clause 37, after a certificate, final or otherwise of its complection, shall have been given by the Engineer-in-charge, may cause the same to be made good by other workmen and deduct the expense (of which the certificate of the Engineer-in-charge shall be final) from any sums that may be then, or at any time thereafter, may become due to the Contractor, or from his security deposit, or the proceeds of sale therof, or of a sufficient portion thereof.

Clause 18: Contractor to supply plant, ladders, scaffolding etc.

The Contractor shall arrange and supply, at his own cost, all material (except such special materials, if any, as may, in accordence with the contract, be supplied from the Engineer-in-charge's stores), plants, tools, appliances, implements, ladders, cordage, tackle, scaffolding and temporary works requisite or propoer for the proper execution of the work, whether original, altered, or substituted, and whether included in the specification or other documents, forming part of the Contract, or reffered to in these conditions, or not, or which may be necessary for the purpose of satisfying or complying with the requirements of the Engineer in- Charge, as to any matter as to which, under these conditions, he is entitled to be satisfied or which he is entiled to require, together with carriage thereof, to and from the work. The Contrctor shall also arrange and supply, without charge, the requisite number of persons with the means and materials, necessary for the purpose of setting out work and counting, weighting and assisting in the measurement or examination at any time and from time to time of the work, or materials. Failing his so doing, the same may be provided by the Engineer-in-charge, at the expense of the Contrator, and the expenses may be deducted from any money due to the Contractor under the Contract, or from his Performance Guarantee and/or Security Deposit or the proceeds of sale therof, or a sufficient portion thereof. The Contractor shall also provide all necessary fencing and lights required to protect the public from accident and shall be bound to bear the expenses of defence of every suit, action or other proceeding 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 proceeding to any such person or which may, with the consent of the Contractor, be paid to compromise any claim by any such person.

Clause 19: Contract may be rescinded and Security Deposit and Performance Forfeited for bribing or if Contractor becomes insolvent.

If the Contractor become insolvent, or commence any insolvency procedings or mark any composition with his creditors, or attempt so to do, or if any bribe, gratuity, gift, loan requisite reward or advantage, pecuniary or otherwise, shall either directly or indirectly, be given, promised or offered by the Contractor or any of his servants or agents to any public officer or person, in the employ of JDA, in any way, relating to his office or employment, or if, any such officer or person shall become, in any way, directly or indirectly, interested in the contract, the Director Engineering may, thereupon, by notice, in writing, rescind the contract and Performance Guarantee and Security Deposit of the Contractor shall, thereupon, stand forfeited and be absolutely at the disposal of JDA and the same consequences shall ensure as, if the contract had been rescinded under Clause 3 hereof, and in addition the Contractor shall not be entitled to recover or be paid for any work therefor, actually performed under the Contract.

Clause 20: Sums payable by way of compensation to be considered as reasonable compensation without reference to actual loss

All sums payable by way of compensation under any of these conditions shall be considered as reasonable compensation to be applied to the use of JDA without reference to the actual loss or damage sustained and whether or not any damage shall have been sustained.

Clause 21: Changes in constitution of firm

Where the Contractor is a partnership firm, previous approval, in writing, of the Engineer-in-charge 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 thereunder the partnership firm would

have the right to carry out the work hereby undertaken by the Contractor. If, previous aproval, as aforesaid, is not obtained, the Contract shall be deemed to have been assigned in contravention of Clause 19 hereof, and the same action may be taken, and the same consequences shall ensure, as provided in the said clause 19.

Clause 22: Work to be under direction of Engineer-in-charge

All the works, to be executed under the contract, shall be executed under the direction and subject to the approval, in all respect, of the Engineer-in-charge of the Governemnt of Rajasthan for the time being, who shall be entitled to direct, at what point or points, and in what manner, they are to be commenced, and from time to time, carried on.

Clasue 23: Standing Committee for Settlement of Disputes

If any question, difference or objection, whatsoever shall arise in any way, in connection with or arising out of this instrument, or the meaning of operation of any part thereof, or the rights, duties or liabilities of either party then, save in so far, as the decision of any such matter, as herein before provided for, and been so decided, every such matter constituting a total claim of Rs. 50,000/- or above, whether its decision has been otherwise provided for and whether it has been finally decided accordingly, or whether the Contract should be terminated or has been rightly terminated, and as regards the rights or obligations of the parties, as the result of such termination, shall be referred for decision to the empowered Standing Committee, which would consist of the followings:-

(i) Commissioner , J.D.A.

(ii) Secretary, J.D.A.

(iii) Director Engineering (Member Secretary), J.D.A.

(iv) Director , Finance, J.D.A.

(vi) Director , Law, J.D.A.

The Engineer-in-charge, on receipt of application along with non-refundable prescribed fee, (the fee would be two percent of the amount in dispute, not exceeding Rs. one lac) from the Contractor, shall refer the disputes to the committee, within a period of one month from the date of receipt of application.

Procedure and Application for referring cases for setttlement by the Standing Committee shall be, as given in Form RPWA 90.

Clause 23A: Contractor to indemnify for infringement of Patent or design

Contractor shall fully indemnify the J.D.A. against any action, claim or proceeding, relating to infringement or use of any patent or design, or any alleged patent or design, rights, and shall pay any royalties, which may be payable in respect of any article or part thereof, included in the contract, in the event of any claims made under or action brought against JDA. In respect of any such matters, as aforesaid, the Contractor shall be, immediately, noticed thereof, and the Contractor shall be at liberty, at his own expense, to settle any dispute or to conduct any litigation, that may arise there from provided that the Contractor shall not be liable to indemnify the J.D.A., if the infringement of the patent or design or any alleged patent or design, right is the direct result of an order passed by the Engineer-in-Charge in this behalf.

Clause 24: Imported Store articles to be obtained from JDA :

The Contractor shal lobtain fro m the stores of the Engineer-in-charge, all imported store articles, which may be required for the work or any part thereof, or in making up articles required thereof, or in connection therewith, unless he has obtained permission in writing, from the Engineer-in-charge, to obtain such stores and articles from else-where. The value of such stores and articles, as may be supplied to the Contractor by the Engineer-in-charge, will b debited to the Contractor, in his account, at the rates shown in the schedule attached to the contract, and if they are not enetered in the schedule, they will be debited at cost price, which for the purposes of this contract, shall include the cost of carriage and all other expenses, whatsoever, which shall have been incurred in obtaining delivery of the same at the stores aforesaid plus storage charges.

Clause 25: Lump-sums in estimates

When the estimate, on which a tender is made includes lump sums, in respect of parts of the work, the Contractor shall be entitled to payment in respect of the item of work involved, or the part of the work in question at the same rates, as are payable under the contract for such items or if the part of the work in question is not, in the opinion of the Engineer-in-charge, capable of measurement, the Engineer-in-charge may at his discretion pay the lump sum amount entered in the estimate and the certificate in writing of the Engineer-in-charge shall be final and conclusive with regard to any sum or sums payable to him under the provisions of this clause.

Clause 26: Action where no Specification

In case of any Class of work for which there is no such specification as is mentioned in the contract document such work shall be carried out in accordance with the detailed specification of the J.D.A. and also in accordance with the instructions and requirement of the Engineer-in-charge.

Clause 27: Definition of work

The expression “works” or “work” where used in these conditions, shall, unless there be some thing either in subject or context, repugnant to such construction, be construed and taken to mean the works by or by virtue of the contract contracted to be executed, whether temporary or permanent, and whether original, altered, substituted or additional.

Clause 27A: Definition of Engineer-in-charge

The term "Engineer-in-charge" means the Executive Engineer who shall supervise and be incharge of the work and who shall sign the contarct on behalf of the JDA.

Clause 28:

It can not be guaranteed that the work will be started immediately after the tenders have been received. No claims for increase of rate will be entertained, if the orders for starting work are delayed.

Clause 29: Payments at reduced rates on account of items of work not accepted and not completed to be at the discretion of the Engineer-in- charge

The rates for several items of works, estimated to cost more than Rs. 1,000/-, agreed within, will be valid only when the item concerned is accepted as having been completed fully in accordance with the sanctioned specifications. In cases, where the items of work are not accepted, as so completed, the Engineer-in-charge may make payment on account of such items, at such reduced rates, as he may considers reasonable, in the preparation of final or on account bills, and his decision in the matter shall be final and binding.

Clause 29A: Payments at part rates

The rates for several items of works may be paid at part rates provisionally in running bills in proportion to the quantum of items executed at the discretion of Engineer-in-charge. In case of item rates, if the rate quoted for certain items are very high in comparison to the average/overall tendered premium, and then the payment at running stages shall not be made more than the average sanctioned premium. The deferred payment, will however be released after successful completion of the work.

Clause 30: Contract's percentage, whether applied to net or gross amount of bill

The percentage referred to in the "Tender for works "will be deducted / added from / to the gross amount of bill before deducting the value of any stock issued.

Clause 31: Contractor to adhere to labour laws/regulation

The Contractor shall adhere to the requirements of the Workmen's Compensation Act and Labour Legislation in force from time to time and be responsible for and shall pay any compensation to his workmen which would be payable for injuries under the Workmen's Compensation Act, here-in-after called the said Act. If such compensation is paid by the J.D.A. as Principal employer under Sub Section (1) of section 12 of the said Act, on behalf of the Contractor, it shall be recoverable by the J.D.A. from the Contractor under Sub Section (2) of the said section. Such compensation shall be recovered in the manner laid down in clause 1 of the Conditions of Contract.

Clause 32: Withdrawal of work from the Contractor

If the Engineer-in-charge shall at any time and for any reasons, whatever, including inability to maintain prorata progress, think any portion of the work should not be executed or should be withdrawn from the Contractor, he may, by notice in writing to that effect, require the Contractor not to execute the portion of the work specified in the notice, or may withdraw from the Contractor the portion of work, so specified, and the Contractor shall not be entitled to any compensation, by reason of such portion of work having been withdrawn from him. The Engineer-in-charge may supplement the work by engaging another agency to execute such portion of the work at the cost of the original contractor, without prejudice to his rights under clause 2. He shall also be competent to levy compensation for delay in progress. The recovery of excess cost shall be made from next available running bill or any other claim and shall not be deferred.

Clause 33:

The Contract includes clearance, leveling and dressing of the site within a distance of 15 meters of the building on all sides except where the building adjoins another building.

Clause 34: Protect works

The Contractor shall arrange to protect, at his own cost, in an adequate manner, all cut stone work and other work, requiring protection and to maintain such protection, as long as work is in progress. He shall remove and replace this protection, as required by the Engineer-in-Charge, from time to time. Any damage to the work, so protected, no matter how it may be caused, shall be made good by the Contractor free of cost.

All templates, forms, moulds, centering, false works and models, which in the opinion of the Engineer-in-Charge, are necessary for the proper and workman like execution of the work, shall be provided by the Contractor free of cost.

Clause 35: Contractor liable for settlement of claims caused by his delays

If the progress of the work has fallen so much in arrears as to prevent other contractors on the work, from carrying out their part of the work within the stipulated time, he will be liable for the settlement of any claim, put in by any of these contractors for the expenses of keeping their labour unemployed, to the extent considered reasonable by the Engineer-in-Charge.

Clause 36A:

The liability, if any, on account of quarry fees, royalties, octroi and any other taxes and duties in respect of materials actually consumed on public work, shall be borne by the Contractor.

Clause 36B:

The cost of all water connections, necessary for the execution of work, and the cost of water consumed and hire charges of meters and the cost of electricity consumed in connection with the execution of work, shall be paid by the Contractor, except where otherwise specifically indicated.

Clause 36C: Payment of Sales Tax, and any other Taxes

Royalty or other tax on materials, issued in the process of fulfilling contract, payable to the JDA under rules in force, will be paid by the Contractor himself.

Clause 36D:

In respect of goods and materials procured by the Contractor, for use in works under the contract, sales tax will be paid by the Contractor himself. But in respect of all such goods manufactured and supplied by the Contractor and works executed under the contract, the responsibility of payment of sales tax would be that of the Engineer-in-charge.

Clause 37: Refund of Performance Guarantee and Security Deposit

The Security Deposit will be refunded after the expiry of the period, as prescribed below:

Performance Guarantee/ Security Deposit will be refunded as per Annexure E enclosed , whichever is later, provided the final bill has been paid.

Clause 38: Fair Wage Clause

(a) The Contractor shall pay not less than fair wages/minimum wages to laboures engaged by him on the work as revised from time to time by the JDA, but the JDA shall not be liable to pay any thing extra for it except as stipulated in price escalation clause (clause 45) of the agreement.

Explanation: "Fair Wage" means minimum wages for time or piece work, fixed or revised, by the J.D.A. JDA under Minimum Wages Act, 1948.

(b) The Contractor shall, **notwithstanding the provisions** of any contract to the contrary, cause to be paid fair wages to laborers indirectly engaged on the work, including any labour engaged by his sub-contractors in connection with the said work as if the laborers have been immediately or directly employed by him.

(c) In respect of all laborers immediately or directly employed on the work, for the purpose of the Contractor's part of this agreement, the Contractor shall comply with or cause to be complied with the Public Works J.D.A. Contract's Labour Regulations made, or that may be made by the JDA, from time to time, in regard to payment of wages, wages period, deductions from wages, recovery of wages not paid, and unauthorized deductions, maintenance of wages register, wage card, publication or scale of wages and other terms of employment, inspection and submission of periodical returns and other matters of a like nature.

(d) The Engineer-in-charge shall have right to deduct from the money due to the Contractor any sum required or estimated to be required for making good the loss suffered by a worker or workers, by reasons of non-fulfillment of the conditions of the contract, for the benefit of the worker or workers, non-payment of wages or of deductions made there from, which are not justified by the terms of the contract, or as a result of non-observance of the aforesaid regulations.

(e) Vis-à-Vis the JDA of Rajasthan, the Contractor shall be primarily liable for all payments to be made and for the observance of the regulations aforesaid, without prejudice to his right to claim indemnity from his sub-contractors.

(f) The regulations, aforesaid, shall be deemed to be part of this contract and any breach, thereof, shall be deemed to be breach of the Contract.

Clause 39: Contractor to engage technical staff

The Contractor shall engage the technical staff, as follows, on the contract works:

(a) For works costing Rs. 100 lac and above – One Graduate Engineer

(b) For works costing between Rs. 50 lac to Rs. 100 lac - One qualified diploma holder having experience of not less than 3 years.

(c) For works costing between Rs. 15 lac and Rs. 50 lac - One qualified diploma holder

The technical staff should be available at site, whenever required by Engineer-in-charge to take instructions.

Clause 39 A:

The Contractor shall comply with the provisions of the Apprenticeship Act, 1961, and the Rules and Orders issued, hereunder, from time to time. If he fails to do so, his failure will be a breach of contract. The Contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provisions of the said Act.

Clause 40: Safety code

The Contractor shall follow the safety code (s) of the works and specified in the special conditions of the work.

Clause 41: Near Relatives barred from tendering

The Contractor shall not be permitted to tender for works in Circle, in which his near relative is posted as Divisional Accountant or as an officer in any capacity between the grades of the Additional Chief / Circle Engineer and Sector Engineer (both inclusive). He shall also intimate the names of persons, who are working with him in any capacity, or are subsequently employed by him and who are near relatives to any gazetted officer in the Organization/J.D.A... Any breach of this condition by the Contractor would render him liable to be removed from the approved list of contractors of the J.D.A If such facts is noticed (a) before sanction of tender, his offer shall be declared invalid and earnest money shall be forfeited, (b) after sanction of the tender then the tender sanctioning authority may at his discretion forfeit his earnest money, performance guarantee, security deposit and enlistment deposit and work/remaining work may allot to any registered contractor on the same rates as per rules.

Note: By the term **"near relative"** is meant wife, husband, parents, and grand-parents, children and grand children, brothers and sisters, uncles and cousins and their corresponding in-laws.

Clause 42: Retired Gazetted Officers barred for 2 years

No Engineer of Gazetted rank or other Gazetted officer, employed in Engineering or Administrative duties in an Engineering J.D.A. of the JDA of Rajasthan, is allowed to work as a Contractor for a period of 2 years of his retirement from JDA service without the previous permission of JDA of Rajasthan. This contract is liable to be cancelled, if either the Contractor or any of his employees is found, at any time, to be such a person, who had not obtained the permission of JDA, as aforesaid, before submission of the tender or engagement in the contractor's service, as the case may be.

Clause 43: Quality Control

The JDA shall have right to exercise proper Quality Control measures. The Contractor shall provide all assistance to conduct such tests.

Clause 43 A:

The work (whether fully constructed or not) and all materials, machines, tools and plant, scaffolding, temporary buildings and other things connected therewith, shall be at the risk of the contractor until the work has been delivered to the Engineer-in-charge, and a certificate from him, to the effect, obtained.

Clause 44: Death of Contractor

Without prejudice to any of the rights or remedies under the contractor, if the Contractor dies the legal heirs of the Contractor or the Director Engineering or duly authorized Engineer shall have the option of terminating the contract without any compensation.

Clause 45: Price Variation Clause:

If, during the progress of the contract of value exceeding Rs. 50.00 lac (accepted tendered amount minus cost of material supplied by the department), and where stipulated completion period is more than 03 months (both the conditions should be fulfilled), the price, of any materials/bitumen/diesel and petrol / cement / steel incorporated in the works (not being materials to be supplied by the department) and / or wages of labour increases or decreases, as compared to the price and / or wages prevailing at the date of opening of tender or date of negotiations for the work, the amounts payable to contractors for the work shall be adjusted for increase or decrease in the rates of materials (excepting those materials supplied by the department) / labour / bitumen / diesel and petrol / cement / steel. If negotiated rates have been accepted, prices as on the date of negotiation shall be considered for price adjustment. Similarly, if rates received on the date of opening of tenders have been accepted, then prices on the date of opening of tender shall be considered for price adjustment.
Increase or decrease in the cost of labour / material / bitumen /diesel and petrol / cement / steel shall be calculated quarterly in accordance with the following formula.

(A) Labour :

$$V_L = 0.75 \times \frac{P_L}{100} \times \frac{(I_{L1} - I_{L0})}{I_{L0}}$$

V_L = Increase or decrease in the cost of work during the quarter under consideration due to change in rates for labour.
R = The value of the work done in rupees during the quarter under consideration excluding the cost of materials supplied by the department and excluding other items as mentioned in this clause.
I_{L0} = The average consumer price index for industrial workers (whole-sale prices) for the quarter in which tenders were opened / negotiated (as published in Reserve Bank of India Journal / labour Bureau Simla, for the area).
I_{L1} = The average consumer price index for industrial workers (whole-sale prices) for the quarter of calendar year under consideration (as published in Reserve Bank of India Journal / labour Bureau Simla, for the area).
P_L = Percentage of labour components.
Note: In case of revision of minimum wages by the JDA or other competent authority, nothing extra would be payable except the price escalation permissible under this clause.

(B) **Material** (excluding material supplied by the department)

V_M = Increase or decrease in the cost during the quarter under consideration due to change in rates of material.
R = The value of the work done in rupees during the quarter under consideration excluding the cost of materials supplied by the department and excluding other items as mentioned in this clause.
L_{M0} = The average wholesale price index (all commodities) for the quarter in which tender were opened / negotiated (as published in Reserve Bank of India Journal / labour Bureau Simla, for the area).

L_{M1} = The average wholesale price index (all commodities) for the quarter under consideration (as published in Reserve Bank of India Journal / labour Bureau Simla, for the area).

P_M = Percentage of material component (excluding materials supplied by the Department).

(C) Bitumen :

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

R = The value of the work done in rupees during the quarter under consideration excluding the cost of materials supplied by the department and excluding other items as mentioned in this clause.

B_0 = The wholesale price for bitumen on the day of opening of tenders/negotiation, as published by the Economic Adviser to Govt. of India, Ministry of Industry.

B_1 = The average wholesale price index for bitumen for the quarter under consideration (as published by the Economic Adviser to Govt. of India, Ministry of Industry.

P_b = Percentage of bitumen component excluding supplied by the Department (Specified in the sanctioned estimate of the work).

(D) Petroleum :

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

R = The value of the work done in rupees during the quarter under consideration excluding the cost of materials supplied by the department and excluding other items as mentioned in this clause.

F_0 = The average wholesale price Index of High Speed Diesel (HSD) as published by the Economic Adviser to the Govt. of India, Ministry of Industry on the day of opening of tender / negotiations.

F_1 = The average wholesale price index of H.S.D. for the quarter under consideration as published weekly by the Economic Adviser to Govt. of India, Ministry of Industry for the quarter under consideration.

P_f = Percentage of fuel and lubricants component excluding fuel and lubricants supplied by the Department (Specified in the sanctioned estimate for the work).

R = Total work done during the quarter as prescribed under this clause.

Note : For application of this clause price of HSD is chosen to indicate fuel and lubricant component.

(E) **Cement :**

V_C = Increase or decrease in the cost of work during the quarter under consideration due to change in rates for cement.

R = The value of the work done in rupees during the quarter under consideration excluding the cost of cement supplied by the department and excluding other items as mentioned in this clause.

I_{C0} = The average wholesale price index for the quarter in which tenders were opened / negotiated (as published by the Economic Advisor to Government of India , Ministry of Industries.).

I_{C1} = The average wholesale price index for the quarter under consideration (as published by the Economic Advisor to Government of India , Ministry of Industries).

P_C = Percentage of cement components (excluding cement supplied by the Department).

(F) Steel :

V_S = Increase or decrease in the cost of work during the quarter under consideration due to change in rates for steel.

R = The value of the work done in rupees during the quarter under consideration excluding the cost of steel supplied by the department and excluding other items as mentioned in this clause.

I_{S0} = The average wholesale price index for the quarter in which tenders were opened / negotiated (as published by the Economic Advisor to Government of India , Ministry of Industries.).

I_{S1} = The average wholesale price index for the quarter under consideration (as published by the Economic Advisor to Government of India , Ministry of Industries).

P_S = Percentage of steel components (excluding steel supplied by the Department).

Clause 45 A : Price Variation in – installation of elevators, supply/installation of Centrally Air Conditioning and Central Evaporating Cooling Works :

In all cases of contracts for installation of elevators, supply/installation of Central Air Conditioning and Central Evaporating Cooling Works, the price quoted shall be based on the Indian Electrical and Electronics Manufacturers Association (IEEMA) price variation clause based on the cost of raw materials / components and labour cost as on the date of quotation / tender, and the same is deemed to be related to wholesale price index number of metal products and All India Average consumer price index number of industrial workers as specified below. In case of any variation in these index numbers, the prices shall be subject to adjustment up or down in accordance with following formula.

Where :

P = Price payable as adjusted in accordance with the above price variation formula.

P_0 = Price quoted / confirmed

M_{P0} = Wholesale Price Index Number for metal products as published by the office of the Economic Adviser, Ministry of Industry, JDA of India in their weekly bulletin, Revised Index Number of Wholesale Prices (Base : 1981-82=100) for the week ending first Saturday of the relevant calendar month. The relevant month shall be that in which price was offered or negotiated whichever is later.

W_0 = All India Average Consumer Price Index Number for Industrial workers (Base : 1982 = 100) as published by Labour Bureau, Ministry of Labour, JDA of India, for relevant calendar month. The relevant month shall be that in which price was offered or negotiated whichever is later.

The above index number MPo & We are those published by IEEMA as prevailing on the first working day of the calendar month FOUR months prior to the date of tendering.

MP = Wholesale Price Index Number of Metal Products as published by the office of Economic Adviser, Ministry of Industry, JDA of India, in their weekly bulletin Revised index number of wholesale prices (Base : 1981-82 = 100). The applicable wholesale price Index Number for Metal Products as prevailing on Ist Saturday of the month covering the date FOUR months prior to the date of delivery and would be as published by IEEMA.

W0 (D)= All India Average Consumer Price Index Number for Industrial workers prevailing for the month covering the date FOUR months prior to the date of delivery of manufactured material and would be as published by IEEMA.

W0 (I) = All India Average Consumer Price Index Number for Industrial workers (Base : 1982=100) as published by Labour Bureau, Ministry of Labour, JDA of India. The applicable All India Consumer Price Index Number of Industrial workers prevailing for the FOUR months prior to the date of completion of installation / progress parts of installation and would be as published by IEEMA. The date of delivery shall be the date on which the manufactured material is actually supplied at site. The date of completion of installation (or progress part of installation shall be the date on which the work is notified as being completed and is available for inspection / duly tested. In the absence of such notification, the date of completion is not intimated, such completion shall be considered by the Engineer-in-charge which shall be final.

Note-1 The Wholesale Price Index Number for Metal Products is published weekly by the office of the Economic Adviser, but if there are any changes, the same are incorporated in the issue appearing in the following week. For the purpose of this Price Variation Clause, the final index figures shall apply.

