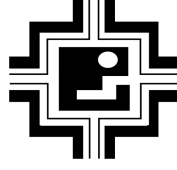


JAIPUR DEVELOPMENT AUTHORITY



Bid Document

For

**P/L/J of DI pipe line for reuse of treated sewage water to Silven Park,
Agra Road from 3 MLD STP, Paldimeena.**

Cost : Rs. 99.34

NIB No. 10/2017-18

Due on: 12.12.2017

**Executive Engineer (PHE-I)
Jaipur Development Authority
Jaipur**

जयपुर विकास प्राधिकरण, जयपुर
इन्दिरा सर्किल, जवाहर लाल नेहरू मार्ग, जयपुर-302004

क्रमांक जविप्रा/अधि.अभि. (पीएचई- I)/2017-18/D-609

दिनांक : 06.11.2017

निविदा सूचना

निविदा सूचना सं0 अधि. अभि. (पीएचई- I) / 10 / 2017-18

जयपुर विकास प्राधिकरण द्वारा **“P/L/J of DI pipe line for reuse of treated sewage water to Silven Park, Agra Road from 3 MLD STP, Paldimeena.”** जिसकी अनुमानित लागत रु 99,33,630.00 के लिए ऑनलाईन बिड्स दिनांक 12.12.2017 को सायं 6:00 बजे तक आमन्त्रित की जाती है। निविदा बोली का ऑनलाईन आवेदन व भुगतान जविप्रा पोर्टल पर करने की अन्तिम तिथि 12.12.2017 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 वालों को निम्न शर्तों की पूर्ति करनी होगी।

1. निविदा दाता जयपुर विकास प्राधिकरण की वेबसाइट 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 पंजीकृत हो।

-SD-

अधिशाषी अभियंता (पीएचई- I)
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: zepheljda@yahoo.in

No: - JDA/EE/PHE-I/2017-18/D-609

Dated: 06.11.2017

NOTICE INVITING BID

NIB No. : JDA/EE (PHE-I)/10/2017-18

Online Bids are invited up-to 6.00 PM of 12.12.2017 for **“P/L/J of DI pipe line for reuse of treated sewage water to Silven Park, Agra Road from 3 MLD STP, Paldimeena.”** Estimated cost of 99,33,630/-. The last date for Applying Bid and making online payment on JDA portal is up-to 6.00 PM of 12.12.2017. 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.

-SD-

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

Annexure: 2

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: zephel1jda@yahoo.in

Bid No: - JDA/EE/PHE-I/2017-18/D-609

Dated: 06.11.2017

NOTICE INVITING BID

NIB No. : JDA/EE(PHE-I)/10/2017-18

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: zephel1jda@yahoo.in
Subject Matter of Procurement	➤ P/L/J of DI pipe line for reuse of treated sewage water to Silven Park, Agra Road from 3 MLD STP, Paldimeena. ➤ Job No. : 092/2017-2018 18
Bid Procedure	➤ Single Stage Tender (eg. Single-stage Two part (envelope) open competitive) eBid procedure at http://eproc.rajasthan.gov.in
Bid Evaluation Criteria (Selection 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. ○ Bidding document fee: Rs. 500/- Rupees (Five Hundred Only) ○ RISL Processing Fee: Rs. 1000/- (Rupees One Thousand only) Requisite Bid Security Deposit
Estimated Procurement Cost	➤ INR 99,33,630/- (Rupees Ninety Nine Lacs Thirty Three Thousand Six Hundred Thirty Only)
Bid Security Deposit	➤ Amount (INR) : 2% (Rs. 1,98,673/-) of Estimated Procurement Cost, 0.5% (49,669/-) 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. (* 2% for Bidder who is A and AA class contractor registered in other Government Department/ 0.5% for Bidder registered as contractor AA, A,B,C in JDA) ➤ Micro Small Medium Enterprise Situated in Rajasthan Tender Fee 50% EMD Value 0.5% ➤ In case of Departments' of the State Government and Undertakings, Corporations, Autonomous bodies, Registered Societies, Cooperative Societies which are owned or controlled or managed by the State Government and Government Undertakings of the Central Government shall submit a bid securing declaration in lieu of bid security.
Date/Time/Place of Pre-Bid	➤ NA
Applying Bid and making Online Payment on JDA portal (www.jda.urban.rajasthan.gov.in)	➤ Start Date: 10.11.2017 at 9.30 AM ➤ End Date: 12.12.2017 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 13.12.2017 10.00AM to 15.12.2017 upto 5.00 PM
Bid Submission on e-Procurement Portal of GOR	➤ Start Date: 10.11.2017 at 9.30 AM ➤ End Date: 12.12.2017 at 06.00 PM

Date/Time/Place of Technical Bid Opening	➤ 18.12.2017 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	➤ 06 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:	
<p>A. Payment Options:</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <ul style="list-style-type: none"> 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. 	
<p>Note:</p> <ol style="list-style-type: none"> Bidder (authorised signatory) shall submit their offer on-line in Electronic formats both for technical and financial proposal. 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. 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). 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. Bidders are also advised to refer "Bidders Manual Kit" available at eProc website for further details about the e-Tendering process. 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 The procuring entity reserves the complete right to cancel the bid process and reject any or all of the Bids. 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. 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. 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. 	

-SD-

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

Annexure: 3
As part of NIB Document

Process for Participation & Depositing Payment Online

JAIPUR DEVELOPMENT AUTHORITY, has decided to receive Bidding document fee, RISL Processing Fee and Bid Security Deposit (BSD) through online mode only for which the bidder has to get registered himself on JDA portal www.jaipurjda.org.

To participate in the bid, bidder has to be:

1. Registered on JDA website www.jaipurjda.org(by depositing Rs. 500.00 online, the validity of which remains 3 