Note-2 The sole purpose of the above stipulation is to arrive at the entire contract under the various situations. The above stipulation does not indicate any intentions to sell materials under this contract as movables.

Note-3 The indices MP & Wo are regularly published by IEEMA in monthly basic price circulars based on information bulletins from the authorities mentioned. These will be used for determining price variation and only IEEMA Circulars will be shown as evidence, if required.

General Conditions for admissibility of Escalation

1. The exact percentage of labour / material (excluding materials to be supplied by the department)/bitumen/diesel and petrol/cement/steel component for the work shall be approved by the authority while sanctioning the detailed Estimates.

2. The break-up of components of labour / materials (excluding materials to be supplied by the department)/bitumen/diesel and petrol cement/steel as indicated in Clause 45 have been pre-determined as below :

(a)	**Labour**	**0.00 percent**
(b)	**Material**	**0.00 percent**
(c)	**Bitumen**	**0.00 percent**
(d)	**Diesel and Petrol**	**0.00 percent**
(e)	**Cement**	**0.00 percent**
(f)	**Steel**	**0.00 percent**
	Total	**0.00 percent**

3. While allowing price escalation the following shall be deducted from the value of work done (R): (a) Cost of material supplied by the Department. (b) Cost of services rendered as per clause 34. (C) of Secured Advance / any advance added earlier but deducted now after work is measured. (d) Cost of extra items, the rates for which have been worked out based on market rates / mutually agreed rates.

4. The first statement of escalation shall be prepared at the end of three months in which the work was awarded and the work done from the date of start to the end of this period shall be taken into account. For subsequent statement, cost of work done during every quarter shall be taken into account. At the completion of work, the work done during the last quarter or fraction, thereof, shall be taken into account.

5. For the purpose of reckoning the work done during any period, the bills prepared during the period shall be considered. The dates of recording measurements in the Measurement Book by the Assistant Engineer shall be the guiding factor to decide the bills relevant to any period. The date of completion, as finally recorded by the competent authority in the Measurement Book shall be the criterion.

6. The index relevant to any quarter, for which such compensation is paid, shall be the arithmetical average of the indices relevant of the calendar month.

7. Price adjustment clause shall be applicable only for – the work that is carried out within the stipulated time, or extension thereof, as are not attributable to the contractor.

8. If during the progress in respect of contract works stipulated to cost Rs. 50 lacs or less. the value of work actually done excluding cost of material supplied by the Department exceeds Rs. **50** lacs and completion period is more **than 03** months, then escalation

would be payable only in respect of value of work in excess over Rs. 50 lacs from the date of satisfying both the conditions.

9. Where originally stipulate period is 03 months or less but actual period of execution excess beyond 06 months on account of reasons not attributable to contractor, escalation amount would be payable only in respect of extended period of amount of work is more than Rs. 50 lac.

10. In case the contractor does not make prorate progress in the first or another time span and the short fall in progress is covered up by him during subsequent time span within original stipulated period then the price escalation of such work expected to be done in the previous time span shall be notional given based upon the price index of that quarter in which such work was required to be done.

11. No claims for price adjustment other than those provided therein shall be entertained.

12. If the period of completion including extended period attributable to JDA exceeds twelve months but cost does not exceeds more than Rs. 50 lac, no escalation is admissible.

13. Similarly, if cost of works increases more than Rs. 50 lac but completion period including extended period attributable to JDA is less than 3 months, no escalation is admissible.

14. No provisional escalation is payable quarterly and no provisional escalation is payable monthly or fortnightly.

15. Escalation is always payable quarterly and no provisional escalation is payable monthly of fortnightly.

16. In case at the time of executing agreement, both the conditions (completion period **3 months** and amount of work **Rs. 50 lac)** for admissibility of price escalation are not fulfilled and subsequently due to additional work and extension of time attributable to JDA, both the conditions become fulfilled, in that case the escalation shall be payable from the date of satisfying both the conditions and only for work done beyond Rs. 50 lac and in period of work beyond 6 months.

17. The contractor shall for the purpose of this conditions keep such books of accounts and other documents are necessary to show the amount of any increase climbed or reduction available and shall allow inspection of the same by a duly authorized representative of JDA and further shall at the request of the Engineer-in-charge furnish, verified in such a manner as the Engineer-in-charge may required any documents so kept and such other information as the Engineer-in-charge may require.

Clause 46: Force-Majuro

Neither party shall be liable to each other, for any loss or damage, occasioned by or arising out of acts of God such as unprecedented floods, volcanic eruptions, earthquake or other invasion of nature and other acts.

Clause 47: General discrepancies and errors

In case of percentage rate tenders, if there is any typographical error or clerical error in rates shown by the JDA in the G- schedule, the rates as given in the basic schedule of rates on which estimate is framed shall be taken as correct.

Clause 48: Post payment Audit & Technical Examination

The JDA shall have right to cause an audit and technical examination of the works, and the final bills of the contractor, including all supporting vouchers, abstracts, etc., to be made within 2 years after payment of the final bill, and if, as a result of such audit and technical examination, any sum is found to have been over paid in respect of any work done by the Contractor under the contract, or any work claimed by him to have been done by him under the Contract and found not to have been executed or executed below specifications, the Contractor shall be liable to refund the amount of over payment, and it shall be lawful for J.D.A. to recover the same from him in the manner prescribed in Clause 50 or in any other manner legally permissible, and if it is found that the Contractor was paid less than what was due to him under the contract in respect of any work executed by him under it, the amount of such under-payment shall be duly paid by the JDA to the Contractor.

Clause 48A: Pre Check or Post Check of Bills

The JDA shall have right to provide a system of pre-check of Contractor's bill by a specified Organization, and payment by an Engineer or an Accounts Officer/sr. Accounts Officer/ chief Accounts Officer/ financial Advisor, as the JDA may in its absolute discretion prescribe. Any over-payments excess payments detected, as a result of such pre-check or post-check of Contractor's bills, can be recovered from the Contractor's bills, in the manner, herein before provided, and the Contractor will refund such over/excess payments.

Clause 48B: Check Measurements

The J.D.A. reserves to itself, the right to prescribe a scale of check measurement of work, in general, or specific scale for specific works, or by other special orders (about which the decision of the J.D.A. shall be final). Checking of measurement by superior officer shall supersede measurements by the subordinate officer, and the former will become the basis of the payment. Any over/excess payments detected, as a result of such check measurement or otherwise at any stage up to the date of completion and the defect removal period specified else-where in this contract, shall be recoverable from the Contractor, as any other dues payable to the JDA.

Clause 49: Dismantled materials

The Contractor, in course of the work, should understand that all materials e.g. stone, bricks, steel and other materials obtainable in the work by dismantling etc. will be considered as the property of the JDA and will be disposed off to the best advantage of the JDA, as per directions, of the Engineer-in-charge.

Clause 50: Recovery from Contractors

Whenever any claim against the Contractor for the payment of a sum of money arises out of or under the contract, the J.D.A. shall be entitled to recover such sum by appropriating, in part or whole of the Performance Guarantee and/or Security Deposit, Security Deposit at the time of enlistment of the Contractor. In the event of the security being insufficient, or if no security has been taken, then the balance or the total sum recoverable, as the case may be, shall be deducted from any sum, then due or which at any time, thereafter, may become due to the Contractor, under this or any other contract with the J.D.A.. Should this sum be not sufficient to cover the full amount recoverable, the Contractor shall pay to the J.D.A. on demand the balance remaining dues.

The J.D.A. shall, further, have the right to affect such recoveries under Public Demand Recovery Act.

Clause 51: <u>Jurisdiction of Court</u>

In the event of any dispute arising between the parties hereto, in respect of any of the matters comprised in this agreement, the same shall be settled by a competent Court having jurisdiction over the place, where agreement is executed and by no other court, after completion of proceedings under Clause 23 of this Contract.

Dated Signature of Engineer- in -charge Dated signature of Contractor

Progress statement referred to in Clause 2 of Conditions of Contract

Name of Work	Date from which the work should be commenced	Date by which the work should be completed	Monthly rate of Progress
1	2	3	4

The contractor has been informed that his tender has been accepted

Notes: - For Filling in the Progress J.D.A. Form

Columns 2,3, and 4 must be initialed and dated by the Contractor

Column 4 must be initialed and dated by the Director Engineering or other duly authorized Engineer also.

The date in column 2 should correspond to the date on which the order to commence work is given to the contractor read with Clause 2 of the conditions of contract.

The date in column 3 must correspond to the period J.D.A. in Sub clause (e) of the Memorandum below "Tender for works".

Column 4. This will ordinarily be worked out proportionately; thus if Rs. 24,000/- is the cost of the whole or portion of work tendered for, and six months period of completion, then the monthly rate of progress should be Rs. 4,000. If necessary, quantities may also be specified in this column at the discretion of the Director Engineering.

The Certificate as to intimation of acceptance of tender printed at the foot of the form must be signed and dated both by the Director Engineering or other duly authorized Engineer and the Contractor.

Dated Signature of Engineer- in -Charge Dated Signature of Contractor

ANNEXURE TO APPENDIX XI
RAJASTHAN PUBLIC WORKS DEPARTMENT
CONTRACTOR LABOUR REGULATIONS

1. **Short title :** These regulations may be called "The Rajasthan Public Works Department Contractor's Labour Regulations."

2. **Definition** : These regulations unless otherwise expressed or indicated, the following words and expressions shall have the meaning hereby assigned to them respectively, that is to say :

(i) **"Labour"** means workers employed by a Rajasthan P.W. Department contractor directly or indirectly through a sub-contractor or other person or by an agent on his behalf.

(ii) **"Fair Wage"** means minimum wages for time or piece work fixed or revised by the State Government under the Minimum Wages Act., 1948.

(iii) **"Contractor"** shall include every person whether sub-contractor or headman or agent employing labour on the work taken on contract.

(iv) "**Wages"** : shall have the same meaning as defined in the Payment of Wages Act. and includes times and piece rate wages.

3. **Display of Notice regarding wages etc.** : The contractor shall (a) before the commences his work on contract, display and correctly maintain and continue to display and inconspicuous places on the work notices in English and the correctly maintain in Hindi by the majority of the workers giving the rate of wages which have been certified by the Executive Engineer, the superintending engineer, the Chief Engineer or Labour Commissioner, as fair wages and the hours of works for which such wages are earned, and (b) send a copy of such notices to the Certifying Officers.

4. **Payment of Wages**

(i) The contractor shall fix the wage period in respect of which the wages shall be payable.

(ii) No wage period shall exceed one month.

(iii) Wages of every workman employed on the contract shall be paid before the expiry of ten days after the last day of the wage period in respect of which the wages are payable.

(iv) When the employment of any worker is terminated by or on behalf of the contractor, the wages earned by him shall be paid before the expiry of the day succeeding the one on which his employment is terminated.

(v) All payments of the wages shall be made on a working day except when the work is completed before the expiry of the wage period in which case, final payments shall be made within 48 hours of the last working day.

5. **Wage Book and Wage slips etc.**

(i) The Contractor shall maintain a Wage Book of each worker in such form as may be convenient but the same shall include the following particulars.

(a) Rate of daily or monthly wages.

(b) Nature of work on which employed.

(c) Total number of days worked during each wage period.

(d) All deduction made form the wages with an indication in each case of the ground for which the deduction is made.

(e) Wages actually paid for each wage period.

(ii) The contractor shall also maintain a wage slip for each worker employed on the work

(iii) The Executive Engineer may grant an exemption from the maintenance of the wage books and wages slips to a contractor who, in his opinion, may not directly or indirectly employ more than 50 persons on the work.

7. **Fines and deductions which may be made form wages**

(i) The wages of a worker shall be paid to him without any deductions of any kind except those authorized, namely the following

(a) Fines

(b) Deductions for absence from duty i.e. from the place or places where, by the terms of his employment, he is required to work. The amount of deduction shall be in proportion to the period for which he was absent.

(c) Deductions for damages to or loss of goods expressly entrusted to the employed person for custody or for loss or any other deductions of money, which he is required to account where such damages or losses are directly attributable to his neglect or default.

(ia) The Rajasthan Government may, from, time to time, allow deductions other than those specified in clause I above.

(ii) No fines shall be imposed on a worker and no deductions for damage or loss shall be made until worker has been given an opportunity of showing cause against each fine or deductions.

(iii) The total amount of fines, which may be imposed in any one wage period on a worker, shall not exceed an amount equal to three paisa in rupee of the wage payable to him in respect of that wage period.

(iv) No fine imposed on any worker shall be recovered from him by installment or after the expiry of 60 days from the date on which it was imposed.

8. **Register of fines etc. :** The contractor shall maintain a register of fines and of all deductions for damage or loss. Such register shall mention the reasons for which fine was imposed or deduction for damage or loss was made.

The contractor shall maintain both in English and local Indian Language, a list approved by the Labour, Commissioner clearly stating the acts and omission for which penalty of fine may be imposed on a workman and display it in a good condition in a conspicuous place on the work.

9. **Preservation of Register :** The wage register, the wage card and the register fines deductions required to be maintained under these regulations, shall be preserved for 12 months after the date of the 1st entry made in them.

10. **Powers of Labour Welfare Officer to make investigation of enquiry** : The Labour Welfare Officer or any other person, authorized by the State Government on their behalf, shall have power to make enquiries with a view to ascertaining and enforcing due and proper observance of the fair wage clauses and provisions of the regulations. He shall investigate into any complaint regarding default made by the Contractor or Sub-Contractor in regard to such provisions.

11. **Report of Labour Welfare Officer :** The Labour Welfare Officer or other person, authorized as aforesaid, shall submit a report of the result of his investigation or enquiry to the Executive Engineer concerned indicating the extent, if any, to which the default has been committed with a note that necessary deductions from the contractors bill be made and the wage and other dues be paid to the labour concerned in case an appeal is made by contractor under clause 12 of these regulations, actual payment of labours will be made by the Executive Engineer after the Labour Commissioner had given decision on such appeal.

12. **Appeal against the decision of Labour Welfare Officers :** Any person aggrieved by the decision and recommendation of the Labour. Welfare Officer or other persons, so authorized, may appeal against. Such decision to the Labour Commissioner within 30 days from the date of decision forwarding simultaneously a copy of his appeal to Executive Engineer concerned but subject to such appeal the decision of the Officer shall be final and binding upon the contractor.

12a No party shall be allowed to be represented by a lawyer during any investigation, enquiry, appeal or any other proceedings.

13. **Inspection of wage books and slips** : The contractor shall allow inspection of the wage books and wage slips and register of lines and deductions to any of his workers or to his agent at a convenient time and place after due notice is received or to the Labour Welfare Officer or any other person authorized by the State Government on his behalf.

14. **Submission of Returns** : The Contractor shall submit periodical returns, as may be specified from time to time.

15. **Amendments** : The State Government may, from time to time, add to or amend these regulations and on any questions as to the application, interpretationer effect of these regulations, the decision of the Labour Commissioner to the Government of Rajasthan or any other person authorized by the State Government in that behalf, shall be final.

SCHEDULE OF FAIR WAGE TO BE GIVEN BY EXECUTIVE ENGINEER LIST OF ACTS AND COMMISSION FOR WHICH FINE CAN BE IMPOSED

(I) Willful insubordination disobedience whether alone or combination with another (2) The fraud or dishonesty in connection with the contractor business or property of the Rajasthan P.W.D. (3) Taking or giving bribes or any illegal gratification. (4) Habitual late attendance. (5) Drunkenness, fighting riot or disorderly or indecent behavior (6) Habitual negligence (7) Smoking near or around the area where combustible or other materials are stocked. (8) Habitual indiscipline (9) Causing damage work in progress or to property of the Rajasthan P.W.D. or the contractor (10) Sleeping on duty (11). Malingering or sowing down work (12). Giving of false information regarding name, age, father's name (13) Habitual loss of wage cards supplied by the employers. (14) Unauthorized use of employer's property or manufacturing or making of unauthorized articles at the work places (15) Bad workmanship in construction and maintenance by skilled workers which is not approved by the department and for which contractors are compelled to undertake rectification (16) Making false complaints and / or misleading statement. (17) Engaging, in trade within the premises of the establishment. (18) Any delinquency of business affairs of the employers. (19) Collection or canvassing for the collection of any money within the premises of an establishment unless authorized by the employer. (20) Holding meeting inside the premises without previous sanction of the employer (21). Threatening or intimidating any workman or employee during the working hours within the premises.

Schedule showing (approximately) material to be supplied from the Public Works Store for work contracted to be executed and the rates of which they are to be charged for

Particulars	Rates which the material will be charged to be contractor			Place of Delivery
	Unit	Rs.	NP	
Doors with Chowkhats				
Doors with Chowkhats				
Doors with Chowkhats				
Windows with Chowkhats				
Windows with Chowkhats				

Windows with Chowkhats				
Steel Shapes				
Steel Shapes				
Steel Shapes				
Bars Mild Steel				
Sheets plain, Corrugated, G.I. etting, wire				
Belts Tower				
Belts Tower				
Locks, Mortise				
Locks, Mortise Rim				
Hinges, Butt				
Hinges, Butt				
Hinges, Butt				
Hinges, Butt				
Hinges, Spring				
Cement, Portland				

Note : The person or firm submitting the tender should see that the rates in the above schedule are filled up by the Engineer-in-Charge on the issue of the form prior to be submission to the tender.

Signature of Contractor **Signature of Engineer**

Progress Statement referred to in Clause 3 of Condition of Contract

Name of Works	Date from which the work should be commenced	Date by which the work should be completed	Monthly rate of progress

The contractor has been informed that his tender has bee accepted.

Date : Date :

Engineer-in-Charge Contractor

Notes for filling in the Progress Statement Form on the Last Page

1. Columns 2, 3 and 4 must be initialed and dated by the Contractor.
2. Column 4 must be initialed and dated by the Chief Engineer or other authorized Engineer also.
3. The date in column 2 should correspond to the date on which the order to commence works is given to the contractor read with Clause 2 of the conditions of contract.
4. The date of column 3 must correspond to the period stated in sub class (e) of the Memorandum below "Tender for works".
5. Column 4. This will ordinarily be worked out proportionately ; thus if Rs. 24,000/- is the cost of the whole or portion of work tendered for, and six months period of completion, then the monthly rate of progress should be Rs. 4,000. If necessary, quantities may also be specified in this column at the discretion of the Chief Engineer.
6. The Certificate as to intimation of acceptance of tender printed at the foot of the form, must be signed and dated both by the Chief Engineer or other duly authorized Engineer and the Contractor

Section A-3
Special Conditions of Contract

SCHEDULE 'I'

Name of work :- **:- Rate contract for construction of 200 mm dia tube well, P/L/J of DI pipe line at various locations for one year under zone PHE-I, JDA, Jaipur.**

SPECIAL CONDITIONS OF THE CONTRACT FOR PIPE LINE WORKS

1. Contractor shall get the material inspected from the third party (CEIL, SGS, RITES) before bringing the material at site. The inspection charges shall be born by the contractor. No payment of these items shall be made before the third party inspection.
2. In case of pipe line testing shall be done as per the relevant Code and the leakage level shall not be more than as per IS 8329. Only 80% of the payment shall be released after providing, laying and jointing of pipes and special in trenches, 20% of the payment shall be released after testing as above.
3. The JDA shall be free to carry out the work from any participating agency on the rate of lowest bidder during the concurrency of rate contract.
4. The contractor shall submit the proof of ownership of suitable machinery for laying of pipeline in all type of strata.
5. The quantity of work can be increased or decreased. However, no guarantee is given about the actual quantity of work.
6. No extra payment shall be made to the contractor on account of excavation in collapsible strata or in hard or rocky strata. The tenderers shall have to make their own arrangement for completing the work and no claim in this respect will entertained.
7. On collection of complete material for each section the same shall be got checked by Engineer–in–Charge or his authorized representative. Such approval shall in no way release the contractor of his responsibility regarding completion of work, as per required specification until the contract is complete.
8. The electric connection, if required, for construction and testing purpose shall be arranged by the contractor at his own cost.
9. The contractor shall make his own arrangement regarding water required for the execution and testing of the work and shall also arrange for the supply of drinking water to his own employees. He shall defray all charges in this connection and should include in his rates a sufficient amount to cover such charges. All such facilities as are required now to be provided for the labour, made under labour welfare rules inforce, shall also be provided by the contractor at his own cost.
10. The contractor will be required to see that the usual hours of work are adhered too. No work shall be done after the sun set without the permission of the engineer-in-charge.
11. The security deposit of the work shall be refundable after six months from the date of completion of the work only after successful testing of the works.
12. The contractor/firm or company while executing the work will adopt all safety measures at his cost to safeguard from any loss of life and damage of public and private property. If any loss and damage is occurred, they will pay the full compensation from their own pocket to the concern. All the consequence (legal and or financial) will be born by the contractor only and JDA will not be responsible in any way.
13. Water for construction / testing purpose shall have to arranged by contractor at his own cost. If water is supplied by the department, the same shall be recovered from the contractor from each running bill at the rate of 1% of total value of pipe line laying work, In case of metered connection the charges shall be recovered on the actual consumption basis on the commercial rates.
14. The contractor shall be fully responsible for structural safety and water tightness of pipeline when tested.
15. No secured advance against material procured at site will be allowed.
16. Pipeline laying should be done in the presence an Engineer not below the rank of Junior Engineer of the JDA, and trench shall be refilled after checking of Assistant engineer. After taking layout, the contractor shall submit day to day schedule of work to the Engineer–in-charge in advance.

18. The contractor/firm or company will take utmost care to safeguard the water mains, Electric and Telephone cable existing surface drains water connections etc., while executing the work. Any damages/rectification shall be born by the contractor only

19. The contractor shall, at his own cost, arrange to provide, erect and maintain necessary display boards/ flags/banners etc. at selection points of project site giving such information as considered necessary for public awareness/ information/ safety as directed by the Engineer-in-charge.

20. Contractor shall provide sufficient number of boards at site of work indicating "JDA AT WORK" at his own cost as required by Engineer-in-charge.

21. The surplus earth and damaged materials will be immediately removed from the site of work and dumped as per instruction of Engineer-in-charge

22. The material collected at site and paid provisionally shall remain under the watch and ward of the contractor till it is consumed fully on the work.

23. Any material not conforming to the specifications collected at site shall have to be removed by the contractor within a period of 3 days of the instructions, issued by the Engineer-in-charge, failing which, such material shall be removed by the Engineer-in-charge at risk and the contractor after expiry of 3 days period.

24. The contractor/firm/company is bound to get the workmen insured against accident from the Insurance Company at his own cost.

25. Contractor shall be the sole custodian of the men and material at work and will be fully responsible for any loss of life or other wise occurred during the execution of the works.

26. The submission of the as-built drawings of the water line work is the precondition for the final payment. The final drawings shall be submitted in one reproducible set and 3 copies on linen bound in an album of an approved size. The contractor shall submit all the completion drawings and approved design calculations on CD ROM / DVD in two copies with proper directory structure. The scale of drawing and the size of drawing shall be as per the direction of the Engineer in Charge.

27. The contractor shall be solely responsible for all kind of liaison before starting the work with PHED/Other JDA zone/JVVNL & BSNL etc. which is required to avoid any damage of already laid pipe lines, Electric, BSNL cables. The contractor shall also liaison for the inter connection work with existing PHED system.

28. Before start of work contractor has to inform concerned JDA zone officers to avoid/minimize road damage

29 The follow up / liaison for release of Electric Power connection of TWs from JVVNL Jaipur shall be in the scope of contractor and shall be deposited the required fess for issue the demand note, which shall be reimbursed by JDA on submission of original receipt.

30. As Built Drawings.
The submission of the as-built drawings of the proposed work with old pipe line work is the precondition for the final payment. The final drawings shall be submitted in one reproducible set and 3 copies on linen bound in an album of an approved size. The contractor shall submit all the completion drawings on CD ROM / DVD in two copies with proper directory structure. The scale of drawing and the size of drawing shall be as per the direction of the Engineer in Charge

31 If there is any typographical error or otherwise in the 'G' Schedule. The nomenclature and the rates as given in the relevant BSR-2016 and JDA approved items/rates on which schedule 'G' is based, shall prevail.

Special conditions for Tube well work

1. The tenderers are advised to study geographical, geological, hydrological and geo-physical condition prevailing in the jurisdiction of JDA for which they are tendering for the work of drilling of 200 mm tube well for power pump with development etc. complete. The rates shall be quoted based on their own assessment of the above features including the nature of the strata to be encountered and approachability of the site etc.

2. The JDA shall be free to carry out the work from any participating agency on the rate of lowest bidder during the current rate contract.

3. Quantity of work can be increased or decreased. However, no guarantee is given about the actual quantity of work.

4. The envelope shall contain the following information/ documents :-

a I. Certified copy of Registration Certificate of Contractor

II. Each page of Tender Document be filled up wherever required and be signed and submitted.

5. No extra charges for higher size drilling in collapsible strata will be paid by the JDA. The tenderers shall have to make their own arrangement for completing the work and no claim in this respect will entertained.

6. Payment will be made on completion of individual tube well in all respect including development.

7. The boring shall be accepted only when it's Yield is 4000 LPH or more for 200 mm diameter TUBE WELL at a draw down not exceeding 7 meters. Only payment of Drilling shall be made for the tube wells having discharge less than above. It is responsibility of contractor to fill up bore holes of such unsuccessful tube wells upto the ground level immediately.

8. **Inspection and Checking of work**

As material are collected and the construction of each section of work is completed it will be checked by Engineer– in–Charge or his authorized representative and the representative of the contractor will assertion from the engineer form time to time that what part and portion he wishes to check over and pass out. Such approval shall in no way release the contractor of his responsibility regarding completion of work, as per required specification until the contract being completed.

9. **Water Supply for Work and Drilling Purposes**

The contractor shall make his own arrangement regarding water required for the execution and testing of the work and shall also arrange for the supply of drinking water to his own employees. He shall defray all charges in this connection and should include in his rates a sufficient amount to cover such charges. All such facilities as are required now to be provided for the labour, made under labour welfare rules enforce, shall also be provided by the contractor at his own cost.

10. **Time of Working**

The contractor will be required to see that the usual hours of work are adhered too. No work shall be done in the night without prior permission of Engineer – in – Charge except when it is absolutely necessary in the public interest. In this case contractor shall immediately inform the Engineer– in–Charge and get it approved.

11. The security deposit of for the work shall be refundable after six months from the date of completion of the work and successful testing.

12. The defect liability period for the tube well and pump set and panel etc. shall be one year after commissioning of the tube well. 10% of amount shall be withheld for each tube well and shall be released after one year of defect liability period. The contractor shall be liable for successful running of tube well during defect liability period.

13. **Completion Period**

Date of completion of work shall be minimum 7 days for each tube well from date of issue of work order. If nos. of tube wells are increased additional three days will be given for construction of each extra tube wells.

14. **Release of Electric connection from JVVNL**

The contractor shall be responsible for getting electric connection released from JVVNL in feasible areas on behalf of JDA. For this JDA shall provide duly signed application form which shall be produced by contractor in JVVNL office. In normal case the final payment shall not be passed till electric connection is released and testing as per norms is done, however in case of non-feasibility of electric connection area the decision of EIC shall be final. The amount required for release of electric connection shall be deposited by contractor to JVVNL office at first stage which shall be reimbursed to him on producing of original receipt of JVVNL.

15 Electric and water connections for construction and testing purpose if needed, shall be arranged by the contractor himself at his own cost.

16 Contractor shall provide sufficient number of boards at site of work indicating **"JDA AT WORK, TOWARDS MAKING JAIPUR A WORLD CLASS CITY"** at his own cost as required by Engineer – in – Charge

17. The following information's shall be furnished on completion by the contractor in accordance with clause No. of 12.2 of IS 2800 (Part I) : 1991, while handling over the tube well

a) Total depth of tube well drilled.
b) Strata chart of tube well indicating different type of soil formation met with at different depths and indicating the depths of each type of soil formation from hydrologist.
c) Samples of strata collected, neatly packed and correctly marked in sample bags.
d) Position of every joint in well assembly.
e) Method used for development.
f) Total hours of development done.
g) Developed discharge in L.P.S.
h) Discharge is totally sand free or presence of sand particles is there.
i) PPM and turbidity after development.
j) Pumping water level at developed discharge, and

k) Static water level

18. Payment shall be made to contractor ensuring that the lowest tenderer shall remain lowest on the completion of work.

19. If contractor failed to do work with in specified time period, the work shall be awarded to second lowest after deposition of earnest money as per rule.

20. The format as per IS: 2800 (Part I): 1991 for furnishing the details is given as below:

a) Agency drilling the tubewell……..
b) Location of tube well……
c) Method of drilling adopted…….
d) Date of starting …….
e) Date of completion …….
f) Pilot hole and test hole ……. Bit Size…….

Bit type ……Hours……..from ……..to ……..

g) Coring done …….Bit size……. Bit type
Hours ……..recovery……from…….to……
h) Reaming ……..Bit Size……..Bit Type ……
Hours……from……to……
i) Lithological data

From	To	Formation
……	……...	…….
……	……...	…….
……	…….	…….

j) Total length of tube well drilled…….
k) Assembly of production well …… Size……
Length ……type ……
Perforation per meter ……

Housing pipe …….

Blind pipe ……

Strainer pipe……
Bail plug……..
l) Top of tube well above/below ground level……
m) Size of gravel……
n) Quantity used before ……..
o) Development……Quantity used during development……
p) Method used for development……

Total hours of testing……

q) Development discharge……
r) Turbidity……..
s) Further details appended
i) Sample of strata, neatly packed in sample bags
ii) Chart of pipe assembly lowered
iii) Results of mechanical analysis of samples of unconsolidated strata.

21. No running payment shall be made for incomplete tube well. Payment shall be made after completion of development, testing of tubewell.

Section A-4
Specifications of Work

General

Standards

Except as otherwise specified in this technical specification, the Indian/International Standards and Codes of Practice in their latest version shall be adhered to for the design, manufacturing, inspection, factory testing, packing, handling and transportation of product. Should any product be offered conforming to other standards, the equipment or products shall be equal to or superior to those specified and the documentary confirmation shall be submitted for the prior approval of the Engineer in Charge.

This specification requires a reference to the following standard specifications

IS: 4985	Unplasticized PVC pipes for potable water supplies
IS: 10151	PVC and its copolymers for its safe use in contact with foodstuffs, pharmaceuticals, and drinking water
IS: 10500	Drinking water specification
IS: 12235	Methods of test for unplasticized PVC pipes for potable water supplies
IS: 4669	Methods of test for PVC resin
IS: 12818	Unplasticized PVC screen and casing pipes for bore/tube well
IS: 3400	Methods of test for vulcanized rubber (part-1 to 22)
IS: 1387	General requirements for the supply of metallurgical material
IS: 210	Grey iron casting
IS: 1536	Centrifugally cast (spun) iron pressure pipe for water, gas and sewage
IS: 1537	Vertically cast iron pressure pipe for water, gas and sewage
IS: 1538	Cast iron fittings for pressure pipes for water, gas and sewage
IS: 5531	CI specials for Asbestos cement pressure pipes for water gas & sewage
IS: 1363	Hexagon head bolts, screws and nuts of product grade A and B (part:1-5)
IS: 1367	Technical supply conditions for threaded steel fasteners
IS: 780	Sluice valve for water works purposes
IS: 2906	Specifications for sluice valves for water works purposes
IS: 318	Leaded tin bronze ingots and casting
IS: 8543	Methods of testing plastics: Determination of density of solid plastics
IS: 7181	Horizontally cast iron double flanged pipes for water, gas and sewage.
IS: 8794	CI detachable joints for use with Asbestos cement pressure pipes
IS: 5382	Rubber sealing rings for gas mains, water mains and sewers
IS: 5531	Cast iron specials for asbestos cement pressure pipes for water, gas and sewage
IS: 779	Water meters
IS: 3624	Pressure and vacuum gauges
IS: 341	Black japan, types A, B and C
IS: 9862	Ready mixed paint, brushing, bituminous, black, lead free, acid, alkali, water and chlorine resisting
IS: 1239	Mild steel tubes, tubular and other wrought steel fittings
IS: 7328	High density polyethylene materials for moulding and extrusion
IS: 4984	Specification for high density polyethylene pipes for potable water supplies; sewage and industrial effluents
IS: 554	Dimensions for pipe threads where pressure tight joints are required on the threads
IS: 1592	Asbestos cement pressure pipes - Specifications
IS: 778	Specifications for copper alloy gate, globe and check valves for water works purposes
IS: 12820	Dimensional requirements for rubber gaskets for mechanical joints and push on joint for use with cast iron pies and fittings for carrying water, gas and sewage.
IS: 9523	Specification for DI fittings for pressure pipes for water, gas, and sewage.
ISO: 2045	Single socket for uPVC and uPVC pressure pipes with elastic sealing ring type joints - Minimum depth of engagement
ISO: 2507	PVC pipes and fittings- Vicat softening temperature - Test method and specification
ISO: 3603	Fittings for PVC pipe with elastic sealing ring joints pressure test for leak profanes
ISO: 1167	Thermoplastics pipes for the transport of fluids - Resistance to internal pressure - Test method and basic specification
ISO 3451-5	Determination of Ash: Part-5 - Poly vinyl chloride
ASTM: D 2152	Standard test method for degree of fusion of extruded PVC pipe and moulded fittings by Acetone immersion
MTNL	Mahanagar Telephone Nigam Limited; Technical specifications for cable ducts.
BS: 4772	Specification for DI fittings
IS: 7634- Parts 1-3	Code of practice for plastic pipe works for potable water supplies
IS: 8329	Centrifugally cast (spun) ductile iron pressure pipes for water, gas and sewage.
IS: 12288	Code of practice for use and laying of ductile iron pipes

CPHEEO Manual on Water Supply and Treatment, III edition, Ministry of Urban Development, New Delhi- May 1999.

Ductile Iron Pipe:-

The pipes will be centrifugally cast (spun) Ductile Iron pipes for Water and Sewage confirming to the IS 8329: 2000. The pipes used will be either with push on joints (Rubber Gasket Joints) or Flanged joints. The class of pipe to be used shall be of the class K-7.

The pipes shall be coated with bitumen as per appendix C and have factory provided cement mortar lining in the inside as per the provisions of Appendix B of the IS 8329: 2000.

The pipes will be supplied in standard length of 5.50 and 6.00 meters length with suitably rounded or chamfered ends. Each pipe of the push on joint variety will also be supplied with a rubber EPDM gasket. Any change in the stipulated lengths will be approved by the Engineer – in charge. The gaskets will confirm to the IS 5382:1985.

The gaskets should also be supplied by the manufacturer of the pipes. They should preferably be manufactured by the manufacturer of the pipes. In case they are not, it will be the responsibility of the manufacturer of the pipes to have them manufactured from a suitable manufacturer under it's own supervision and have it tested at his/sub contractors premises as per the contract. The pipe manufacturer will however be responsible for the compatibility and quality of the products.

The flanged joints will confirm to the Clause 6.2 of IS 8329. The pipe supply will also include one rubber gaskets for each flange.

Inspection and Testing:

The pipes will be subjected to following tests for acceptance:

Visual and dimensional check as per Clause 13 and 15 of IS 8329

Mechanical Test as per Clause 10 of IS 8329

Hydrostatic Test as per Clause 11 of IS 8329

The test reports for the rubber gaskets shall be as per acceptance tests of the IS 5832 and will be in accordance to Clause 3.8

The sampling shall be as per the provisions of the IS 8329

Marking

All pipes will be marked as per Clause 18 of IS 8329 and show as below:

Manufacturer name/ stamp

Nominal diameter

Class reference

A white ring line showing length of insertion at spigot end

Packing and Transport:

The pipes should be preferably transported by road from the factory and stored as per the manufacturer specifications to protect damage.

Specials for Ductile Iron Pipes

General

This section covers the general requirements for Ductile Iron (DI) fittings suitable for Tyton joints to be used with Ductile Iron pipes with flanged and Tyton jointing system.

Types of specials

The following types of DI fittings shall be manufactured and tested in accordance with IS: 9523 or BS: 4772.

flanged socket

flanged spigot

Double socket bends (900, 450, 22 1/2 0, 11 1/4 0)

Double socket branch flanged tee

All socket tee.

Double socket taper.

All Flanged Tee.

All Flanged taper.

Supply

All the DI fittings shall be supplied with one rubber ring for each socket. The rubber ring shall conform to IS: 12820 and IS: 5382 as described in the preceding chapter. Flanged fittings shall be supplied with one rubber gasket per flange and the required number of nuts and bolts.

General

This section covers the requirements for lubricant for the assembly of Ductile Iron pipes and specials suitable for Tyton push-in rubber ring joints

Specification

The lubricant has to have the following characteristics:

must have a paste like consistency and be ready for use

has to adhere to wet and dry surfaces of DI pipes and rubber rings

to be applied in hot and cold weather; ambient temperature 0 - 50 °C, temperature of exposed pipes up to 70 °C

must be non toxic

must be water-soluble

must not affect the properties of the drinking water carried in the pipes

must not have an objectionable odour

has to inhibit bacterial growth

must not be harmful to the skin

must have a shelf live not less than 2 years

Acceptance tests

They shall be conducted in line with the provisions of the IS 9523

Packing

All the DI fittings shall be properly packed with jute cloth. Rubber rings shall be packed in polyethylene bags. Rubber rings in PE bags and nuts, bolts etc. shall be supplied in separate jute bags.

The fittings should also be supplied by the manufacturer of the pipes. They should preferably be manufactured by the manufacturer of the pipes. In case they are not, it will be the responsibility of the manufacturer of the pipes to have them manufactured from a suitable manufacturer under it's own supervision and have it tested at his/sub contractors premises as per the contract. The pipe manufacturer will however be responsible for the compatibility and quality of the products.

Laying and jointing of DI pipes

Pipes should be lowered into the trench with tackle suitable for the weight of pipes. For smaller sizes, up to 200 mm nominal bore, the pipe may be lowered by the use of ropes but for heavier pipes suitable mechanical equipment have to be used.

All construction debris should be cleared from the inside of the pipe either before or just after a joint is made. This is done by passing a pull-through in the pipe, or by hand, depending on the size of the pipe. All persons should vacate any section of trench into which the pipe is being lowered

On gradients of 1:15 or steeper, precautions should be taken to ensure that the spigot of the pipe being laid does not move into or out of the socket of the laid pipe during the jointing operations. As soon as the joint assembly has been completed, the pipe should be held firmly in position while the trench is back filled over the barrel of the pipe.

The designed anchorage shall be provided to resist the thrusts developed by internal pressure at bends, tees, etc.

Where a pipeline crosses a watercourse, the design and method of construction should take into account the characteristics of the watercourse to ascertain the nature of bed, scour levels, maximum velocities, high flood levels, seasonal variation, etc. which affect the design and laying of pipeline.

The assembly of the pipes shall be made as recommended by the pipe manufacturer and using the suitable tools.

The socket and spigot ends of the pipes shall be brushed and cleaned. The chamfered surface and the end of the spigot end have to be coated with a suitable lubricant recommended by the manufacturer of the pipes. Oil, petroleum bound oils, grease or other material which may damage the rubber gasket shall not be used as lubricant. The rubber gasket shall be inserted into the cleaned groove of the socket. It has to be checked for correct positioning.

The two pipes shall be aligned properly in the pipe trench and the spigot end shall be pushed axially into the socket either manually or with a suitable tool specially designed for the assembly of pipes and as recommended by the manufacturer. The spigot has to be inserted up to the insertion mark on the pipe spigot. After insertion, the correct position of the socket has to be tested with a feeler blade

Deflection of the pipes -if any- shall be made only after they have fully been assembled. The deflection shall not exceed 75 % of the values indicated by the pipe manufacturer.

Anchoring of the pipeline

Thrust blocks shall be provided at each bend, tee, taper, end piece to prevent undue movements of the pipeline under pressure. They shall be constructed as per design of ENGINEER- IN- CHARGE according to the highest pressure during operation or testing of the pipes, the safe bearing pressure of the surrounding soil and the friction coefficient of the soil.

Leakage Test

After laying and jointing the pipeline shall be tested for tightness of barrels and joints, and stability of thrust blocks in sections approved by the Engineer in Charge. The length of the sections depends on the topographical conditions. Preferably the pipeline stretches to be tested shall be between two chambers (air valve, scour valve, bifurcation, other chamber). At the beginning, the Contractor shall test stretches not exceeding 2 km. After successful organization and execution of tests the length may be extended to more than 2 km after approval of the Engineer in Charge.

The water required for testing shall be arranged by the contractor himself. The Contractor shall fill the pipe and compensate the leakage during testing. The Contractor shall provide and maintain all requisite facilities, instruments, etc. for the field testing of the pipelines. The testing of the pipelines generally consists in three phases: preparation, pre-test/saturation and test immediately following the pre-test. Generally, the following steps are required which shall be monitored and recorded in a test protocol if required

The testing conditions for the pipelines are summarized as follows:

Maximum hydrostatic test pressure for DI K-7 pipes shall be 2.0 times of maximum design pressure in the pipeline.

Pre test and saturation period with addition of make-up water

Pressure:	Test pressure
Duration:	3 hrs for DI pipes without cement mortar lining / 24 hrs for DI pipes with cement mortar lining

Pressure test with addition of make-up water

Pressure:	Test pressure
Duration:	3 hrs

Test criteria for DI pipes: Q = 1 liter per km per 10mm of pipe per 30 m test pressure per 24 hrs.

All pressure testing at site should be carried out hydrostatically. The pipes shall be accepted to have passed the pressure test satisfactorily, if the quantity of water required to restore the test pressure as per the latest codal

provisions does not exceed the amount 'Q', calculated by the above formula.
If it is required to test a section of a pipeline with a free end, it is necessary to provide temporary support against the considerable end thrust developed by the application of the test pressure. The end support can be provided by inserting a wooden beam or similar strong material in a short trench excavated at right angle to the main trench and inserting suitable packing between the support and pipe end.
The pipeline stretch will pass the test if the water added during the test period is not exceeding the admissible limits. No section of the pipe work shall be accepted by the Engineer in charge until all requirements of the test have been obtained.
On completion of a satisfactory test any temporary anchor blocks shall be broken out and stop ends removed. Backfilling of the pipeline shall be completed.

Failure to pass the test

All pipes or joints which are proved to be in any way defective shall be replaced or remade and re-tested as often as may be necessary until a satisfactory test shall have been obtained. Any work, which fails or is proved by test to the unsatisfactory in any way, shall be redone by the Contractor.

Flushing and disinfecting of pipelines

After testing and commissioning the contractor shall flush the pipes with a velocity not less than 1 m/s or as approved by the Engineer in Charge. Disinfection of drinking water pipelines shall be made by engineer- in charge.

Supply of Ductile Iron Pipes:-

The Contractor will have to supply DI pipes manufactured by manufacturer who has been in business of supply of DI pipes rubber ring jointed and have proven record of successful supply and testing of pipeline for minimum one year.

PVC Pipes

Scope

This section of the document specifies the required properties of the pipes made of unplasticized polyvinyl chloride (uPVC) with socket(s) suitable for elastomeric sealing ring type joints for conveyance of water under pressure for supply of drinking water. The pipes are intended to be used for buried water mains with ambient atmospheric temperature reaching up to 50°C and soil surface temperature rising more than 65°C. The stipulations given in this document for uPVC pipe which are not covered by any other code/standard, shall be governed by the provisions of IS 4985
The pipes will be supplied with one end plain with chamfer and other end socket suitable for elastomeric sealing ring type joints in accordance with IS: 4985.
Each pipe shall be supplied along with a rubber ring suitable for the socket for elastomeric sealing ring type joints.

Material

The material from which the pipes are made shall consist substantially of unplasticized polyvinyl chloride conforming to IS: 10151, to which may be added only those additives that are absolutely needed to facilitate the manufacture of the polymer, and the production of sound, durable pipes of good surface, finish, mechanical strength and opacity. The total quantity of additives like plasticizers, stabilisers, lubricants and fillers shall not exceed more than the percentage specified in IS 4985.The bulk density of uPVC pipe shall be 1.39 to 1.44 g/ cm^3.PVC resin of suspension grade K-66/K-67 shall be used for extrusion of uPVC pipe.

Classification

The pressure rating of pipes shall be of class-3 and class-4 in accordance with IS: 4985 with a maximum continuous working pressure at 27 ^{0} C of 6 and 8 kg/cm^2

Dimensions of the pipes and the sockets

The dimensions and tolerances of pipes shall comply to clauses of IS: 4985.
The tolerance on outside diameter and wall thickness of pipe shall be as per Table-1 given in IS: 4985.

The dimensions of the socket for elastomeric sealing ring type joint shall be in accordance with Clause 7.2.1.2 and Tables 4 and 5 of the IS 4985

The pipe shall be supplied in straight lengths of 6 m with tolerance of + 20 mm and -0 mm. The effective length of socket pipe shall be considered as shown in Figure-3 of IS: 4985.

Physical & chemical properties

The pipe shall confirm to the Clause 10 of IS 4985-2000 for its physical and chemical properties except for the density and ash content provisions which shall be as per the stipulations of Clause 1.2.2 of this chapter.

The colour of the pipes shall be dark grey.

Influence on water intended for human consumption shall be governed by IS: 12235.

All plastic and non plastic material for components of the uPVC piping system e. g. Elastomeric sealing ring, lubricants, when in permanent or in temporary contact with water which is intended for human consumption, shall not adversely affect the quality of the drinking water.

Mechanical properties

Hydrostatic strength of the pipes

The pipes and integral sealing ring will confirm to internal hydrostatic pressure in accordance with Clause 11.1 and sampling as per annex D of IS 4985

Tests and conformity criteria

Quality assurance from the manufacturer

The following in house tests shall be carried out on the raw material:
Grade (K-value)
Particle size distribution
Bulk density of resin
Bulk density of compound

The manufacturer will also have the following tests conducted from Standard Test Laboratory
Effect on water quality
Internal Hydrostatic Test (Type)

Acceptance Test

All uPVC pipes of the same size and class manufactured on a particular machine shall be considered as a lot for quality control inspection. However, the maximum size of a lot shall not be more than 1000 pipes.

The sampling procedure and scale of sampling for visual inspection and dimensional requirements shall be as per given in Annexure-D of IS: 4985.

The pipes shall be tested for lot acceptance.

The following acceptance tests shall be conducted in accordance with IS: 4985 and IS: 12235.
Visual and dimensional check
Reversion test.
Vicat Softening test
Ash Content
Bulk density
Resistance to external blows
Internal hydrostatic pressure test for pipes and joints
Opacity

Markings

Each pipe shall be clearly marked as indicated below:
Manufacturers name and trademark
Outside diameter in mm.
Class of pipe and pressure rating
Month and year of manufacturing
Length of pipe
Marking of insert depth of spigot

Each pipe shall also be marked in centre strip as circumference 1" wide at intervals not more than 3 meters to show the class of pipe.

Class 3 – Green
Class 4 – Brown

Packing and transport

The socket and spigot end of all the pipes shall be provided with tightly fitted end caps, protecting the inside of the pipes effectively against dirt etc. The end caps shall be of suitable high density (HD) plastic material in any colour other than black. They shall be fitted to the pipes prior to packing and transportation.

The pipes shall be transported to the store and site by trucks in pre packed bundles to ensure adequate protection during transport. At the time of packing and stacking of pipes the sockets shall be alternated within the pile and shall project sufficiently for the pipes to be correctly supported along their whole length. The pipes shall rest uniformly on the vehicle bed over their whole length during transport, carefully placed and firmly secured against unwarranted movement during transportation to the satisfaction of Engineer In charge.

Supply of uPVC Pipes:-

The Contractor will have to supply uPVC pipes manufactured by manufacturers having ISO 9000-2000 certification and who has been in the business of supply of uPVC pipes with elastomeric rubber ring joints and have proven record of successful supply and testing for minimum one year. The Contractor will have to present a certified photocopy of this certification for manufacturer he propose to procure his material from before starting supplies.

Rubber Rings for PVC Pipes and Specials

Scope

This section prescribes the requirements for materials used for vulcanized solid rubber sealing rings for water supply at ambient temperature. It covers rubber rings for uPVC pipes.

Material

The rubber shall be free from extractable substances which impart taste, odour or toxicity to water. The rubber or its compound shall not content toxic materials, such as compounds of mercury, antimony, manganese, lead or copper.

The rubber rings shall be vulcanized from Ethylene propylene (EPDM). The colour of material shall be black.

The rubber ring shall be long term termite resistant.

The sealing ring shall have no detrimental effect on the properties of the pipe and shall not cause the test assembly to fail the functional requirements

Appearance and homogeneity

The rings shall be homogeneous, free from porosity, grit, excessive blooms, blisters, or other visible surface imperfections. The fin or flash shall not exceed 0.4 mm and width 0.8 mm.

Rubber rings shall be made of a properly vulcanized virgin rubber compound containing no scrap or reclaim.

The surface of the rubber rings shall be smooth, free from pitting cracks, blisters, air marks, and any other imperfection that may affect its behavior in service. The body of the rubber ring shall be free from porosity and air pockets.

Dimensions and tolerances.

The profile and dimensions of the rubber ring shall be such that under normal circumstances efficient sealing can be expected for the socket dimensions.

The nominal measurements and the tolerances shall be in accordance with the figures stated by the manufacturer and they shall be laid down in a drawing.

Physical requirements.

The rubber ring shall have the ISI mark and will confirm to IS: 5382 and comply with the following physical properties when tested in accordance with IS: 3400

Properties	EPDM
Tensile Strength	11 MPa
Hardness	50, +5, -4 IRHD
Elongation at break	Min. 400%
Compression Set Test condition 27degree C., 72h, Max. permanent deformation	12%
Water absorption Test	Max. 10%
Accelerated ageing Test Hardness Tensile Strength Elongation at break	 -5 to +8 IRHD ± 20% -30% to +10%

Marking

Each sealing ring shall be permanently marked with:
The Manufacturer's name or trade mark.
The month and year of manufacture
Diameter of pipe for which the ring is suitable.
Type of rubber material

Testing

The scale of sampling and criteria for conformity shall be in accordance with IS: 5382. The following tests shall be conducted for conformity.
Hardness
Tensile strength
Elongation at break
Compression set
Accelerated ageing
Water absorption
Stress relaxation

The test pieces shall be cut from the finished product. Where this is not possible because the sample would be too small, the manufacturer shall provide test slabs from the same batch of rubber and vulcanized to the same degree and in the same manner as that of the rubber from which the rubber rings have been manufactured.

Wherever it is not possible to cut standard test piece from the rings, for determination of tensile strength and elongation at break, test piece in the shape of dumb bell as shown in Figure - 2 of IS: 5382 shall be used with the rate of traverse of moving grip as 15 cm/min.

Packing

Maximum 10 pieces of rubber ring shall be packed in one polyethylene bag. The colour of the polyethylene bags shall be preferably black or dark grey. The rubber rings packed in polyethylene bags shall be supplied in bituminized polyethylene lined jute bags to protect them from undue exposure to light and heat.

The rubber rings should also be supplied by the manufacturer of the pipes. They should preferably be manufactured by the manufacturer of the pipes. In case they are not, it will be the responsibility of the manufacturer of the pipes to have them manufactured from a suitable manufacturer under its own supervision and have it tested at his/sub contractors premises as per the contract. The pipe manufacturer will however be responsible for the compatibility and quality of the products.

Specials for uPVC Pipe System

uPVC specials

Manufacturing and type of sealing joint

All the uPVC fittings shall be fabricated from class-4 uPVC pipes only.

The socket dimensions shall be in accordance with the pipe sockets. The rubber sealing rings for pipe/specials shall be in accordance with the specifications .

Type of specials

Double sockets

The double socket special shall be suitable for elastomeric sealing ring type joint as per the enclosed drawing. The dimensions of the fitting shall be as given in Table below.

Table for dimensions of Double Sockets

S No.	Suitable for pipe OD (mm)	Min. length of fitting (h) mm	Min. spacer (l) mm
1	63	235	20
2	90	266	20
3	110	288	20
4	140	314	20
5	160	334	20
6	225	404	30
7	280	460	30
8	315	485	30

Double Socket Bends:

The fabricated bends shall be suitable for elastomeric sealing ring type joint as per the enclosed drawing. The dimensions of the double socket bends shall be as given below:

S.No.	Outside diameter in mm	Radius (r) mm	Angle of bend in degrees	L1 = L2
1	63	221	90	359
		221	45	230
2	90	315	90	469
		315	45	285
3	110	385	90	551
		385	45	326
4	140	490	90	674
		490	45	387
5	160	560	90	756
		560	45	428
6	225	788	90	1023
		788	45	562
7	280	980	90	1268
		980	45	674
8	315	1100	90	1410
		1100	45	746

Quality control tests

All the fitting shall be tested for socket dimension, workmanship/surface finish and leak tightness in accordance with for uPVC pipes.

Supply of specials

All the PVC fittings shall be supplied along with necessary rubber rings. The rubber rings shall be supplied in black coloured polyethylene bags. The fittings shall be packed and supplied in jute bags or in cardboard or wooden boxes according to their size.

The fittings should also be supplied by the manufacturer of the pipes. They should preferably be manufactured by the manufacturer of the pipes. In case they are not, it will be the responsibility of the manufacturer of the pipes to have them manufactured from a suitable manufacturer under it's own supervision and have it tested at his/sub contractors premises as per the contract. The pipe manufacturer will however be responsible for the compatibility and quality of the products.

Valves

General

The sluice valve will confirm to IS: 780/ IS: 2906.

The material to be supplied under this sub-section shall include but not be limited to the following:

All necessary fittings including bolts, nuts, gaskets, backing rings, counter flanges, jointing material, strainers etc. as required.

Sluice Valves

Scope

This section covers the requirements for non rising stem type sluice valve from 50 mm to 600 mm size. The valves will be used for water supply on line installations in upright positions, up to 450 C working temperature, with double flange and cap or hand wheel, for manual operation.

Nominal pressure and dimensions

The working pressure of the valves shall be 10 kg/cm2 (1 MPa)

The dimension and mass of the sluice valves shall be in accordance with IS: 780 for sizes from 50 to 300 mm and IS: 2906 for sizes 350 to 600 mm.

The flanges and their dimensions of drilling shall be in accordance with IS: 1538 (part-I to XXII).

Material

The material for different component parts of sluice valve shall conform to requirements given below:

S No.	Component	Material	Ref. to IS	Grade / designation
1	Body, bonnet, wedge, stuffing box, gland, thrust plate, hand wheel cap. etc.	Grey cast iron	210	FG 200
2	Stem	Stainless steel	6603	AISI 431, AISI 410
3	Wedge nut	Leaded tin bronze	318	LTB 2
4	Body seat ring, wedge facing ring	Leaded tin bronze	318	LTB 2
5	Bolt	Carbon steel	1363	Class 4.6
6	Nut	Carbon steel	1363	Class 4
7	Bonnet gasket	Compressed fiber board	2712	C
8	Gland packing	Asbestos	4687	Nil

Coating

All sluice valves shall be coated by dipping in a bath of tar base composition as given in Clause 7 of IS: 780 for sizes from 50 mm to 300 mm and Clause 8 of IS: 2906 for sizes from 350 mm to 600.

All components susceptible to corrosion attack shall be coated internally and externally. Protective coating shall always be applied to the individual components before they are assembled, following shot blasting to give good adhesion.

Marking, testing and inspection

The standard marking and packing of the valves shall be done as per Clause 10 and 11 of IS: 780. The direction of rotation for OPEN, CLOSE position shall be marked on the hand wheel and on the bonnet of the valve.

Testing of sluice valve shall be done for close end in accordance with IS: 780 for sizes from 50 mm to 300 mm and IS: 2906 for sizes from 350 mm to 600.

All the valves shall be inspected for flaw detection test in accordance with IS: 780. for sizes from 50 mm to 300 mm and IS: 2906 for sizes from 350 mm to 600.

The design, construction material, manufacture, inspection, performance and testing shall comply with all applicable Indian Standards and Codes. Nothing in the specification will be construed to relieve the supplier of this responsibility.

Air valves

Scope and general design feature

This section covers the requirements of automatic double ball air valves to be used for evacuation of accumulation of air in water mains under pressure, for the exhaust of air when such mains are being charged with water and for inlet of air when they are emptied of water.

The Air Valves shall conform to IS14845. The design shall be such that higher the rate of flow the greater the resultant down thrust keeping the ball 'glued' to its seat until the last drop of air is expelled from the pipe system.

The valves shall have an integrated sluice valve. If required, they shall be installed on a flange welded on the MS pipe / special. The possible air velocity (inflow and outflow) must be at least 10 m/s. The working pressure of the air valves shall be 10 kg / cm^2 (1Mpa).

Construction feature

The flow of air should be as unobstructed as possible. The low-pressure orifice shall be in the same axis as the main discharge/incoming airflow and must have a diameter sufficiently large.

The cone angle in the low-pressure (large orifice) chamber should be carefully calculated and there should be adequate height to allow for free movement of the vulcanite ball in the low chamber. The annulus around the low-pressure vulcanite covered ball is to be generously proportioned for discharge of air under various differential pressures.

The orifice shall be carefully profiled to allow the requisite flow of air under varying differential pressure. It shall be in moulded synthetic rubber such that even after extended contact the vulcanite covered ball does not stick to it when the line pressure becomes zero.

In the high-pressure chamber the orifice shall be in profiled in such a manner that the rubber-covered ball is not damaged even after extended contact. There should be machined guide in the chamber, which ensures that the ball travels vertically and makes contact with the nipple and seals off the orifice without fail.

Material

The material for different component parts of the air valve shall conform to requirements given below:

S No.	Component	Specifications
1	Body	Cast Iron conforming to IS: 210 GR FG 200
2	High Pressure Cover	Cast Iron confirming to IS 210 GR FG 200
3	Low Pressure Cover	Cast Iron confirming to IS 210 GR FG 200
4	Cowl	Cast iron confirming to !S 210 GR FG
5	High Pressure Orifice Plug	Stain less steel conforming to AISI 410
6	Low pressure ball	Vulcanite covered seasoned timber
7	High pressure ball	Rubber covered seasoned timber
8	Lower pressure seat ring	Dexine (Nitrile rubber)
9	Isolating sluice valve	Conforming to IS: 780 – 1984
10	Spindle for sluice valve	Stainless steel conforming to AISI 410
11	Bolts and nuts	Mild steel

The body and seat of the valve shall withstand a working pressure of 10 kg/cm^2 for at least 15 minutes.

Inspection

Third Party Inspection:

The following items of supply will be got inspected from approved inspecting agency (CEIL, SGS. RITES) at manufacturers premises before dispatch at his own cost.

1. Ductile Iron pipes, rubber gaskets & specials
2. Sluice valves,
3 upvc pipes

Specifications for Laying and Jointing of Pipe Line System for Water Supply

Preparatory work

The contractor will inspect the route along which the pipe line is proposed to be laid. He should observe/ find out the existing underground utilities/ construction and propose an alignment along which the pipeline is to be laid. He should make all efforts to keep the pipe as straight as possible with the help of ranging rods. Wherever there is need for deviation, it should be done with the use of necessary specials or by deflection in pipe joints (limited to 75% of permissible deflection as per manufacturer). The alignment as proposed should be marked on ground with a line of white chalk and got approved from Engineer In-Charge. The Contractor will than prepare an L-Section along this alignment showing the location of proposed pipeline. The L-section should be got approved from the site Engineer. The position of fittings, valves, should be shown on the plan.

Alignment and the L-Sections

The alignments, L-section (depth of laying) and location of specials, valves and chambers may be changed at site in co-operation with and after approval of the Engineer in Charge. The minimum cover to the top of the pipe shall be 1 m.

Standards

Except as otherwise specified in this technical specification, the Indian Standards and Codes of Practice in their latest version, National Building code, PWD specification of the state of Rajasthan and Manual of water supply of GOI shall be adhered to for the supply, handling, laying, installation, and site testing of all material and works.

Tools and equipment

The contractor has to provide all the tools and equipment required for the timely, efficient and professional implementation of the work as specified in the various sections of the contract and as specified by the instructions of manufacturers of the pipes and other material to be handled under this contract. On demand he shall provide to the Engineer in Charge a detailed list of tools and equipment available. If in the opinion of the Engineer in Charge the progress or the quality of the work cannot be guaranteed by the available quantity and type of tools and equipment the contractor has to provide additional ones to the satisfaction of the Engineer in Charge. The Contractor will always have a leveling instrument on site.

Handling and laying of pipes

Transportation of pipes and specials & Storage:-

The Contractor has to transport the pipes and other materials from manufacturer to the site of laying as indicated by the Engineer in Charge. Pipes should be handled with care to avoid damage to the surface and the socket and spigot ends, deformation or bending. Pipes shall not be dragged along the ground or the loading bed of a vehicle. Pipes shall be transported on flat bed vehicles/trailers. The bed shall be smooth and free from any sharp objects. The pipes shall rests uniformly on the vehicle bed in their entire length during transportation. Pipes shall be loaded and un-loaded manually or by suitable mechanical means without causing any damage to the stacked pipes.

The transportation and handling of pipes shall be made as per IS 12288. Handling instructions of the manufacturers of the pipes shall be followed. All precautions set out shall be taken to prevent damage to the protective coating, damage of the jointing surfaces or the ends of the pipes.

Whatever method and means of transportation is used, it is essential that the pipes are carefully placed and firmly secured against uncontrolled movement during transportation to the satisfaction of engineer in charge.

Cranes or chain pulley block or other suitable handling and lifting equipment shall be used for loading and un-loading of heavy pipes. However, for pipes up to 400 mm nominal bore, skid timbers and ropes may be used. Where using crane hooks at sockets and spigot ends hooks shall be broad and protected by rubber or similar material, in order to avoid damage to pipe ends and lining. Damage to lining must be repaired before pipe laying according to the instructions of the pipe manufacturer. Pipes shall not be thrown directly on the ground or inside the trench.

When using mechanical handling equipment, it is necessary to employ sufficient personnel to carry out the operation efficiently with safety. The pipes should be lifted smoothly without any jerking motion and pipe movement should be controlled by the use of guide ropes in order to prevent damage caused by pipes bumping together or against surrounding objects.

Rolling or dragging pipes along the ground or over other pipes already stacked shall be avoided.

The pipe should be given adequate support at all times. Pipe should be stored on a reasonably flat surface free from stones and sharp projections so that the pipe is supported through out its length. In storage, pipe racks should provide continuous support and sharp corners of metal racks should be avoided. Socket and Spigot pipes should be stacked in layer with sockets placed in alternate ends of the stack to avoid lop sided stacks.

Pipes should not be stored inside another pipe. On no account the pipes should be stored in stressed or bent condition or near the sources of heat. Pipes should not be stacked more than 1.5 m high and pipes of different sizes and classes should be stacked separately. The ends of the pipes should be protected from abrasion. The pipes should be protected from U.V. rays and excessive heat at all times. Their storage facility should be well ventilated.

The Contractor shall provide proper and adequate storage facilities to protect all the materials and equipment's against damage from any cause whatsoever and in case of any such damage/theft, the Contractor shall be held responsible.

The contractor will lay the pipelines along the alignments as per the layout given by the Engineer in Charge. The layout shall be given keeping in view the information available regarding existing services like water lines, sewers, telephone and electric lines/ cables. In the event some services fall in the alignment of lines to be laid, the contractor shall have to shift such services for which a provision has been made in the BOQ. The contractor shall take all due care to avoid damage to any such services and, in case of any damage occurring to them in progressing the work, the Contractor shall make good the same at his own cost. No additional time shall, however, be allowed on this account.

Stringing of pipes along the alignment

The pipes shall be laid out properly along the proposed alignment in a manner that they do not create any significant hindrance to the public and that they are not damaged.

Stringing of the pipe end to end along the working width should be done in such a manner that the least interference is caused in the land crossed. Gaps should be left at intervals to permit the passing of equipment across the working area. Pipes shall be laid out that they remain safe where placed and that no damage can occur to the pipes and the coating until incorporated in the pipeline. If necessary, pipes shall be wedged to prevent accidental movement. Precautions shall be made to prevent excessive soil, mud etc. entering the pipe.

Generally, the pipes shall be laid within two weeks from the date of their dispatch from the manufacturer /store .

Pipe trench

Trench excavation

The trench excavation of pipeline shall be in accordance with IS 12288. Pipe trenches shall be excavated to the lines and levels shown on the drawings or as directed by the Engineer in Charge. The depth of the excavated trench shall be as given in the drawings or as directed by the Engineer in Charge. The width of the trench at bottom between the faces of sheeting shall be such as to provide 200 mm clearance on either side of the Diameter. No pipe shall be laid in a trench until the section of trench in which the pipe is to be laid has been approved by the Engineer in Charge.

The depth should be sufficient to provide a cover not less than 1000 mm. It may be necessary to increase the depth of pipeline to avoid land drains or in the vicinity of roads, railways or other crossings. Care should be taken to avoid the spoil bank causing an accumulation of rainwater.

The bottom of the trench shall be trimmed and leveled to permit even bedding of the pipes. It should be free from all extraneous matter, which may damage the pipe or the pipe coating. Additional excavation shall be made at the joints of the pipes, so that the pipe is supported along its entire length.

All excavated material shall be stacked in such a distance from the trench edge that it will not endanger the work or workmen and it will avoid obstructing footpaths, roads and driveways. Hydrants under pressure, surface boxes, fire or other utility controls shall be left unobstructed and accessible during the construction work. Gutters shall be kept clear or other satisfactory provisions made for street drainage, and natural watercourses shall not be obstructed.

To protect persons from injury and to avoid damage to property, adequate barricades, construction signs, torches, red lanterns and guards, as required, shall be placed and maintained during the progress of the work and until it is safe for traffic to use the roadways. All materials, piles equipment and pipes which may serve as obstruction to traffic shall be enclosed by fences or barricades and shall be protected by illuminating proper lights when the visibility is poor.

As far as possible, the pipe line shall be laid below existing services, like water and gas pipes, cables, cable ducts and drains but not below sewers, which are usually laid at greater depth. Where it is unavoidable, pipeline should be suitably protected. A minimum clearance of 150 mm shall be provided between the pipeline and such other services.

Trees, shrubbery fences, poles, and all other property and surface structures shall be protected. Tree roots shall be cut within a distance of 50 cm from pipe joints in order to prevent roots from entering them. Temporary support, adequate protection and maintenance of all under ground and surface structures, drains, sewers and other obstructions encountered in the progress of the work shall be provided. The structures, which will be disturbed, shall be restored after completion of the work.

Where water forms or accumulates in any trench the Contractor shall maintain the trench free of water during pipe laying.

Wherever necessary to prevent caving, trench excavations in soils such as sand, gravel and sandy soil shall be adequately sheeted and braced. Where sheeting and bracing are used, the net trench width after sheeting shall not be less than that specified above. The sides of the excavation shall be adequately supported at all times and, except where described as permitted under the Contract, shall be not battered.

The Engineer in Charge in co-operation with the Contractor shall decide about the sheeting/ bracing of the trench according to the soil conditions in a particular stretch and taking into account the safety requirements of the Contractor's and Engineer-In- Charge's staff. Generally, safety measures against caving have to be provided for trenches with vertical walls if they are deeper than 2.0 m.

Trench excavation to commensurate with the laying progress

The work of trench excavation should be commensurate with laying and jointing of the pipeline. It should not be dug in advance for a length greater than 500 m ahead of work of laying and jointing of pipeline unless otherwise permitted by the Engineer in Charge. The Contractor has to ensure the following:

- safety protections as mentioned above have to be incorporated in the work process
- hindrances to the public have to be minimized
- the trench must not be eroded before the pipes are laid
- the trench must not be filled with water when the pipes are laid
- the trench must not be refilled before laying of the pipes

The bed for the laying of the pipes has to be prepared according to the L-Section immediately before laying of the pipes.

Bedding of the pipes

The trench bottom shall be even compact and smooth so as to provide a proper support for the pipe over its entire length, and shall be free from stones, lumps, roots and other hard objects that may injure the pipe or coating. Holes shall be dug in the trench bottom to accommodate sockets so as to ensure continuous contact between the trench and the entire pipe barrel between socket holes.

Laying and jointing of pipes

General

The pipes will be cleaned in the whole length with special care of the spigot and sockets on the inside/ outside to ensure that they are free from dirt and unwarranted projections. The whole of the pipes shall be placed in position singly and shall be laid true to profile and direction of slope indicated on longitudinal sections. The pipes shall be laid without deflection in a straight alignment between bends and between high and low points. Vertical and horizontal deflections between individual pipes need the approval of the Engineer in Charge. In no case the deflection shall be more than 75 % of those recommended by the manufacturer.

Before pipes are jointed they shall be thoroughly cleaned of all earth lumps, stones, or any other objects that may have entered the interior of the pipes, particularly the spigot end and the socket including the groove for the rubber ring.

Pipes and the related specials shall be laid according to the instructions of the manufacturers and using the tools recommended by them.

Cutting of pipes shall be reduced to a minimum required to conform to the drawings. Cutting has to be made with suitable tools and according to the recommendations of the manufacturer. The spigot end has to be chamfered again at the same angle as the original chamfered end. Cutting shall be perpendicular to the Centre line of the pipe. In case of ductile iron pipes the cut and chamfered end shall be painted with two coats of epoxy paint. If there is no mark for the insertion depth on the spigot end of the (cut) pipe it shall be marked again according to the instructions of the manufacturer.

Before pipes are jointed they shall be thoroughly cleaned of all earth lumps, stones, or any other objects that may have entered the interior of the pipes, particularly the spigot end and the socket including the groove for the rubber ring. End caps are removed only just before laying and jointing

All specials like bends, tees etc. and appurtenances like sluice or butterfly valves etc. shall be laid in synchronization with the pipes. The Contractor has to ensure that the specials and accessories are ready in time to be installed together with the pipes.

At the end of each working day and whenever work is interrupted for any period of time, the free ends of laid pipes shall be protected against the entry of dirt or other foreign matter by means of approved plugs or end caps.

When pipe laying is not in progress, the open ends of installed pipe shall be closed by approved means to prevent entrance of trench water and dirt into the line.

No pipe shall be laid in wet trench conditions that preclude proper bedding, or when, in the opinion of the Engineer in Charge, the trench conditions or the weather are unsuitable for proper installation.

The pipeline laid should be absolutely straight unless planned otherwise. The accuracy of alignment should be tested before starting refilling with the help of stretching a string between two ends of the straight stretch of pipes to rectify possible small kinks in laying.

Special Cast Iron fittings and Accessories

Normally when pipeline is laid, a certain number of cast iron fittings such as tees, bends, reducers, etc, and special fittings such as air or sluice valves are required.

Laying of Fittings – All cast iron fittings shall be plain ended to suit the outside diameter of Asbestos cement pressure pipes and to the class and diameter of pipe manufactured. When using such cast iron fittings, they are jointed by cast iron detachable joints only. For cast iron specials having flanges, they are jointed in the pipeline with cast iron flange adaptors having one end flanged and the other plain ended.

Anchorages - It should particularly be noted that the cast iron joints do not hold pipe ends within it firmly. During working or test pressure, there will be tendency for the pipe ends or special ends to slip out of the joint, more so with the case of blank end cap used for closure of pipeline and all degree bends and tees. In order to keep them firmly in the pipeline, anchoring of these specials are necessary against the direction of thrust.

The anchorage shall consist of either concrete cast-in-situ or masonry built in cement mortar. The anchors shall be extended to the firm soil of the trench side. The shape of the anchors will depend on the kind of specials used. They shall be spread full width of trench and carried vertically by the side and over the special to about 15 cm. The bearing area on sides of the trench will be proportional to the thrust and to bearing capacity of the sides of the trench.

Back filling and tamping

The soil under the pipe and coupling shall be tamped in order to provide a firm and continuous support or the pipeline.
Tamping shall be done either by tamping bars or by using water to consolidate the back fill material.

The initial back fill material used shall be free of large stones and dry lumps. In stony areas the material for initial back fill can be shave from the sides of the trenches. In bogs and marshes, the excavated material is usually little more than vegetable matter and this should not be used for bedding purposes. In such cases, gravel or crushed stone shall be hauled in.

The initial back fill shall be placed evenly in a layer of about 100 mm thick. This shall be properly

Consolidated and this shall be continued till there is a cushion of at least 300 mm of cover over the pipe.

If it is desired to observe the joint or coupling during the testing of mains they shall be left exposed.

Sufficient back fill shall be placed on the pipe to resist the movement due to pressure while testing.

Balance of the back fill need not be so carefully selected as the initial material. However, care shall be taken to avoid back filling with large stones, which might damage the pipe when spaded into the trench.

Pipes in trenches on a slope shall have extra attention to make certain that the newly placed back fill will not become a blind drain in effect because until back fill becomes completely consolidated, there is a tendency for ground or surface water to move along this looser soil resulting in a loss of support to the pipe. In such cases, the back fill should be tamped with extra care and the tamping continued in 100 mm layers right up to the ground level.

Anchoring of the pipeline

Thrust blocks shall be provided at each bend, tee, taper, end piece to prevent undue movements of the pipeline under pressure. They shall be constructed as per actual design and approval of Engineer in Charge according to the highest pressure during operation or testing of the pipes, the safe bearing pressure of the surrounding soil and the friction coefficient of the soil.

Testing of the upvc pipelines

Sectional tests:- After laying and jointing the pipeline shall be tested for tightness of barrels and joints, and stability of thrust blocks in sections approved by the Engineer in Charge as per IS Code.

HDPE Pipes

The HDPE (High density polyethylene) pipes (for water supply) confirming to IS 4984-1995 and duly marked with certification of BIS shall only be supplied. The pipe shall confirm to the test requirements prescribed in IS 4984-1995. The minimum factory test pressure for hydraulic test shall be 2 times the rated pressure of pipe for 60 seconds. No defect/ leakage/ cracks should be visible after hydraulic test.

Colour

The colour of pipe shall be black. Each pipe shall contain minimum three equispaced longitudinal stripes of width 3mm in blue colour. These strips shall be co-extruded during pipe manufacturing and shall not be more than 0.2mm depth. The material of the stripes shall be same type of resin, as used in the base compound for the pipe.

Material

The raw material used for the manufacture of pipes should not constitute toxic hazard, should not support microbial growth and should not give rise to unpleasant taste or odor, clouding or discoloration of water. The pipes shall be manufactured from 100% virgin PE-80 High density polyethylene (HDPE) food grade raw material with minimum required strength of 8MPa (PE-80). The raw material should be of food grade quality. The nominal pressure of pipes required shall be as specified in the scope of work. The pipe material shall be suitable for conveyance of drinking water for which the certificate of recognized institute shall be provided. High density polyethylene (HDPE) used for the manufacture of pipes shall confirm the designation PEEWA-45-T-003 or PEEWA-45-T-006 or PEEWA-50-T-003 or PEEWA-50-T-006 or PEEWA-57-T-003 or PEEWA-57-T-006 of IS: 7238/1992. In addition the material shall also confirm to $5.6.2 of IS 7328-1992. The specific base density shall be between 940.0 Kg/Cum and 958.4 Kg/Cum (both inclusive) when determined at 27 C according to procedure prescribed in Annexure “A” of IS: 7328/1992. The value of the density shall not differ from the nominal value by more than 3 kg/cum as per $ 5.2.1.1 of IS 7328-1992.

The MFR (Melt Flow Rate) of the material shall be between 0.20g/10min and 1.10g/10min (both inclusive) when tested at 190 degree C with nominal load of 5 Kgf when determined by the method prescribed in $ 7 of IS: 2530-1963. The MFR of the material shall be within +/- 20% of the value declared by the manufacturer.

The resin shall be compounded with Carbon black. The Carbon Black content in the material shall be within 2.5 + 0.5% and dispersion of Carbon black shall be satisfactory when tested according to the procedure prescribed in IS: 2530-1963.

With the advancement in technology natural (unpigmented) resin designation PEEWA-45-T-003 or PEEWA-45-T-006 or PEEWA-50-T-003 or PEEWA-50-T-006 or PEEWA-57-T-003 or PEEWA-57-T-006 of IS: 7238/1992 duly stabilized with anti-oxidants may be compounded with suitable black master batch or processed directly after physical mixing with suitable black master batch in the pipe extruder for production of pipes, which shall confirm to the performance requirements of the pipe as specified in IS 4984. The material of pipe thus produced shall confirm to the requirements of $ 5.2 of IS 4984-1995.

The percentage of anti-oxidant used shall not be more than 0.3 percent by mass of finished resin. The anti-oxidant used shall be physiologically harmless and shall be selected from the list given IS: 10141-1982.

No reworked or recycled material shall be used.

Dimensions

The outside diameter of pipes, tolerance on the same and ovality of pipes, and minimum and maximum wall thickness shall be confirming to IS 4984-1995. The length of straight pipe shall be 5 to

20m. However wherever specifically required under the conditions of contract, the pipes shall be supplied in coils.

Visual appearance

The internal and external surfaces of pipes shall be smooth, clean and free from grooving and other defects. The ends of the pipes shall be cleanly cut square with the axis to within the tolerances given in IS 4984 and free from deformity. Slight shallow longitudinal grooves or irregularities in the wall thickness shall be permissible provided that the wall thickness remains within the permissible limits.

Inspection and Testing of HDPE Pipes

The HDPE pipes supplied by the contractor shall be subjected to following tests as per IS 4984 for acceptance:

- Visual and dimensional check as per IS 4984
- Hydraulic characteristics/ Internal pressure creep rupture test as per IS 4984
- Longitudinal reversion test as per IS 4984
- Overall Migration test
- Density test
- Melt flow rate test
- Carbon black content and Dispersion test
- Any other test required as per provisions to which supplied pipes confirms i.e. (IS 8329)
- Hydraulic test at manufacturer premises before dispatch.

In addition the following are required for review by inspection authority:

- The test reports of raw material.
- The type test report of pipe. This shall not be more than two years old from the date of inspection of pipes.
- Notch Impact test as per ASTM-1474. HDPE pipes when tested as per ASTH-1474 (Notch Impact Test) should pass the Hydraulic test as per 1S:4984:1995 for a minimum 165 Hrs. This test can be carried out at factory or at some private laboratory. Such report should not be more than 3 month old from date of inspection.

The sampling method for testing shall be as per the provisions of the standards to which they are manufactured.

The pipes shall also be got tested from CIPET. Department shall demand for manufacturers' test report for pipes along with pre dispatch inspection by EIC or his authorized representative.

Marking

All pipes shall be marked as per the provisions of IS 4984 and subjected to following minimum requirements:

- Manufacturer name/ Trade mark,
- Designation of pipe,
- Lot number/ Batch number,
- Manufacturing standard to which the pipe confirms (IS 4984) and BIS certification mark,
- Mark of pre-dispatch Inspecting authority.

TRANSPORTATION / STORAGE OF PIPES AND SPECIALS:

The Contractor has to transport the pipes and other materials from manufacturer to the site stores and from the site stores to the site of laying as per the instructions given by the Engineer in Charge. Pipes should be handled with care to avoid damage to the surface and the socket and spigot ends, deformation or bending. Pipes shall not be dragged along the ground or the loading bed of a vehicle. Pipes shall be transported on flat bed vehicles/trailers. The bed shall be smooth and free from any sharp objects. The pipes shall rests uniformly on the vehicle bed in their entire length during transportation. Pipes shall be loaded and un-loaded manually or by suitable mechanical means without causing any damage to the stacked pipes.

The transportation and handling of DI pipes shall be made as per IS 12288. All precautions set out shall be taken to prevent damage to the protective coating, damage of the jointing surfaces or the ends of the pipes.

Whatever method and means of transportation is used, it is essential that the pipes are carefully placed and firmly secured against uncontrolled movement during transportation to the satisfaction of engineer in charge.

Damage to lining must be repaired, as per relevant IS code, before pipe laying according to the instructions of the pipe manufacturer after taking approval of EiC. Pipes shall not be thrown directly on the ground or inside the trench.

When using mechanical handling equipment, it is necessary to employ sufficient personnel to carry out the operation efficiently with safety. The pipes should be lifted smoothly without any jerking motion and pipe movement should be controlled by the use of guide ropes in order to prevent damage caused by pipes bumping together or against surrounding objects.

Rolling or dragging pipes along the ground or over other pipes already stacked shall be avoided.

The pipe should be given adequate support at all times. Pipe should be stored on a reasonably flat surface free from stones and sharp projections so that the pipe is supported through out its length. In storage, pipe racks should provide continuous support and sharp corners of metal racks should be avoided. Pipes should not be stacked in large piles for all pipes. Socket and Spigoted pipes should be stacked in layer with sockets placed in alternate ends of the stack to avoid lop sided stacks.

Pipes should not be stored inside another pipe. On no account the pipes should be stored in stressed or bent condition or near the sources of heat. Pipes should not be stacked more than 1.5 m high and pipes of different sizes and classes should be stacked separately. The ends of the pipes should be protected from abrasion. The pipes should be protected from U.V. rays and excessive heat at all times. Their storage facility should be well ventilated.

The Contractor shall provide proper and adequate storage facilities to protect all the materials and equipments against damage from any cause whatsoever and in case of any such damage/theft, the Contractor shall be held responsible.

The contractor will lay the pipelines along the alignments as per the approved L section. layout shall be given by the Engineer in Charge of his authorized representative. The layout shall be given keeping in view the information available regarding existing services like water lines, sewers, telephone and electric lines/ cables. In the event some services fall in the alignment of lines to be laid, the contractor shall have to shift the alignment or such services. The contractor shall take all due care to avoid damage to any such services and, in case of any damage occurring to them in progressing the work, the Contractor shall make good the same at his own cost. No additional time and payment shall be allowed on this account.

Rubber rings shall be handled and stored in their original packing, protected against sunlight and contacts with petroleum product, solvents and paints.

The Contractor shall provide suitable lifting equipment for loading, unloading and laying of the pipes.

Specials for HDPE Pipes

Unless otherwise specified, the specials and the jointing material for HDPE pipes shall be Fusion fittings confirming to GBE/PL2:PART 4. Fusion fittings with integral heating element shall be used in general. All fittings shall be of Class B. Fittings shall be produced from material class PE 80 or PE 100. The fittings shall be free from cracks, voids, blisters, holes, distortion, dents, injurious incisions, inclusions or any other likely to impair their performance. For each fitting the fusion time shall be the same.

SPECIFICATIONS FOR P/L/J AND SECTIONAL TESTING OF PIPELINES

General

The contractor will inspect the route along which the pipe line is proposed to be laid. Efforts shall be made by the contractor to make minor deviations from the marked alignment so as to keep the pipe alignment as straight as possible and to avoid damage of public and private properties along the alignment. The alignment of pipe line and location of specials & chambers may be changed at site in co- ordination and with prior approval of the Engineer In Charge. The final alignment on which the pipeline shall be laid shall be marked in field and got approved from the Engineer in Charge or his representative. Where ever there is need for deviation, it should be done with the use of necessary specials or by deflection in pipe joints (limited to 75% of permissible deflection as per relevant standards). The alignment as proposed should be marked on ground with a line of white chalk and got approved from Engineer In-Charge. The position of fittings, valves, shall be as per directions of engineer-in-charge.

The quality of pipes, inner mortar lining and the quality of laying shall ensure that the considered co- efficient of friction of value (Cr=1) is obtained during the designed period, so that the design is validated and the designed quantities of flow can be delivered. Thus the contractor shall ensure that the conditions of pipes its lining and the laying are perfect in all respect.

Standards

Except otherwise specified in this technical specification, the Indian Standards and Codes of Practice in their latest version, National Building code, PWD specification of the state of Rajasthan and Manual of water supply of GOI shall be adhered to for the supply, handling, laying, installation, and site testing of all material and works. The laying of pipeline shall be done in confirmations to the following standards:

.Alignment and the L-Sections

The slopes provided shall be such that in existing ground level conditions, the maximum cover over the laid pipe is neither more than 1.5 m nor less than 0.9 m, if the pipe is to be laid above ground. The average cover generally should not be less than 0.9 meters. In case of HDPE pipes, the pipes shall have a minimum cover of 900 mm when laid under roads with light traffic or under cultivated soils and 1.25 m when laid under roads with heavy traffic. When the soil has poor bearing capacity and is subject to heavy traffic, the pipes shall be laid on a concrete cradle.

SCHEDULES AND SPECIFICATIONS FOR TUBE WELL WORK

Schedule - A

1. Specification and scope of tube well work

The work of construction of tube wells is to be done in JDA jurisdiction and accordingly G schedule has been prepared.
The work of drilling of bores is suitable for 150/ 200mm diameter casing pipes and strainer pipes in all type of soils and rocks including fixing of casing and strainer pipes, Gravel Packing, Wrapping coir rope and development by compressor. The boring will be done as per relevant IS : 2800-1979, 4097-1970, 4270-1967, IS : 8110 amended up to date and any other relevant code applicable along with notifications.

2. Definition of Strata

2.1 **ROCKY AREA SHALL MEAN, AREA WHERE THE STRATA ESSENTIALLY COMPRISES OF THE ROCK FORMATION WITH OVER BURDEN OF LESS THAN 30 M AND THE AQUIFER IS TO BE TAPPED IN ROCK. THE ROCK MAY BE WITH OR WITHOUT FISSURES AND FAULTS, JOINTS AND BEDDING, PLANES MAY HAVE FRACTURED AND WEATHERED ZONES, ROCKS MAY BE SOFT, MEDIUM OR HARD AND MAY COMPRISE OF SHALES, SAND STONE, LIME STONE, DOLOMITE, QUARZITE, BASALTS, GRANITE, SCIESTS, FILLITIES SLATES, CHEISSES ETC. AND THEIR INTERCALATION, INTRUSIVE AND CONGLOMERATES OF THESE HUT SHALL EXCLUDE CLAYS, SAND SILTS, PEBBLES CABLES, MURRUM AND SILT STONES. THE DEPTH OF DRILLING CAN BE INCREASED OR DECREASED AS PER SITE CONDITIONS.**

2.2 All alluvium area shall mean, areas where the strata comprises of loose, unconsolidated material like clay, silts, sands, gravel's, pebbles, cobbles 10 cms. Diameter and 2 M thickness and boulders (Upto beds of 1.0 meter thickness and less than 15 cms. Diameter)

3. Installation of well assembly

Aquifer study is to be done by the tenderer and accordingly he has to design the gravel pack, blind pipe, housing pipe and slotted pipe to be used shall be made of mild steel conforming to IS : 4270/1967 and approved class. The pipes may be seamless or electric resistance welded (ERW) with specified threads.

3.1 The slotted pipe to be used shall be lined slots (Vertical or Horizontal) with an opening area equal to as arrived at is design. The slots size should not exceed the thickness of slotted pipe. This slots size shall be specific depending on the result by actual mechanical analysis of the aquifer samples, which shall have to be done by the tenderer. The length of the slotted pipe/strainer shall normally be not less than 3 M. It shall actually be arrive at from the thickness of the aquifer encountered. It is not necessary to screen the whole part of the aquifer and such depth should be drilled so as to give at least 4000 LPH discharge for 200 mm diameter tube well.

The slotted pipe shall be attached to the housing pipe/blind pipe by means of strong M.S. Coupling/reducers as the case may be of quality ad design approved by Engineer-in- charge. The bottom plow shall be such as to suit the design of pipe assembly.

3.2 The design of well assembly should be got approved from the Engineer-in-Charges before lowering is started.

4. Painting

Before lowering coat of approved corrosion resistance paint shall be given to all the mild steel parts of the well assembly.

5. Gravel Packing

Gravel to be used shall be confirming with IS : 2800 (Part-II) 1979(latest). These shall be hard, well rounded and of reasonable size free from dust and foreign material as well as flaky particles. The uniformity coefficient should not be more than 2 (uniformity coefficient = D_{60}/D_{10}.

The size of gravel shall finally depend on the mechanical analysis of the aquifer. The Gravel will have to be cleaned and washed before use. A tolerance of 10% shall be allotted in respect of grading of Gravel.

The Gravel filling of the annular space between the pipe assembly and the bore holes shall start from the bottom of bore holes and shall be done upto ground level. The gravel packing will have to be done as per IS : 2800.

6 Development of the tube well

The tube well may be developed as per clause 9.3 of IS : 2800 (Part I)-1991 (latest). The water coming out should be silt/sand free after completion of development. The tube shall be developed by using a compressor of minimum capacity 600 cfm and pressure 7.0 kg/cm^2. Final discharge should be totally sand free as per IS: 2800 (Part –I) 1991 (amended upto date). The payment shall be made for actual working hours for development subject to ceiling of maximum 25 hours for each tube well. The contractor has to bear the cost of development work needed beyond 25hrs, at his own cost.

7 Lowering of Riser pipe in Tube Well

Providing of HDPE pipe having SS nipples on both end including nut & bolts for 40 mm to 63 mm diameter shall be lowered in required length. The flange shall have required suitable size of holes and slot for cable.

8 Specifications for submersible pump sets

Supply of submersible pumping sets comprising of submersible motor of sufficient horse power coupled to a pump of duty condition as specified in the schedule of rates, having detailed specification given below:

Description:

8.1 The submersible pump set should be in accordance with the provision of IS 8034-1976 (specification for submersible pumps sets for clear cold fresh water) amended or revised upto date.

8.2 The electric motor is to operate through 3 phase, 50 c/s A.C. Supply of 400 +10% volts at 3000 rpm (synchronize).

8.3 The pump sets shall normally be installed in bore wells and should be suitable for grounding water generally available in Rajasthan. The water to be handled by the pump sets may have total solids 3000 ppm (max), turbidity 50 ppm chlorides 1000ppm (max) pH value between 6.5 to 8.5.

8.4 The discharge casing, suction casing, and pump bowl shall be made from cast iron grade FG 200 IS 210-1978. The pump shaft and bearings sleeves are to be made of stainless steel as per IS 1570(part IV) 1972 or CA 6mm confirming to ASTMA 296 with 12 % chrome steel carbon content upto 0.1% for mixed flow impellers materials should be chrome steel having minimum hardness of 200 BHN , or Aluminum Bronze as per grade AB- II or BS 1400. In case of radial flow impellers material may be aluminum bronze with hardness 140-180 BHN. The casing wear ring (where required and bearing bush shall be made from lead tin bronze grade 4 of IS 318-1981.

8.5 The motor starter should be easily rewirable and winding should be easily accessible to facilitate checking and locating of any fault without disturbing the full winding and to replace the default coils. It should be possible to rewind the motor with ready made pre-tested coils.

8.6 The stator body should preferably be shrunk fitted instead of being only press fitted. The stator body should be rigidly welded on the stamping assembly and adequate to arrangement of stamping inside the stator body preferably by providing matching grooves in stamping assembly and stator body. Metal rings with rounder fingers should be provided on both ends of stampings. Threaded joints in the motor should be avoided to prevent damage due to rest. Bearing housing should be threaded but located in spigot and by suitable tie bolts. The motor as well as stator should be impregnated under vacuum and the motor should be backed repeatedly under controlled conditions to ensure long life of varnish and give a hard finish to the motor surface. The rotor shaft should be provided with stainless steel sleeves in the bearing portion. The rotor should be made of corrosion resisting material.

8.7 The thrust bearing should be water lubricated and of hydro dynamic Mitchell type and should be able to take all untoward loads at most unfavorable running conditions. It should have sieving metallic thrust pads.

8.8 The rotating element (as assembled rotors) of pump should be dynamically balanced at high speeds.

8.9 The manufacture should have facilities for dynamic balancing at high speed, vacuum impregnated of rotors and stators high tension electrical testing and pump testing. Details in this regard be enclosed with tender.

8.10 Performance curves of various pumps offered should be enclosed. The curve should he for duty range showing discharge/head, discharge/efficiency, discharge/BHP and discharge/submergence relations.

8.11 The cable shall conform to IS 694 (Part I) 1964 and IS 694 (Pt. II) 1964 specifications for PVC insulated cables (for voltage upto 1100 volts) Pt. I with copper conductors.

8.12 The coupling shall be preferably of mesh type rigid sleeves coupling of stainless steel non slip type with matching groove collar and key way arrangement.

8.13 The duty point of pumps shall be located near the peak efficiency and three should not be any steep fall in QHH V/s efficiency curve in the head range of 10% and 25%.

8.14 Efficiency – The efficiency, motor efficiency and overall efficiency should be clearly mentioned in the offer. Please note that no negative tolerance in overall efficiency with be allowed.

8.15 The motor shall conform to IS 9283-1979 and IS 325-1978 (amended up to date) the later a far it can be applied to submersible motors regarding electrical performance. The motor shall not get overloaded throughout the working range of pump even when voltage is as low 358 volts.

8.16 **Inspection :-** A certificate of inspection of submersible pumping set will be produced by contractor along with the bill to Engineer-in-Charge. All the testing and inspection charges will be paid by the contractor himself.

9. Specifications for feeder pillar panels:

Feeder Pillar Panels suitable for 10.0 H.P. Electric Motors complete with star delta starters and DOL starter upto 5 HP Electric motor and other accessories as detailed below operated on 3 phase 50 cycles A.C. supply 415 volts.

1 No, push button operated air Break fully automatic Star Delta Starters in sheet steel enclosure for 10.0 H.P. electric motors confirming to IS: 8544 (amended upto date).

Motor	Contactor Rating		
	Main	Delta	Star
Upto 10.0 H.P.	16 Amps	16 Amps	16 Amps

9.2 1 No. Miniature Circuit breaker (TPN) confirming to IS: 8828-1978 of adequate capacity, 32 Amp

9.3 1 No. 0-500 volts 100mm diameter round projection volt meters class 1.5 with selector switch confirming to IS: 1248 (amended upto data)

9.4 1 No. 100mm diameter round projection mounting type ammeter of suitable range class 1.5 with selector switch (details shown below) confirming to IS: 1248 (amend upto date) 0 to 30 amp range

9.5 3 Nos. Indicator Lamps RYB indication.

9.6 Provision for supply and fixing of power capacitor 4 KVAR ISI mark with the panel, space of requisite standard KWH meter may be provided in the panel with thick bakelite sheet for fixing of KWH meter

9.7 3 Nos. 415 volts rewirable type fuses (for 32 Amp)

9.8 1 No. Danger plate

9.9 1 no. Name plate.

9.10 1 No. Single phase preventor based on negative sequence voltage sensing to protect the submersible motor against single phasing should have facility to automatically restart the pump on resumption of power supply with auto/manual selection.

9.11 Space for Flow meter display unit.

9.12 Space for Pressure Display.

9.13 Neutral link.

9.14 Connecting strip 60 Amp 9 way

The above accessories and equipment will be mounted in a floor mounting type sheet shall enclosures made out of 16 gauge MS sheet and having locking arrangement and 2 Nos. earthing bolts, The complete panels board should be synthetic enamel painted with two coats after applying basic primer over washed and clean metal surface. The panel board will be fixed/mounted on a angle iron framework made of 35x35x5mm angle iron so that the same could be floor mounted and installed at site. The panel will be fully factory wired and ready for connection to the equipment.

Size of feeder pillar panels exclusive of canopy Height 1200mm, Width 850mm, Depth 400mm.

Size of Canopy: 940 mm W, 400mm D, 100mm H Tapering. Stand size mode of angle iron 35x35x5mm H= 360mm. (Drawings of feeder panel enclosed)

The panel shall be mounted on masonry platform with 50mm thick CC 1:2:4 flooring having size 1000mm x 600mm protruding 45cm above the existing road level.

Detailed specification of Individual Items:

9.15 Starters

Push button operated air break starter fully automatic suitable for starting squirrel cage induction motor working on 3 phase 415 Volts (+10% to –15%) 50 c/s A.C. supply each starter shall comprising as per IS:8444 (amended upto date)

(a) Over Current Device:

1 No. Triple pole thermal bimetllic/over current relay accurately calibrated and temperature compensated with differential system for phase failure and unbalanced load protections.

(b) Control Assembly

I. It shall confirm to IS: 2959-1975 and shall comprise of 3 triple pole contractors of specified capacity one for main, one for the star position and one for delta position. Each contractor shall be provide with 1 No. And 1 NC auxiliary unit.

II. Vacuum impregnated machine wound and backed coil with inter layer paper insulation/epoxy cost suitable for tropical conditions. The coil should be safe from mechanical damage in case of accidental mishandling and should have high resistance to moisture and suitable for operation of 415 (+10% to –15%) volt supply.

III. Contractors should be of suitable silver alloy to ensure long life and the contact system should be double break and designed to keep bounce to the minimum. Provision for mechanically interlocking the contractors should be available.

IV. The manner of removal of fixed and moving contacts should be easy. The thermal connections preferable should be require disconnection during contact replacement.

V. The coil should be easily accessible and the coil replacement as well as the contactor assembly should be simple without likely to pull out. Screws should be provided with retaining arrangement.

(C) Timer:

The change over from star to delta position shall be automatic and sharp through thermal/pneumatic/electronic timer (adjustable approximately from 5 to 20 seconds or 2 to 12 seconds)

(D) Start and Stop Push Button:

Shrouded and mounted on the cover.

9.16 Control Switch:

The miniature circuit breaker shall be of adequate rating suitable for operation at 415 V-3 phase, to C/s A.C. supply. The breaker mechanism shall be of quick make break and trip free. The components of the breaker should be designed to last the life of the breaker with no maintenance what so ever including greasing.

The circuit breaker shall have unambiguous mechanical trip indication by means of the position of the knob in addition to ON/OFF.

The circuit breaker shall trip in less than or equal to 25 milli-seconds short circuit conditions.

9.17 Painting

All steel work should undergo a process of de-greasing, pickling in acid and cold rising, passivating and sprayed with a high corrosion resistance primer. The finishing treatment should be application of two coats of synthetic enamel paint.

9.18 Wiring

The panel should be completely factory wired for the connection to the equipment at site, wiring should be made in such a way that it is easily accessible for observations repair work without disturbing other components. Contactor should be PVC insulated confirming to IS 694

The make of various components should be as below

Miniature Circuit breaker

L&T/MDS/Standards/Indo Asian make or any equivalent mark.

Ampere/Voltmeter

IMP /AE/Essmoar equivalent ISI mark

Starter/Contactor/|Relay Timer:

L&T/Siemens/BCH

Porcelain Rewirable fuse unit:

Havells/Standard or any equivalent ISI mark.

Selector Switch:

Kaycee/Becon/Salzer

Single Phase preventor:

Minilec/or any equivalent ISI mark

Capacitor L&T and equivalent ISI marked

Schedule - B

Complete set of drawing can be obtained from office of Executive Engineer (PHE-I).

Schedule - C (Sample of material)

The contractor shall submit the list of samples of the following items in specified quantities as mentioned against each item before the commencement of work or within 15 days of issue of work order which ever is earlier, to the Engineer – In – Charge for carrying out of test as specified under schedule "D" and shall obtain his approval before issuing any such material at site.

Sample of the following items shall be submitted for each source of supply free of cost by the contractor.

1. Gravel 0.25 cu.m.

2. PVC wire mesh 0.5 Sq.m.

6. Sample of earth strata /tube well at interval of 6m or change of strata for each tube well separately in fine and clear bottles.

7. Water samples in clear bottles for chemical analysis at every 3m interval.

8. Any other sample that may be required by Engineer- in – Charge from time to time.

9. Water sample after development in two bottles for each tube well (The Chemical analysis from PHED laboratory shall be submitted to Engineer -in-charge, no payment shall be made by department in this regard)

Schedule - D (Tests to be carried out)

The following test to be carried out by the Executive engineer or any other agency authorized by him to undertake such test.

The Engineer – in – Charge or his authorized representative will carry out as and when considered necessary for the quantity and quality of work done and for the materials used in the work. The contractor, unless otherwise specified shall provide all facilities and arrangements to undertake these tests and all testing charges shall be borne by the contractor.

The contractor shall supply required quantity of samples desired by executive engineer, the samples so obtained shall be sent to authorized laboratory for testing, if the material is not found according to the specifications the entire cost of samples and testing shall be borne by the contractor and the entire lot of supply will also be rejected.

Schedule - E (Site Conditions)

The work is located at different places in JDA region.

The view of the having visited the site, the contractor should sign the certificates as below:

It is certified that I/We……the tenderer for the above work having visited the site and have and aquanted myself/ourselves with all conditions and accordingly I/we am/are quoting the rates in confirmation of above facts and in stipulation of the other conditions as mentioned in the tender form.

Schedule - F

The complete work defined in the scope of work in the schedule A and detailed itemswise under schedule G appended herewith shall be completed in all respect and to the entire satisfaction of the Engineer – in – Charge and hand over to the JDA or to the person nominated by the JDA to take over within stipulated period from the date of issue of order to the contractor. The date of commencement of the rate contract shall be 10 days after issue of work order. The completion period of each tube well or number of tube well shall be as per clause 12 of Special Terms and Conditions

Schedule - G

Schedule "G" given separately. The contractor is liable to honour of the any adjoining property and any other work for the damage ascertained on account of this work, while in progress.

SCHEDULE –H

The unit rates of items which are not covered under the basic schedule of rates mentioned above by Addl. Chief Engineer and the cost analysis will be done, if needed.

The scope of work for each item of work in schedule–G is as per detailed drawing.

All leads and lifts, centering and strutting are included in the item rates for such work and no extra payment on account of extra lead lifts centering and strutting is admissible. The contractor should invariably account all these items involved in work in his percentage premium rates offered in the tender by him, such claim shall be paid to him.

The quantities of different items and schedules–G are estimated, which may vary as per actual site conditions. The contractor will have to execute the work as per site conditions and will not paid any thing extra on account of non execution one or more items. He is also required to assess the areas of the site of works. The extra work shall not be done by the contractor until and unless the quantity and unit rates for such extra work is agreed between JDA and the contractor and written order to such effect is issued by the competent authority. All extra work shall be paid as per basic schedule of rates on which schedule-G has been prepared.

In case the unit rates or extra works to be carried out is not covered under basic schedule of rates as per specified then the unit rate shall be decided by analysis of prevailing market rate. Such basic items shall be considered for detailed analysis of the extra work and not tender premium shall be paid over and above such rates

Schedule - I

No material shall be supplied by JDA

Executive Engineer (PHE-I)
JDA, Jaipur

Specification of G.I. Pipes

1. Scope:

This includes manufacture & Supply of galvanized mild steel Tubes Sockets (Medium Class) to be used for Water wells and other miscellaneous purposes conforming to IS: 1329-1990 (amended up to date) in nominal bore of pipes of 32mm. The pipes should be ISI marked.

2. Material:

General requirements relating to supply of Mild steel Tubes shall confirm to IS: 1387-1967. The welded tubes shall be manufactured from hot rolled steel skeip/strip confirming to Grade-I ass per IS: 10748-1984 (amended up to date). The tube shell be Electric Resistance welded (ERW). The height of the internal weld fin shall not be greater the 60% of the specified thickness.

The chemical analysis of steel tubes shall be carried out only for sulphur & phosphorous requirement. The Sulphur & phosphorus requirements shall not exceed 0.05 percent each with maximum permissible variation of 0.005 percent each. The analysis shall be carried out as per IS: 228.

The sockets shall be electric resistance welded and should meet the requirement of IS: 1239 (Part-2) 1992 (amended up to date). However socket for 32mm pipe shall manufactured from seamless pipe & it shall be not dipped galvanized.

3.Dimension and Masses:

Dimensions and masses of steel Tubes shall be as follows:

Nominal Bore (mm)	Out side Diameter		Thickness (mm)	Mass of screwed & socketed type kg/m	Minimum out side diameter of socket (mm)	Minimum length of socket (mm)
	Maximum (mm)	Minimum (mm)				
32	42.9	42.0	3.2	3.13	49.0	51.0

4. Length of Pipe:

The G.I. pipes of 32mm nominal bore with socket (as per clause 3.4 above) shall be supplied in 3 M. length.

The length of tube shall be measured as inclusive of socket on one end with handling tight. Handling tight means that the socket is so tight fitted that it should not fall down during handling on transit.

5. galvanising:

The Zinc coating on the tube shall be in accordance with IS: 4736-1986. The tubes shall be galvanized before screwing .

6. Tolerance on Thickness mass & length:

The tolerance shall be permitted as per clause 9 and 11 of IS: 1239 (Part-II) 1990. However tolerance in length of 32mm pipe shall + 0-mm-25-mm.

7. Finish:

All pipes shall be clearly finished and reasonably free from injurious defects. The ends shall be cleanly cut and reasonably square. The tubes shall be reasonably straight.

1. Protection And Packing:

The protection and packing shall be done as per provision of relevant IS:

2. Inspection

All material shall be inspected by the concerned Executive Engineer. Material shall be supplied in Divisional Store for checking and then issued for execution.

Note: Wherever there is reference of Indian Standard it shall be considered amended up to date at the time of inspection of Supply/replacement by inspecting agency. Any amendment shall be effective only when it is implemented by B.I.S. All the material shall be ISI marked.

Section A-5
Annexure

Annexure A :

Compliance with the code of Integrity and No Conflict of Interest

Any person participating in a procurement process shall –

(a) Not offer any bribe, reward or gift or any material benefit either directly or indirectly in exchange for an unfair advantage in procurement process or to otherwise influence the procurement process;
(b) Not misrepresent or omit the misleads or attempts to mislead so as to obtain a financial or other benefit or avoid an obligation;
(c) Not indulge in any collusion, Bid rigging or anti-competitive behavior to impair the transparency, fairness and progress of the procurement process;
(d) Not misuse any information shared between the procuring Entity and the Bidders with an intent to gain unfair advantage in the procurement process;
(e) Not indulge in any coercion including impairing or harming or threatening to do the same, directly or indirectly, to any party or to its property to influence the procurement process;
(f) Not obstruct any investigation or audit of a procurement process;
(g) Disclose conflict of interest, if any; and
(h) Disclose any previous transgressions with any Entity in India or any other country during the last three years or any debarment by any other procuring entity.

Conflict of Interest :-

The Bidder participating in a bidding process must not have a Conflict of interest.
A conflict of interest is considered to be a situation in which a party has interests that could improperly influence that party's performance of official duties or responsibilities, contractual obligations, or compliance with applicable laws and regulations.
i. A Bidder may be considered to be in Conflict of Interest with one or more parties in a bidding process if, including but not limited to:

a. Have controlling partners/shareholders in common ; or
b. Receive or have received any direct or indirect subsidy from any of them; or
c. Have the same legal representative for purposes of the Bid; or
d. Have a relationship with each other; directly or through common third parties, that puts them in a position to have access to information about or influence on the Bid of another Bidder, or influence the decisions of the Procuring Entity regarding the bidding process; or
e. The Bidder participates in more than one Bid in a bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all Bids in which the Bidder is involved. However, this does not limit the inclusion of the same subcontractor, not otherwise participating as a Bidder, in more than one Bid; or
f. The Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the Goods, Works or Services that are the subject of the Bid; or
g. Bidder or any of its affiliates has been hired (or is proposed to be hired) by the Procuring Entity as engineer-in-charge/ consultant for the contract.

Annexure B :

Declaration by the Bidder regarding Qualifications

Declaration by the Bidder

In relation to my/our Bid submitted to …….. for procurement of …….. in response to their Notice inviting Bids No. ……..Dated …….. I/We hereby declare under Section 7 of Rajasthan Transparency in Public Procurement Act, 2012, that :

1. I/We possess the necessary professional, technical, financial and managerial resources and competence required by the Bidding Document issued by the Procuring Entity;
2. I/We have fulfilled my/our obligation to pay such of the taxes payable to the Union and the State Government or any local authority as specified in the Bidding Document;
3. I/We are not insolvent, in receivership, bankrupt or being wound up, not have my/our affairs administered by a court or a judicial officer, not have my/our business activities suspended ant not the subject of legal proceeding for any of the foregoing reasons;
4. I/We do not have, and our directors and officers not have, been convicted of any criminal offence related to my/our professional conduct or the making of false statements or misrepresentations as to my/our qualifications to enter into a procurement Contract within a period of three years preceding the commencement of this procurement process, or not have been otherwise disqualified pursuant to debarment proceedings;
5. I/We do not have a conflict of interest as specified in the Act, Rules and the Bidding Document, which materially affects fair competition;

Date :
Place :

Signature of bidder

Name :
Designation :
Address :

Annexure C :

Grievance Redressal during Procurement Process

The designation and address of the First Appellate Authority is Commissioner , JDA, Jaipur.

The designation and address of the Second Appellate Authority is Additional Chief Secretary, UDH, Raj Govt.

(1)Filing an appeal

If any Bidder or prospective bidder is aggrieved that any decision, action or omission of the Procuring Entity is in contravention to the provisions of the Act or the Rules or the Guidelines issued there under, he may file an appeal to First Appellate Authority, as specified in the Bidding Document within a period of ten days from the date of such decision or action, omission, as the case may be, clearly giving the specific ground or grounds on which he feels aggrieved:

Provided that after the declaration of a Bidder as successful the appeal may be filed only by a Bidder who has participated in procurement proceedings:

Provided further that in case a Procuring Entity evaluates the Technical Bids before the opening of the Financial Bids, an appeal related to the matter of Financial Bids may be filed only by a Bidder whose Technical Bid is found to be acceptable.

(2) The officer to whom an appeal is filed under para (1) shall deal with the appeal as expeditiously as possible and shall Endeavour to dispose it of within thirty days from the date of the appeal.

(3) If the officer designated under para (1) fails to dispose of the appeal filed within the period specified in para (2), or if the Bidder or prospective bidder or the Procuring Entity is aggrieved by the order passed by the First Appellate Authority, the Bidder or prospective bidder or the Procuring Entity, as the case may be, may file a second appeal to Second Appellate Authority specified in the Bidding Document in this behalf within fifteen days from the expiry of the period specified in para (2) or of the date of receipt of the order passed by the First Appellate Authority, as the case may be.

(4)Appeal not to lie in certain cases

No appeal shall lie against any decision of the Procuring Entity relating to the following matters, namely:-

(a) Determination of need of procurement;
(b) Provisions limiting participation of Bidders in the Bid process;
(c) The decision of whether or not to enter into negotiations;
(d) Cancellation of a procurement process;
(e) Applicability of the provisions of confidentiality.

(5)Form of Appeal

(a) An appeal under para (1) or (3) above shall be in the annexed form along with as many copies as there are respondents in the appeal.

(b) Every appeal shall be accompanied by an order appealed against, if any, affidavit verifying the facts stated in the appeal and proof of payment of fee.

(c) Every appeal may be presented to First Appellate Authority or Second Appellate Authority, as the case may be, in person or through registered post or authorized representative.

(6) Fee for filing appeal

(a) Fee for first appeal shall be rupees two thousand five hundred and for second appeal shall be rupees ten thousand, which shall be non-refundable.
(b) The fee shall be paid in the form of bank demand draft or banker's cheque of a Scheduled Bank in India payable in the name of Appellate Authority concerned.

(7) Procedure for disposal of appeal

(a) The First Appellate Authority or Second Appellate Authority, as the case may be, upon filing of appeal, shall issue notice accompanied by copy of appeal, affidavit and documents, if any, to the respondents and fix date of hearing.
(b) On the date fixed for hearing, the First Appellate Authority or Second Appellate Authority, as the case may be, shall,-
  (i) Hear all the parties to appeal present before him; and
  (ii) Peruse or inspect documents, relevant records or copies there of relating to the matter.
(c) After hearing the parties, perusal or inspection of documents and relevant records or copies thereof relating to the matter, the Appellate Authority concerned shall pass and order in writing and provide the copy of order to the parties to appeal free of cost.
(d) The order passed under sub-clause (c) above shall also be placed on the State Public Procurement Portal.

FORM No. 1

[See Rule 83]

Memorandum of Appeal under the Rajasthan Transparency in Public Procurement Act, 2012

Appeal No. …… of …… Before the ……..…….. (First/Second Appellate Authority)

1. Particulars of appellant :

(i) Name of the appellant :

(ii) Official address, if any :

(iii) Residential address :

2. Name and address of the respondent (s) :
   (i)
   (ii)
   (iii)
3. Number and date of the order appealed against and name and designation of the officer/authority who passed the order (enclose copy), or a statement of a decision, action or omission of the Procuring Entity in contravention to the provisions of the Act by which the appellant is aggrieved:
4. If the Appellant proposes to be represented by a representative, the name and postal address of the representative:
5. Number of affidavits and documents enclosed with the appeal :
6. Grounds of appeal : ……..
   (Supported by an affidavit)
7. Prayer : ……

Place ……..
Date ……..

Appellant's Signature

Annexure D :

Additional Conditions of Contract

1. **Correction of arithmetical errors**

   Provided that a Financial Bid is substantially responsive, the Procuring Entity will correct arithmetical errors during evaluation of Financial Bids on the following basis:

   i. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected, unless in the opinion of the Procuring Entity there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price shall be corrected;

   ii. It there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected ; and

   iii. If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (i) and (ii) above.

   If the Bidder that submitted the lowest evaluated Bid does not accept the correction of errors, its Bid shall be disqualified and its Bid Security shall be forfeited or its Bid Securing Declaration shall be executed.

2. **Procuring Entity's Right to Vary Quantities**

   (i) At the time of award of contract, the quantity of Goods, works or services originally specified in the Bidding Document may be increased or decreased by a specified percentage, but such increase or decrease shall not exceed twenty percent, of the quantity specified in the Bidding Document. It shall be without any change in the unit prices or other terms and conditions of the Bid and the conditions of contract.

   (ii) If the Procuring Entity does not procure any subject matter of procurement or procures less than the quantity specified in the Bidding Document due to change in circumstances, the Bidder shall not be entitled for any claim or compensation except otherwise provided in the Conditions of Contract.

   (i) In case of procurement of Goods or services, additional quantity may be procured by placing a repeat order on the rates and conditions of the original order. However, the additional quantity shall not be more than 25% of the value of Goods of the original contract and shall be within one month from the date of expiry of last supply. If the supplier fails to do so, the Procuring Entity shall be free to arrange for the balance supply by limited Bidding or otherwise and the extra cost incurred shall be recovered from the supplier.

3. **Dividing quantities among more than one Bidder at the time of award (In case of procurement of Goods)**

   As a general rule all the quantities of the subject matter of procurement shall be procured from the Bidder, whose Bid is accepted. However, when it is considered that the quantity of the subject matter of procurement to be procured is very large and it may not be in the capacity of the Bidder, whose Bid is accepted, to deliver the entire quantity or when it is considered that the subject matter of procurement to be procured is of critical and vital nature, in such cases, the quantity may be divided between the Bidder, whose Bid is accepted and the second lowest Bidder or even more Bidders in that order, in a fair, transparent and equitable manner at the rates of the Bidder, whose Bid is accepted.

Signature of Contractor
with full address & Mobile No.

Executive Engineer (PHE-I)
JDA, Jaipur

AnnexureE:

JAIPUR DEVELOPMENT AUTHORITY, JAIPUR

No. JDA/Ex.En. (TA to Dir. Engg.-I)/2016/D-29 Dated: 11/3/2016

Office Order

Subject: - DLP period for various type of works.

As per the decision taken in the 201st meeting of Executive Committee held on 23.02.2016 w.r.t. agenda no. 201:22, DLP period of various natures of works amounting more than Rs. 25 lakhs has been revised as per following time periods based on nature of works.

This order will supersede the earlier orders issued in this regard i.e. order No. JDA/TA to D(E)/2010-11/D-317 dated 28.04.2011 including Special Condition No. 2.2.2 & 2.2.3 of Annexure-I related to SD refund & forfeiture (other Special Condition of annexure-I of this order will remain valid) and order No. JDA/Ex.En.(Pr.-5 & TA)/2013/D-43 dated 27.02.2013 and also all pertaining orders, in contract agreements or in PWF&AR having DLP period different than what is being enforced through this present order for concerned type of work.

Table-I

S.No.	Type of Work	Existing DLP Period	As per approved in E.C. held on 23.02.2016
1.	Bridge Work	3 years	5 Years
2.	CD Work	3 years	5 Years
3.	CC Road, PQC Work	3 years	5 Years
4.	CC tiles/Kerbs/medians	3 years	5 years
5.	Drains	6 months	3 years
6.	Roads		
	(i) Two layer WBM/GSB	3 years	6 Months or one full rainy season which ever is later
	(ii) For Renewal/Strengthening		
	(a)BT upto 30 mm thickness	3 years	1 year
	(b)BT above 30 mm to upto 40 mm	3 years	2 years
	(c)BT above 40 mm to upto 90 mm	3 years	3 years
	(d) BT Above 90 mm	3 years	5 years
	(iii)New Roads		
	(a) BT upto 90 mm	3 years	3 years
	(b) BT more than 90 mm	3 years	5 years
7.	Compound wall	6 months	3 years
8.	Buildings work		
	(i) Work pertaining to Sanitary works electrical works, Joinery works and painting works.	6 months	2 years
	(ii) Work pertaining to Building structure and other civil works.	6 months	5 years
9.	Electric work except maintenance	6 months	3 years
10.	Sewer/Water supply all including STP and water supply related work except maintenance works.	6 months	3 years

The release of SD amount shall be as per following table:-

Table-II

S. No.	Released SD / DLP period	1st year	2nd year	3rd year	5th year
1.	Upto 1 year	100%	40%	20%	10%
2.	Upto 2 year		60%	20%	10%
3.	Upto 3 year			60%	10%
4.	Upto 4 year				20%
5.	Upto 5 year				50%

Various conditions for managing DLP are as under:-

(i) At the time of completion of work, final component shall be worked out for each individual item like BT/CC/tiles/drains etc (as per different categories in Table I), DLP shall be operative based upon type of individual item ex:- CC-5 years, BT- 1/2/3/5 years, Drain- 3 years etc.

(ii) Similarly for all new works, these components should be calculated at the time of TS itself, which should be made part of BID document.

(iii) If any work, amount is less than Rs. 25 lakhs but later on due to extra/excess work, if amount of final work crosses more than Rs. 25 lakhs, DLP shall be operative as per rule for each individual item.

(iv) Similarly if any work is more than Rs. 25 lakhs but after finalization amount of work is less than Rs. 25 lakhs, DLP should be operative for six months or rainy season whichever is late.

(v) During DLP period if contractor fails to repair any work even after issue of 7 days written notice, same work shall be got executed by respective Executive Engineer at the contractor's risk and cost. This process shall be applicable throughout the DLP period. After completion of DLP period in such works contractor should be debarred and blacklisted from JDA for three years as per RTPP Rule 2012 and 2013 where he defaults twice in a single agreement or in two different works.

(vi) Quarterly Inspection as per rules shall be carried out and DLP registers shall be maintained by respective Executive Engineers to monitor the DLP repairs.

(vii) Special and regular inspection shall also be carried out as per order no. JDA/Ex.En & TA to DE-I/2014-15/D-223 dated 12.03.2015 and order no. SE (PMGSY) CIRCULAR 2006/D-115 dated 04.05.2006 Point no. 3.

(viii) In case JDA feels to take up work on any existing DLP road due to any reason, following procedure should be adopted:

(a) At the time of withdrawal total liability of repairs as per DLP conditions to be carried out and contractor shall be asked to complete the same. After completion of assessed repairs DLP period shall be released after deduction amt. as per table III.

Table-III

% Recovery on Withdrawal of DLP, of work order / DLP period	1 year	2 year	3 year	4 year	5 year
1 year	1.12	-	-	-	-
2 year	2.55	1.43	-	-	-
3 year	4.38	3.26	1.83	-	-
5 year	9	7.88	6.45	4.62	2.47

Note:- Calculation is to be done on quarterly basis.

(b) In case Contractor fails to carry out these repairs, same shall be carried out at his risk and cost. If the total amt. of such repairs works out to be more than total retained amt. of SD, same shall be recovered from other works and as per PDR rules. The amount as per Table III is also to be deducted in addition to this amount.

(ix) Based upon type of work, DLP conditions for works to be carried out during DLP period with their frequency of respective type of work shall be prepared by respective SE's after approval of these periods.

This order shall come in force with immediate effect and will be applicable on all new works whose NIB is to be called.

Sd/-
Director (Engineering-I)
JDA, Jaipur

Copy to following for information and necessary action:-

1. PS to JDC, JDA, Jaipur.
2. PS to Secretary, JDA, Jaipur.
3. Director Engineer I/II, JDA, Jaipur.
4. Director (Fin.), JDA, Jaipur.
5. C.F, JDA, Jaipur.
6. All Add. Chief Engineers, JDA, Jaipur.
7. All Superintendent Engineers, JDA, Jaipur.
8. OSD (RM), JDA, Jaipur.
9. Additional Director (REV.&DP.)
10. CAO (P&A) JDA, Jaipur.
11. Sr. Horticulturist, JDA, Jaipur
12. All Executive Engineer, JDA, Jaipur.
13. DD (E&B) JDA, Jaipur.
14. All AOs, JDA, Jaipur.
15. All AAOs, JDA, Jaipur.
16. System Analyst
17. All Contractors' Association, JDA, Jaipur.
18. Guard file

S.E. & TA to Dir. (Engg.-I)
JDA, Jaipur

01. Use of Bitumen mixture Tar mechanical lime grinder, cement concrete mixer & vibrator is essential for the work. Which shall have to be arranged by the contractor at his own level/cost?
02. If there is any typographical error or otherwise in the 'G' Schedule the rates given in the relevant BSR on which schedule 'G' has been prepared, shall prevail.
03. The contractor shall follow the contractor labour regulation and abolition Act 1970 & Rule 1971.
04. The JDA shall have right to cause on audit and technical examination of the work and the final bills of the contractor including all supporting vouchers, abstract etc. to be made within two years after payment of the final bills and if as a result such audit any amount is found to have been over paid/excess in respect of any work done by the contractor under the contract or any work claimed by him to have been done under this contract and found not to have been executed the contractor shall be liable to refund such amount and it shall be lawful ;for the JDA to recover such sum from him in ;the manner prescribed in special condition no. 8 or any other manner legally permissible and if it is found that the contractor was paid less then that was due to him under the contract in respect of any work executed by him under it, the amount of such under payment shall be paid bay the JDA to the contractor.
05. Tax exemption/ Tax liabilities if any shall be applicable as per prevailing government rule and bidder has to consider this while quoting the rates.
06. The contractor shall not work after the sunset and before sunrise without specific permission of the authority Engineer.
07. Whenever any claim against the contractor for the payment of a sum of money arises out or under the contracts, the JDA shall be entered to recover the sum by appropriating in part or whole of the security deposit of the contractor. In the event of the security being insufficient or if no security has been taken from the contractor then the balance of the total sum recoverable as the case may shall be deducted from any sum then due or which a any time there contract with the JDA should this sum be sufficient to recover the full amount recoverable, the contractor shall pay to JDA on demand the balance remaining due. The JDA shall further have the right to effect such recoveries under P.D.R. Act.
08. The rate quoted by the contractor shall remain valid for a period of 90 days from the date of opening of the tenders.
09. By submission of this tender the contractor agree to abide with all printed conditions provided in the PWD manual from 64 (Chapter 3-para 36) and subsequent modification.
10. No conditions are to be added by the contractor and conditional tender is liable to be rejected.
11. All transaction in the execution of this work and this tender will be liable to sale-tax vide section 2(B) read with sub clause (4) Sale-tax Rule, 1954.
12. If any tenderer withdraws his tender prior to expiry of said validity period given at S.No. 7 or mutually extended prior or makes modifications in the rates, terms and conditions of the tender within the said period which are not acceptable to the department or fails to commence the work in the specified period, fails to execute the agreement the department shall without prejudice to any, other right or remedy, be at liberty to forfeit the amount of earnest money given in any form absolutely. If any contractor, who having submitted a tender does not execute the agreement or start the work or dose not complete the work and the work has to be put to retendering, he shall stand debarred for six months from participating of tendering in JDA in addition to forfeiture of Earnest Money / Security Deposit and other action under agreement
13. Rules regarding enlistment of contractors provide that work ;upto five times limit for which they are qualified for tendering can be allotted to them Therefore, before tender the contractors will keep this in mind, and submit the details of work. Tenders with incomplete or incorrect information are liable to be rejected.
14. Any material not conforming to the specifications collected at site shall have to be removed by the contractor within a period of 3 days of the instructions, issued by the Engineer-Incharge in writing. Failing which, such material shall be removed by the Engineer-Incharge at risk and the contractor after expiry of 3 days period.

15. The material collected at site and paid provisionally shall remain under the watch and ward of the contractor till it is consumed, fully on the work.
16. The rates provided in tender documents are inclusive of all Taxes royalty.
17. No extra lead of earth/material shall be paid over and above as specified in 'G' schedule. Source/borrow pit area for earth shall have to be arranged by the Contractor at his own cost.
18. Undersigned has full right to reject any or all tenders without given any reasons.
19. Mortar of Masonry work and lean concrete will be permitted mixer with hopper.
20. As per Supreme Court decision "All contracts with Governments shall require registration of workers under the building and other construction workers (Regulation of Employment and Conditions of Service) Act, 1996 and extension of benefits to such workers under the act."
21. The tenderer are required to submit copy of their enlistment as contractor.
22. Conditions of RPWA-100 will be mandatory & acceptable to the contractor.
23. Any tender received with unattested cutting/overwriting in rates shall be rejected and such bidder will be debarred from tendering for three months in JDA.
24. All the provisions of THE RAJASTHAN TRANSPARENCY IN PUBLIC PROCUREMENT ACT, 2012 and Rules, 2013 will be applicable. If there is any contradictions in existing special conditions and provisions of THE RAJASTHAN TRANSPARENCY IN PUBLIC PROCUREMENT ACT, 2012 and RULES, 2013, provisions of THE RAJASTHAN TRANSPARENCY IN PUBLIC PROCUREMENT ACT, 2012 and RULES 2013 shall be applicable.

Signature of Contractor
with full address & Mobile No.

Executive Engineer (PHE-I)
JDA, Jaipur

Schedule – I

FINANCIAL RESOURCES AND CAPABILITY

[Reference clause 3 (a)]

1 Name of Bidder

2. Total financial turnover achieved by the bidder in the last five financial years:

S.no.	Year	Turnover
(1)		
(2)		
(3)		
(4)		
(5)		

Note: Balance Sheets and Profit & Loss Accounts is to be enclosed by the bidder which is considered by him as per criteria 2 (a).

3. Total financial Turnover projected in the current financial year

4. Has the bidder ever been debarred from tendering for Central Government / State Government / any Government undertaking?

   Yes / No, if yes give details.

5. Has bidder ever been declared insolvent?

   Yes/No, if yes give details.

6. Name(s) and Address of Branch/(s) for bidder's Bankers.

   I/We hereby certify that the above information is correct to the best of my/our knowledge and belief.

Signature of Bidder

Date : **(With Seal wherever applicable)**

SCHEDULE - II

[Reference Clause 3(b)]

DETAILS OF QUANTITIES OF WORKS EXECUTED DURING LAST FIVE FINANCIAL YEARS

S. No.	Name of Works (with agreement No. & Date)	Client	Place (district / state)	Financial Year	Principal Items of work	
					As per 2(a)	As per 2(a)

Signature of Bidder

Note: Certificates from concerned Engineers-in-charge should be enclosed in support and verification of the above statement.

To be given on Non-Judicial stamp Paper of Rs. 10/- only, duly attested by Oath-Commissioner / Notary Public

Schedule – III

[Reference Clause 3(d)]

AFFIDAVIT

I/We…….. Proprietor/ Partner/ Authorized signatory of M/s …… under take the oath that I/We will deploy the machinery and equipment listed below as and when required in the execution of this work.

No.	Name of Machinery	Minimum Requirement	Availability	
	After taking approval of Superintending Engineer		Owned	Leased
1	Auto level Instrument with stand & staff	1No.		
2	Tractor with tanker attach with pump	1No		
3	Tractor with Trolly and blade	1No		
4	Diesel operated dewatering pump.	1No		
5				
6				

I/We hereby certify that the above information is correct to the best of my/our knowledge and belief.

Date: Signature of Bidder

(With seal)

SCHEDULE - IV

[Reference Clause 3(e)]

DETAILS OF MAXIMUM VALUE CIVIL ENGINEERING WORKS EXECUTED IN ANY ONE YEAR DURING THE LAST FIVE YEARS TAKING INTO ACCOUNT THE COMPLETED AS WELL AS WORKS IN PROGRESS

S. No.	Name of Works (with agreement No. & Date)	Client	Place (district / state)	Financial Year	Cost of Work as per Work Order	Stipulated date of commencement	Stipulated date of completion	Value of work done during the year

Signature of Bidder

SCHEDULE - V

[Reference Clause 3(f)]

DETAILS OF EXISTING COMMITMENTS & ON GOING WORKS TO BE COMPLETED

S. No.	Name of Works (with agreement No. & Date)	Client	Cost of Work as per Work Order	Stipulated date of commencement	Stipulated date of completion	Value of balance work on date of tender	Likely date of completion of balance work

Signature of Bidder

SCHEDULE - VI

[Reference Clause 3(g)]

DETAILS OF LITIGATION OR ARBITRATION CONTRACTS

S. No.	Name of Works (with agreement No. & Date)	Client	Work Order Amount	Disputed Amount Claimed in Litigation / Arbitration	Date of Raising Disputed Amount	Actual Award Amount, if the case is Decided	Cause of Litigation & matter in Dispute

Signature of Bidder

SCHEDULE –VII

[Reference Clause 3(h)]

BID CAPACITY

Name of Bidder: _____

1.	A = Maximum value of civil Engineering works Executed in any one year during the last five Years (Updated to present price level)	_____Lacs	Certified details enclosed at Page No._____
2.	N = Number of years prescribed for completion of the Work for which bids are invited	----------	
3.	B = Value, at present price level of existing Commitments and on going works to be Completed during the next N Period.	_____Lacs	Certified details enclosed at Page No. _____

Bid Capacity = A x N x 3 - B

= _____ Lacs

Signature of Bidder

ANNEXURE- I

[Reference Clause 3(i)]

Signed Photograph of Applicant

To be given on Non-Judicial stamp
Paper of Rs. 10/- only,

AFFIDAVIT

I/We…… Proprietor/ Partner/ Authorized signatory of M/s …… under take the oath that the information furnished by me/us of the assessment Bid for …… is correct to the best of my/our knowledge and nothing has been concealed by me. I acknowledge that if in future any information furnished by me is found incorrect I will be solely responsible and shall be punished as per the law and also any benefits in any form obtained by me shall be recoverable.

.....

Proprietor/ Partner/ Authorized signatory

M/s ……

……

Note:-

The applicant has to enclose a self attested photo identity card with the above affidavit.

ANNEXURE- II

Bank Guarantee Performa for Bid security deposite

Form of (Bank Guarantee) -En cashable at branch of the bank in Jaipur City.

To
Secretary,
Jaipur Development Authority,
Jaipur

Sub:
Bank Guarantee No. _____ dated _____ for [amount of Security in figures] [in words] on behalf of _____ [Name of the Bidder] against the Security Deposit for the work of "**Rate contract for construction of 200 mm dia tube well, P/L/J of DI pipe line at various locations for one year under zone PHE-I, JDA, Jaipur.**"

WHEREAS, _____ [name of Bidder with address] **(hereinafter called "the Bidder")** has submitted his Bid dated ..... for the work of "**Rate contract for construction of 200 mm dia tube well, P/L/J of DI pipe line at various locations for one year under zone PHE-I, JDA, Jaipur.**" (Hereinafter called "the Bid").

KNOW ALL PEOPLE by these presents that we _____ _____ (Name of Bank) of having our registered office at _____[name of country] having our registered office at _____ (hereinafter called "the Bank") are bound unto Secretary, Jaipur Development Authority. (Hereinafter called "the Employer") in the sum of Rupees _____ **[Amount of Security in figures]** _____ (in words) only for which payment will and truly to be made to the said Employer, the Bank binds itself, its successors, and assigns by these presents.
That on demand of JDA , this Bank Guarantee is encashable at following branch in Jaipur City.
1. Name of Bank:
2. Name of the branch with branch code:
3. Address:
4. E-Mail Id:
5. Telephone No.
6. Fax No.:

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

THE CONDITIONS of this obligation are:
(1) if the Bidder withdraws his Bid during the period of Bid validity specified in the Form of Bid;

(2) if the Bidder refuses to accept the correction of errors in his bid;

(3) If the Bidder, having been notified of the acceptance of his Bid by the Employer during the period of Bid validity;

(a) fails or refuses to execute the Form of Agreement in accordance with the Instructions to Bidders, or

(b) fails or refuses to furnish the Performance Security, in accordance with the Instructions to Bidders;

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

This Guarantee will remain in force up to and including the date 30 days after the date of expiration of the Bid Validity, as stated in the Instructions to Bidders, or any such extension thereto as may be agreed by the Bidder, notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this Guarantee should reach the Bank not later than the above date.

The amount covered under the above Bank Guarantee shall be automatically be credited in the accounts of JDA in ICICI Bank, JDA Campus, Jaipur through **ISFC code No ICICI 006754. Bank Account No. 675401700518** on the date of expiry or its validity, unless the agencies get it re-validated well before its expiry date or produce NOC from JDA in written for its release.

Date _____Signature of the Bank_____

Witness_____ Seal _____

[Signature, Name and Address]

[Note: To be furnished on appropriate non-judicial stamps.]

PAYMENT MECHANISM FOR PARTICIPATING IN TENDER

Jaipur Development Authority has decided to receive Earnest Money Deposit (EMD) (Bid Security) Tender fee online through JDA portal. The bid security options available in tender for participants are as mentioned below :

A. Payment Options:

Option-1: Bank Guarantee (BG). against EMD / Bid Security

Bidder may opt Bank Guarantee (BG) against EMD (Bid Security) for which bidder requires to prepare BG before applying in the tender. The details of BG requires to be fed on JDA portal before paying balance amount (Tender Fee). This amount will be paid through **Payment Gateway only,** option to make balance payment through EFT (RTGS/NEFT) will not be available

If bidder does not opt for BG against EMD, options of making complete payment through Payment Gateway or through EFT (NEFT/RTGS) will be available

Option-2: Electronic Fund Transfer (EFT: NEFT/RTGS)

If the bidder selects payment mode as EFT (NEFT/RTGSL **"Paying Slip for EFT (NEFT/RTGS}"** will be generated by the system for the complete amount. The payment can be made from **any Bank any Branch** using this Paying Slip through NEFT/RTGS (Claim against payment made through EFT in any other JDA bank account will not be acceptable and bidder stands disqualified from participation in the bid applied for). After successful transaction through NEFT/RTGS, as per the standard procedures it may take 4 to 24 hours in process of confirmation of EFT through Auto-Process depending on the time of EFT done. Therefore, option to make payment through EFT (NEFT/RTGS) will be available till 2 days prior to closing date of bid participation.

Option-3: Payment Gateway (Aggregator)

The facility to make payment through Debit Card, Credit Card, Net banking etc., will be available. User can use this facility from **anywhere any time** till the closing date & time of bid participation

B. Bid Participation Receipt

After confirming payment, the bidder will get Bid Participation Receipt on the basis of which user will get the payment details along with other details for bidding on e-Procurement portal of GOR

- In case of BG as the remaining payment will be done through Payment Gateway, on successful transaction the **"Bid Participation Receipt"** will be generated on real time basis
- In case complete payment is done through Payment Gateway, on successful transaction the **"Bid Participation Receipt"** will be generated on real time basis
- In case complete payment is done through EFT (NEFTIRTGS), on confirmation of payment from ICICI Bank (Auto Process) **"Bid Participation Receipt"** will be available on Login of Bidder on JDA portal.

-SD-
Executive Engineer (PHE-I)
JDA, Jaipur

JAIPUR DEVELOPMENT AUTHORITY

Tender Document

For

Name of work : Rate contract for construction of 200 mm dia tube well, P/L/J of DI pipe line at various locations for one year under zone PHE-I, JDA, Jaipur.

Cost: Rs. 530.75 Lacs

NIT No. 14/2017-18 Due On: 08.05.2018

Volume-II

Envelope 'B' (Financial)

Executive Engineer (PHE-I)
Jaipur Development Authority
Jaipur

Validate Print Help

Percentage BoQ

Tender Inviting Authority: JAIPUR DEVELOPMENT AUTHORITY, JAIPUR

Name of Work: Rate contract for construction of 200 mm dia tube well, P/L/J of DI pipe line at various locations for one year under zone PHE-I, JDA, Jaipur

Contract No: EE PHE-I_14_2017-18

Name of the Bidder/ Bidding Firm / Company :	

PRICE SCHEDULE

(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevent columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only)

NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	Estimated Rate in Rs. P	TOTAL AMOUNT Without Taxes in Rs. P	TOTAL AMOUNT In Words
1	2	4	5	6	53	55

1	Providing laying & Jointing of ISI mark centrifugally cast (Spun) ductile iron pressure pipe for water with socket and spigot end and Tyton joint confirming to IS 8329/2000 and departmental specification in standard length (As required) for (Class K-7) suitable for push on joint (rubber gaskets jointing) with side cement mortar lining with cutting of pipe and fixing of C.I. special joint where ever required. This also include the excavation of trench up to 1.5 Meter depth in all type of soil cutting of road surface pavement where required lift up to 1.5 Mt. stacking the soil clear form the edge of excavation andrefiling of soil after laying and jointing of pipe line with proper compaction and disposing of all surplus soil as directed with in lead of 30 Meter. This also include getting the pipe line tested and site clearance etc.(D-878 dt.01.09.2008)					
1.01	100 mm	8922.000	P. Meter	1397.00	**12464034.00**	INR One Crore Twenty Four Lakh Sixty Four Thousand &Thirty Four Only
1.02	150 mm	5000.000	P. Meter	2013.00	**10065000.00**	INR One Crore Sixty Five Thousand Only
1.03	200 mm	2300.000	P. Meter	2455.00	**5646500.00**	INR Fifty Six Lakh Forty Six Thousand Five Hundred Only
1.04	250 mm	1000.000	P. Meter	3184.00	**3184000.00**	INR Thirty One Lakh Eighty Four Thousand Only
1.05	300 mm	1000.000	P. Meter	4024.00	**4024000.00**	INR Forty Lakh Twenty Four Thousand Only
1.06	350 mm	500.000	Nos	5042.00	**2521000.00**	INR Twenty Five Lakh Twenty One Thousand Only

2	Providing/fixing/testing KG of DI specials (K-7) i.e. bend, tees, tail pieces, flanges etc. of various size as per the site condition and requirement including all jointing material in all respects, As per PHED specification. (D-306 dt. 28.04.2009)	5000.000	Kg.	90.00	**450000.00**	INR Four Lakh Fifty Thousand Only
3	Providing, fabricating and installing MS specials including rolling, cutting, welding in different shape and size. **(D-547 dt. 20.12.2011)**	5000.000	Kg.	80.00	**400000.00**	INR Four Lakh Only
4	Labour charges for inter connection of proposed pipe line with existing, pipe line by digging of Pit, cutting of pipe, dewatering through pumps and satisfactory testing of inter connectin and site clearance.**(D-547 dt. 20.12.2011)**	60.000	Each	2512.00	**150720.00**	INR One Lakh Fifty Thousand Seven Hundred & Twenty Only
5	Labour charges for inter connection of proposed pipe line with existing, pipe line by digging of Pit, cutting of pipe, without bailing out of water and satisfactory testing of inter connection and site clearance.**(D-547 dt. 20.12.2011)**	40.000	Each	890.00	**35600.00**	INR Thirty Five Thousand Six Hundred Only
6	Supply of cast iron detachable joints class-10 as per ISI specification (IS 8794-1988) along with rubber ring (ISI marked) and nut bolts complete as per PHED specificatins. **(D-547 dt. 20.12.2011)**					
6.01	100 mm	250.000	Each	274.00	**68500.00**	INR Sixty Eight Thousand Five Hundred Only
6.02	150 mm	150.000	Each	458.00	**68700.00**	INR Sixty Eight Thousand Seven Hundred Only
6.03	200 mm	25.000	Each	652.00	**16300.00**	INR Sixteen Thousand Three Hundred Only
6.04	250 mm	25.000	Each	881.00	**22025.00**	INR Twenty Two Thousand &Twenty Five Only

6.05	300 mm	5.000	Each	1090.00	**5450.00**	INR Five Thousand Four Hundred & Fifty Only
6.06	350 mm	5.000	Each	1911.00	**9555.00**	INR Nine Thousand Five Hundred & Fifty Five Only
7	Supply and fixing of cast iron double sluice valves IS 14846/2000 specification (ISI marked) of PN-1 rating including cost of rubber flange gaskit and nut bolts complete as required for following sizes. **(D-547 dt. 20.12.2011)**					
7.01	100 mm	30.000	Each	5541.00	**166230.00**	INR One Lakh Sixty Six Thousand Two Hundred & Thirty Only
7.02	150 mm	15.000	Each	8107.00	**121605.00**	INR One Lakh Twenty One Thousand Six Hundred & Five Only
7.03	200 mm	10.000	Each	12565.00	**125650.00**	INR One Lakh Twenty Five Thousand Six Hundred & Fifty Only
7.04	250 mm	5.000	Each	23269.00	**116345.00**	INR One Lakh Sixteen Thousand Three Hundred & Forty Five Only
7.05	300 mm	5.000	Each	34984.00	**174920.00**	INR One Lakh Seventy Four Thousand Nine Hundred & Twenty Only
7.06	350 mm	2.000	Each	56466.00	**112932.00**	INR One Lakh Twelve Thousand Nine Hundred & Thirty Two Only
8	Supply and fixing of cast iron Dismentiling joint as per PHED Specifiction including cost of rubber flange gaskit and nut bolts complete as required for following sizes. **(D-547 dt. 20.12.2011)**					
8.01	150 mm	15.000	Each	4311.00	**64665.00**	INR Sixty Four Thousand Six Hundred & Sixty Five Only
8.02	200 mm	10.000	Each	6036.00	**60360.00**	INR Sixty Thousand Three Hundred & Sixty Only

8.03	250 mm	4.000	Each	7918.00	**31672.00**	INR Thirty One Thousand Six Hundred & Seventy Two Only
8.04	300 mm	4.000	Each	9094.00	**36376.00**	INR Thirty Six Thousand Three Hundred & Seventy Six Only
8.05	350 mm	2.000	Each	12662.00	**25324.00**	INR Twenty Five Thousand Three Hundred & Twenty Four Only
9	Supply of cast iron specials (class-10) as per IS : 5531-1988) specification as required. **(D-547 dt. 20.12.2011)**					
9.01	80 mm to 150 mm	4000.000	Kg.	58.00	**232000.00**	INR Two Lakh Thirty Two Thousand Only
9.02	200 mm to 300 mm	4000.000	Kg.	62.00	**248000.00**	INR Two Lakh Forty Eight Thousand Only
9.03	350 mm to 400 mm	1000.000	Kg.	67.00	**67000.00**	INR Sixty Seven Thousand Only

10	Providing, Laying & Jointing in standard lengths HDPE PE-80 PN-6 pipes conforming to IS-4984:1995 (UP TO DATE) with necessary jointing material like mechanical connection i.e. thread/insert/quick release coupler joint/compression fitting joint of flanged joint and specials jointing pipe by butt fusion welding method, including all taxes (central and local), transportation and freight charges inspection charges loading/unloading charges, stacking the same in closed shade duly protecting from sunray and rain including cost of labour and material, specials (Tees, bend etc.) and also including the excavation of trench up to 1.5 Meter depth in all type of soil cutting of road surface pavement whererequired lift up to 1.5- Mt. stacking the soil clear from the edge of excavation and refilling of soil after laying and jointing of pipe line with proper compaction and disposing of all surplus soil as directed with in lead of 50 Meter with satisfactory, hydraulic testing etc. complete as per technical specifications and direction of Engineer-in-charge. (supply up to 90 mm dia. Coil & above 90 mm dia straight length in 6.0 M)					
10.01	90 mm dia	1500.000	Mtr.	397.00	**595500.00**	INR Five Lakh Ninety Five Thousand Five Hundred Only
10.02	110 mm dia	2500.000	Mtr.	567.00	**1417500.00**	INR Fourteen Lakh Seventeen Thousand Five Hundred Only
10.03	160 mm dia	1000.000	Mtr.	990.00	**990000.00**	INR Nine Lakh Ninety Thousand Only

11	Shifting of 15 mm house connection from all kind of water mains to consumer and upto meter complete job including E/W,demolishing of CC/ Black top/WBM road etc. of all thickness, fitting of Gun Metal ferrule of appropriate size as per IS 2692, fitting of MS clamp made by MS strip 50 X 3 mm properly welded with saddle piece, fixing Gun metal non return valve or check valve horizontal type of (ISI make) of size15 mm, MDPE pipe dia 20 mm, PN 16 of confirming to ISO 4427-1996 certified pipe manufactured from virgin PE-80 polyethylene food grade raw material and compressed fitting for MDPE pipe as per ISO 3458-59 or equivalent internal standred of PN-16 rating and fixing of 15 mm size Gun metal full way valve (IS : 778 mark) or wheel valve of approved make complete with supply of all material and successful testing.					
11.01	Upto 5 mtr. length	1000.000	Each	1900.00	**1900000.00**	INR Nineteen Lakh Only
11.02	5 mtr to 10 mtr. length	800.000	Each	2200.00	**1760000.00**	INR Seventeen Lakh Sixty Thousand Only
Total in Figures					**47377463.00**	INR Four Crore Seventy Three Lakh Seventy Seven Thousand Four Hundred & Sixty Three Only
Quoted Rate in Figures			**Select**		**0.00**	INR Zero Only
Quoted Rate in Words		**INR Zero Only**				

Validate Print Help

Percentage BoQ

Tender Inviting Authority: JAIPUR DEVELOPMENT AUTHORITY, JAIPUR

Name of Work: Rate contract for construction of 200 mm dia tube well, P/L/J of DI pipe line at various locations for one year under zone PHE-I, JDA, Jaipur

Contract No: EE PHE-I_14_2017-18

Name of the Bidder/ Bidding Firm / Company :	

PRICE SCHEDULE

(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevent columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only)

NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	Estimated Rate in Rs. P	TOTAL AMOUNT Without Taxes in Rs. P	TOTAL AMOUNT In Words
1	2	4	5	6	53	55

1	Construction of Tube-well upto 100 Meter depth and above in all type of rocks by DTH system and over burden, to accommodate casing pipe of following sizes in all types of soils and over burden including lowering of casing pipes, but excluding cost of casing pipes as per IS : 2800 (Part I & II) 1979 specifications. The work would be completed after obtaining sand free water. The tube well should have a throughout bore as per nominal dia of casing pipe:					
1.01	200 mm dia Nominal bore	1200.000	R.Mtr.	742.50	**891000.00**	INR Eight Lakh Ninety One Thousand Only
2	Construction of *tube-well* from ground levels and upto 100 Meter depth and above to accommodate housing and assembly pipe of following sizes in all types of alluvium strata by percussion/ rotary drilling method and with gravel as per IS:4097-1967 and packing as per IS:2800 (Part I -& II) 1979 as amended upto date (the work includes the cost of gravel & its primary packing and packing during development, lowering of housing & strainer assembly pipes, with supply and wrapping of coir-rope, wherever necessary, for arresting fine sand particles. The work will not include cost of housing pipe and strainer pipe assembly and development work, but work would be completed after obtaining sand free water).					
2.01	200 mm Nominal bore	1050.000	R.Mtr.	1089.00	**1143450.00**	INR Eleven Lakh Forty Three Thousand Four

						Hundred & Fifty Only
3	Development of tube well as per IS specification using suitable compressor to give sand free water for required yield of the gravel packed tube well.	180.000	Hours	445.50	**80190.00**	INR Eighty Thousand One Hundred & Ninety Only
4	Supply of *ERW M.S. black casing pipe* ISI marked (IS:4270/1992) of grade Fe410 of following sizes at site of work. Nominal bore of pipe (mm)					
4.01	200 Nominal bore of pipe (mm)	780.000	Mtr.	1413.00	**1102140.00**	INR Eleven Lakh Two Thousand One Hundred & Forty Only
5	Supply of *strainer pipes* made of ERW M.S. black pipe ISI mark of following sizes at the site of work including required size of slotting as per IS:8110-1985.					
5.01	200 mm Nominal bore	270.000	Mtr.	1638.00	**442260.00**	INR Four Lakh Forty Two Thousand Two Hundred & Sixty Only
6	Installation of submersible motor pump set in Tube-well/open well complete (labour charges only) including transportation of tripod, chain pulley block	15.000	Each	2772.00	**41580.00**	INR Forty One Thousand Five Hundred & Eighty Only
7	P/Laying ISI marked P.V.C. insulated submersible cable confirming to IS:694 with flexible copper conductor including making connection etc. as required.					
7.01	4.0 Sq.mm 3 core flat / Round	1650.000	Mtr.	102.40	**168960.00**	INR One Lakh Sixty Eight Thousand Nine Hundred & Sixty Only

8	SITC of radial / mixed flow submersible motor pump sets ISI marked (IS:8034-1989) of approved make with required accessories including making connection suitable for T.W./ D.C.B./ Open well. The job includes lowering of riser pipe, G.I./ H.D.P.E. pipe with rope, cables, installation of complete fitting and accessories, jointing of electrical cables up to switch board. All labour for testing of submersible pumps set and supply of water to water mains, complete in all respect.					
8.01	100 mm diameter Submersible pump shall have following HP Rating, phase, Head, minimum Discharge respectively.					
8.02	5.0 HP, 1-Ø, (55-150)Mtr, (166-60)LPM	15.000	Each	24140.80	**362112.00**	INR Three Lakh Sixty Two Thousand One Hundred & Twelve Only
9	Providing & lowering of G.I. Pipes, flange pipe including rubber washer and nuts of 8 mm dia complete in all respect I.S.1239 Marked.					
9.01	B Class 50 mm dia	1620.000	R.Mtr.	369.00	**597780.00**	INR Five Lakh Ninety Seven Thousand Seven Hundred & Eighty Only
10	P & F G.I. Pipes (External Work) with G.I. fittings excluding union (IS : 1239 Mark) including trenching & refilling earth etc. 65mm dia nominal bore					
10.01	B' Class	90.000	Mtr.	381.60	**34344.00**	INR Thirty Four Thousand Three Hundred & Forty Four Only
11	P & F Full-way Valve (IS:778 Mark) or wheel valve of approved make :					
11.01	Gun-Metal 50mm nominal bore	15.000	Each	1084.50	**16267.50**	INR Sixteen Thousand

						Two Hundred & Sixty Seven and Paise Fifty Only
12	Providing fixing and installation of 80 mm dia Woltman type water meter with material (Flanges,Insertion sheet, Nut bolt etc.)	15.000	Each	22997.00	**344955.00**	INR Three Lakh Forty Four Thousand Nine Hundred & Fifty Five Only
13	Providing and installing of approved make spring loaded dual plate check valve of following dia. Including all taxes , inspection charges, loading and unloading, stacking etc., including cost of all labour, jointing material with nut bolts, rubber mats etc., and giving satisfactory hydraulic field testing, complete as per specifications.**(D-547 dt. 20.12.2011)**					
13.01	50 mm	15.000	Each	1571.00	**23565.00**	INR Twenty Three Thousand Five Hundred & Sixty Five Only
14	Supply and fixing & testing of feeder type penal board suitable for upto 15 HP electric motor having star delta/ DOL starter (L&T /BCH), MCB 32 amp.(havals /L&T), capacitor 3 KVR (L&T/Havals), Single phase priventor(L$T/havals),indicating lamp RYB , Amp. Meter (0 to 30Amp) , Volt Meter with slector switch (0 to 500 V) size 100 mm, kit kat fuse unit 100 amp,backlite sheet for fixing of 3 phase electric meter of JVVNL electric feeder penal approved as per design and specification mounted on angle iron fram and fixed plain on plain cement concrete plateform, size of feeder penal box 900X 450X1200mm **(D-547 dt. 20.12.2011)**					
14.01	Star Delta above 5 HP to 15 HP	15.000	Each	24915.00	**373725.00**	INR Three Lakh Seventy Three Thousand Seven Hundred & Twenty Five

						Only
15	S&F tube well cover (for 200 mm dia pipe) of MS sheet 8 mm thick at top & 5 mm thick 100 mm wide shroud around the edge so as to form a cap on the top end of casing pipe with GI Nipple 45 cm long & two GI flanger at both end in 80 mm sizes passing through a hole in the centre of MS shet A 25 mm socket with end plug shall also be weld over top plate (as per drawing enclosede), A GI nipple having outside thread of size 1/2" (for installation pressure gauge) shall be provide & welded with GI 80 mm nipple near top plate nipple shall be provided with end plug.) **(D-547 dt. 20.12.2011)**	15.000	Each	908.00	**13620.00**	INR Thirteen Thousand Six Hundred & Twenty Only
16	P/Laying P.V.C. / XLPE insulated & P.V.C. sheathed cable of 1.1 KV grade with aluminium conductor of IS:1554 P-I / IS :7098 P - I of Group 1 of approved make in ground as per IS:1255 including excavation of 30cmx75cm size trench, 25 cm thick under layer of sand,IInd class bricks covering, refilling earth,compaction of earth, making necessary connection, testing etc. as required of size.					
16.01	10.0 Sq. mm					
16.02	4 core Complete Rate Armoured	450.000	Mtr.	136.00	**61200.00**	INR Sixty One Thousand Two Hundred Only
Total in Figures					**5697148.50**	INR Fifty Six Lakh Ninety Seven Thousand One Hundred & Forty Eight and Paise Fifty Only
Quoted Rate in Figures			**Select**		**0.00**	INR Zero Only

Quoted Rate in Words		**INR Zero Only**

Executive Engineer (PHE-1)
JDA, Jaipur

I/We quoted rates …… %
Above/Below G-Schedule

In words
……..

Signature of Contractor

Validate Print Help

Percentage BoQ

Tender Inviting Authority: JAIPUR DEVELOPMENT AUTHORITY, JAIPUR

Name of Work: Rate contract for construction of 200 mm dia tube well, P/L/J of DI pipe line at various locations for one year under zone PHE-I, JDA, Jaipur

Contract No: EE PHE-I_14_2017-18

Name of the Bidder/ Bidding Firm / Company :	

PRICE SCHEDULE

(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevent columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only)

NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	Estimated Rate in Rs. P	TOTAL AMOUNT Without Taxes in Rs. P	TOTAL AMOUNT In Words
1	2	4	5	6	53	55
1	Providing laying & Jointing of ISI mark centrifugally cast (Spun) ductile iron pressure pipe for water with socket and spigot end and Tyton joint confirming to IS 8329/2000 and departmental specification in standard length (As required) for (Class K-7) suitable for push on joint (rubber gaskets jointing) with side cement mortar lining with cutting of pipe and fixing of C.I. special joint where ever required. This also include the excavation of trench up to 1.5 Meter depth in all type of soil cutting of road surface pavement where required lift up to 1.5 Mt. stacking the soil clear form the edge of excavation andrefiling of soil after laying and jointing of pipe line with proper compaction and disposing of all surplus soil as directed with in lead of 30 Meter. This also include getting the pipe line tested and site clearance etc.(D-878 dt.01.09.2008)					
1.01	100 mm	8922.000	P. Meter	1397.00	**12464034.00**	INR One Crore Twenty Four Lakh Sixty Four Thousand
1.02	150 mm	5000.000	P. Meter	2013.00	**10065000.00**	INR One Crore Sixty Five Thousand Only
1.03	200 mm	2300.000	P. Meter	2455.00	**5646500.00**	INR Fifty Six Lakh Forty Six Thousand Five Hundred
1.04	250 mm	1000.000	P. Meter	3184.00	**3184000.00**	INR Thirty One Lakh Eighty Four Thousand Only
1.05	300 mm	1000.000	P. Meter	4024.00	**4024000.00**	INR Forty Lakh Twenty Four Thousand Only
1.06	350 mm	500.000	Nos	5042.00	**2521000.00**	INR Twenty Five Lakh Twenty One Thousand Only
2	Providing/fixing/testing KG of DI specials (K-7) i.e. bend, tees, tail pieces, flanges etc. of various size as per the site condition and requirement including all jointing material in all respects, As per PHED specification. (D-306 dt. 28.04.2009)	5000.000	Kg.	90.00	**450000.00**	INR Four Lakh Fifty Thousand Only
3	Providing, fabricating and installing MS specials including rolling, cutting, welding in different shape and size. **(D-547 dt. 20.12.2011)**	5000.000	Kg.	80.00	**400000.00**	INR Four Lakh Only
4	Labour charges for inter connection of proposed pipe line with existing, pipe line by digging of Pit, cutting of pipe, dewatering through pumps and satisfactory testing of inter connectin and site clearance.**(D-547 dt. 20.12.2011)**	60.000	Each	2512.00	**150720.00**	INR One Lakh Fifty Thousand Seven Hundred & Twenty Only
5	Labour charges for inter connection of proposed pipe line with existing, pipe line by digging of Pit, cutting of pipe, without bailing out of water and satisfactory testing of inter connection and site clearance.**(D-547 dt. 20.12.2011)**	40.000	Each	890.00	**35600.00**	INR Thirty Five Thousand Six Hundred Only
6	Supply of cast iron detachable joints class-10 as per ISI specification (IS 8794-1988) along with rubber ring (ISI marked) and nut bolts complete as per PHED specificatins. **(D-547 dt. 20.12.2011)**					
6.01	100 mm	250.000	Each	274.00	**68500.00**	INR Sixty Eight Thousand Five Hundred Only
6.02	150 mm	150.000	Each	458.00	**68700.00**	INR Sixty Eight Thousand Seven Hundred Only
6.03	200 mm	25.000	Each	652.00	**16300.00**	INR Sixteen Thousand Three Hundred Only
6.04	250 mm	25.000	Each	881.00	**22025.00**	INR Twenty Two Thousand &Twenty Five Only
6.05	300 mm	5.000	Each	1090.00	**5450.00**	INR Five Thousand Four Hundred & Fifty Only
6.06	350 mm	5.000	Each	1911.00	**9555.00**	INR Nine Thousand Five Hundred & Fifty Five Only
7	Supply and fixing of cast iron double sluice valves IS 14846/2000 specification (ISI marked) of PN-1 rating including cost of rubber flange gaskit and nut bolts complete as required for following sizes. **(D-547 dt. 20.12.2011)**					
7.01	100 mm	30.000	Each	5541.00	**166230.00**	INR One Lakh Sixty Six Thousand Two Hundred &
7.02	150 mm	15.000	Each	8107.00	**121605.00**	INR One Lakh Twenty One Thousand Six Hundred &
7.03	200 mm	10.000	Each	12565.00	**125650.00**	INR One Lakh Twenty Five Thousand Six Hundred &
7.04	250 mm	5.000	Each	23269.00	**116345.00**	INR One Lakh Sixteen Thousand Three Hundred &
7.05	300 mm	5.000	Each	34984.00	**174920.00**	INR One Lakh Seventy Four Thousand Nine Hundred &
7.06	350 mm	2.000	Each	56466.00	**112932.00**	INR One Lakh Twelve Thousand Nine Hundred & Thirty
8	Supply and fixing of cast iron Dismentiling joint as per PHED Specifiction including cost of rubber flange gaskit and nut bolts complete as required for following sizes. **(D-547 dt. 20.12.2011)**					
8.01	150 mm	15.000	Each	4311.00	**64665.00**	INR Sixty Four Thousand Six Hundred & Sixty Five
8.02	200 mm	10.000	Each	6036.00	**60360.00**	INR Sixty Thousand Three Hundred & Sixty Only
8.03	250 mm	4.000	Each	7918.00	**31672.00**	INR Thirty One Thousand Six Hundred & Seventy Two
8.04	300 mm	4.000	Each	9094.00	**36376.00**	INR Thirty Six Thousand Three Hundred & Seventy Six
8.05	350 mm	2.000	Each	12662.00	**25324.00**	INR Twenty Five Thousand Three Hundred & Twenty
9	Supply of cast iron specials (class-10) as per IS : 5531-1988) specification as required. **(D-547 dt. 20.12.2011)**					

NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	Estimated Rate in Rs. P	TOTAL AMOUNT Without Taxes in Rs. P	TOTAL AMOUNT In Words
1	2	4	5	6	53	55
9.01	80 mm to 150 mm	4000.000	Kg.	58.00	**232000.00**	INR Two Lakh Thirty Two Thousand Only
9.02	200 mm to 300 mm	4000.000	Kg.	62.00	**248000.00**	INR Two Lakh Forty Eight Thousand Only
9.03	350 mm to 400 mm	1000.000	Kg.	67.00	**67000.00**	INR Sixty Seven Thousand Only
10	Providing, Laying & Jointing in standard lengths HDPE PE-80 PN-6 pipes conforming to IS-4984:1995 (UP TO DATE) with necessary jointing material like mechanical connection i.e. thread/insert/quick release coupler joint/compression fitting joint of flanged joint and specials jointing pipe by butt fusion welding method, including all taxes (central and local), transportation and freight charges inspection charges loading/unloading charges, stacking the same in closed shade duly protecting from sunray and rain including cost of labour and material, specials (Tees, bend etc.) and also including the excavation of trench up to 1.5 Meter depth in all type of soil cutting of road surface pavement where required lift up to 1.5- Mt. stacking the soil clear from the edge of excavation and refilling of soil after laying and jointing of pipe line with proper compaction and disposing of all surplus soil as directed with in lead of 50 Meter with satisfactory, hydraulic testing etc. complete as per technical specifications and direction of Engineer-in-charge. (supply up to 90 mm dia. Coil & above 90 mm dia straight length in 6.0 M)					
10.01	90 mm dia	1500.000	Mtr.	397.00	**595500.00**	INR Five Lakh Ninety Five Thousand Five Hundred
10.02	110 mm dia	2500.000	Mtr.	567.00	**1417500.00**	INR Fourteen Lakh Seventeen Thousand Five Hundred
10.03	160 mm dia	1000.000	Mtr.	990.00	**990000.00**	INR Nine Lakh Ninety Thousand Only
11	Shifting of 15 mm house connection from all kind of water mains to consumer and upto meter complete job including E/W,demolishing of CC/ Black top/WBM road etc. of all thickness, fitting of Gun Metal ferrule of appropriate size as per IS 2692, fitting of MS clamp made by MS strip 50 X 3 mm properly welded with saddle piece, fixing Gun metal non return valve or check valve horizontal type of (ISI make) of size15 mm, MDPE pipe dia 20 mm, PN 16 of confirming to ISO 4427-1996 certified pipe manufactured from virgin PE-80 polyethylene food grade raw material and compressed fitting for MDPE pipe as per ISO 3458-59 or equivalent internal standred of PN-16 rating and fixing of 15 mm size Gun metal full way valve (IS : 778 mark) or wheel valve of approved make complete with supply of all material and successful testing.					
11.01	Upto 5 mtr. length	1000.000	Each	1900.00	**1900000.00**	INR Nineteen Lakh Only
11.02	5 mtr to 10 mtr. length	800.000	Each	2200.00	**1760000.00**	INR Seventeen Lakh Sixty Thousand Only
Total in Figures					**47377463.00**	INR Four Crore Seventy Three Lakh Seventy Seven Thousand Four Hundred & Sixty Three Only
Quoted Rate in Figures			**Select**		0.00	INR Zero Only
Quoted Rate in Words						

INR Zero Only

Validate Print Help

Percentage BoQ

Tender Inviting Authority: JAIPUR DEVELOPMENT AUTHORITY, JAIPUR

Name of Work: Rate contract for construction of 200 mm dia tube well, P/L/J of DI pipe line at various locations for one year under zone PHE-I, JDA, Jaipur

Contract No: EE PHE-I_14_2017-18

Name of the Bidder/ Bidding Firm / Company :	

PRICE SCHEDULE

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NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	Estimated Rate in Rs. P	TOTAL AMOUNT Without Taxes in Rs. P	TOTAL AMOUNT In Words
1	2	4	5	6	53	55
1	Construction of Tube-well upto 100 Meter depth and above in all type of rocks by DTH system and over burden, to accommodate casing pipe of following sizes in all types of soils and over burden including lowering of casing pipes, but excluding cost of casing pipes as per IS : 2800 (Part I & II) 1979 specifications. The work would be completed after obtaining sand free water. The tube well should have a throughout bore as per nominal dia of casing pipe:					
1.01	200 mm dia Nominal bore	1200.000	R.Mtr.	742.50	**891000.00**	INR Eight Lakh Ninety One Thousand Only
2	Construction of *tube-well* from ground levels and upto 100 Meter depth and above to accommodate housing and assembly pipe of following sizes in all types of alluvium strata by percussion/ rotary drilling method and with gravel as per IS:4097-1967 and packing as per IS:2800 (Part I -& II) 1979 as amended upto date (the work includes the cost of gravel & its primary packing and packing during development, lowering of housing & strainer assembly pipes, with supply and wrapping of coir-rope, wherever necessary, for arresting fine sand particles. The work will not include cost of housing pipe and strainer pipe assembly and development work, but work would be completed after obtaining sand free water).					
2.01	200 mm Nominal bore	1050.000	R.Mtr.	1089.00	**1143450.00**	INR Eleven Lakh Forty Three Thousand Four Hundred
3	Development of tube well as per IS specification using suitable compressor to give sand free water for required yield of the gravel packed tube well.	180.000	Hours	445.50	**80190.00**	INR Eighty Thousand One Hundred & Ninety Only
4	Supply of *ERW M.S. black casing pipe* ISI marked (IS:4270/1992) of grade Fe410 of following sizes at site of work. Nominal bore of pipe (mm)					
4.01	200 Nominal bore of pipe (mm)	780.000	Mtr.	1413.00	**1102140.00**	INR Eleven Lakh Two Thousand One Hundred & Forty
5	Supply of *strainer pipes* made of ERW M.S. black pipe ISI mark of following sizes at the site of work including required size of slotting as per IS:8110-1985.					
5.01	200 mm Nominal bore	270.000	Mtr.	1638.00	**442260.00**	INR Four Lakh Forty Two Thousand Two Hundred & Sixty Only
6	Installation of submersible motor pump set in Tube-well/open well complete (labour charges only) including transportation of tripod, chain pulley block	15.000	Each	2772.00	**41580.00**	INR Forty One Thousand Five Hundred & Eighty Only
7	P/Laying ISI marked P.V.C. insulated submersible cable confirming to IS:694 with flexible copper conductor including making connection etc. as required.					
7.01	4.0 Sq.mm 3 core flat / Round	1650.000	Mtr.	102.40	**168960.00**	INR One Lakh Sixty Eight Thousand Nine Hundred & Sixty Only
8	SITC of radial / mixed flow submersible motor pump sets ISI marked (IS:8034-1989) of approved make with required accessories including making connection suitable for T.W./ D.C.B./ Open well. The job includes lowering of riser pipe, G.I./ H.D.P.E. pipe with rope, cables, installation of complete fitting and accessories, jointing of electrical cables up to switch board. All labour for testing of submersible pumps set and supply of water to water mains, complete in all respect.					
8.01	100 mm diameter Submersible pump shall have following HP Rating, phase, Head, minimum Discharge respectively.					
8.02	5.0 HP, 1-Ø, (55-150)Mtr, (166-60)LPM	15.000	Each	24140.80	**362112.00**	INR Three Lakh Sixty Two Thousand One Hundred & Twelve Only
9	Providing & lowering of G.I. Pipes, flange pipe including rubber washer and nuts of 8 mm dia complete in all respect I.S.1239 Marked.					
9.01	B Class 50 mm dia	1620.000	R.Mtr.	369.00	**597780.00**	INR Five Lakh Ninety Seven Thousand Seven Hundred & Eighty Only

NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	Estimated Rate in Rs. P	TOTAL AMOUNT Without Taxes in Rs. P	TOTAL AMOUNT In Words
1	2	4	5	6	53	55
10	P & F G.I. Pipes (External Work) with G.I. fittings excluding union (IS : 1239 Mark) including trenching & refilling earth etc. 65mm dia nominal bore					
10.01	B' Class	90.000	Mtr.	381.60	**34344.00**	INR Thirty Four Thousand Three Hundred & Forty Four Only
11	P & F Full-way Valve (IS:778 Mark) or wheel valve of approved make :					
11.01	Gun-Metal 50mm nominal bore	15.000	Each	1084.50	**16267.50**	INR Sixteen Thousand Two Hundred & Sixty Seven
12	Providing fixing and installation of 80 mm dia Woltman type water meter with material (Flanges,Insertion sheet, Nut bolt etc.)	15.000	Each	22997.00	**344955.00**	INR Three Lakh Forty Four Thousand Nine Hundred & Fifty Five Only
13	Providing and installing of approved make spring loaded dual plate check valve of following dia. Including all taxes , inspection charges, loading and unloading, stacking etc., including cost of all labour, jointing material with nut bolts, rubber mats etc., and giving satisfactory hydraulic field testing, complete as per specifications.**(D-547 dt. 20.12.2011)**					
13.01	50 mm	15.000	Each	1571.00	**23565.00**	INR Twenty Three Thousand Five Hundred & Sixty Five
14	Supply and fixing & testing of feeder type penal board suitable for upto 15 HP electric motor having star delta/ DOL starter (L&T /BCH), MCB 32 amp.(havals /L&T), capacitor 3 KVR (L&T/Havals), Single phase priventor(L$T/havals),indicating lamp RYB , Amp. Meter (0 to 30Amp) , Volt Meter with slector switch (0 to 500 V) size 100 mm, kit kat fuse unit 100 amp,backlite sheet for fixing of 3 phase electric meter of JVVNL electric feeder penal approved as per design and specification mounted on angle iron fram and fixed plain on plain cement concrete plateform, size of feeder penal box 900X 450X1200mm **(D-547 dt. 20.12.2011)**					
14.01	Star Delta above 5 HP to 15 HP	15.000	Each	24915.00	**373725.00**	INR Three Lakh Seventy Three Thousand Seven
15	S&F tube well cover (for 200 mm dia pipe) of MS sheet 8 mm thick at top & 5 mm thick 100 mm wide shroud around the edge so as to form a cap on the top end of casing pipe with GI Nipple 45 cm long & two GI flanger at both end in 80 mm sizes passing through a hole in the centre of MS shet A 25 mm socket with end plug shall also be weld over top plate (as per drawing enclosede), A GI nipple having outside thread of size 1/2" (for installation pressure gauge) shall be provide & welded with GI 80 mm nipple near top plate nipple shall be provided with end plug.) **(D-547 dt. 20.12.2011)**	15.000	Each	908.00	**13620.00**	INR Thirteen Thousand Six Hundred & Twenty Only
16	P/Laying P.V.C. / XLPE insulated & P.V.C. sheathed cable of 1.1 KV grade with aluminium conductor of IS:1554 P-I / IS :7098 P - I of Group 1 of approved make in ground as per IS:1255 including excavation of 30cmx75cm size trench, 25 cm thick under layer of sand,IInd class bricks covering, refilling earth,compaction of earth, making necessary connection, testing etc. as required of size.					
16.01	10.0 Sq. mm					
16.02	4 core Complete Rate Armoured	450.000	Mtr.	136.00	**61200.00**	INR Sixty One Thousand Two Hundred Only
Total in Figures					**5697148.50**	INR Fifty Six Lakh Ninety Seven Thousand One Hundred & Forty Eight and Paise Fifty Only
Quoted Rate in Figures			**Select**		**0.00**	INR Zero Only
Quoted Rate in Words					**INR Zero Only**	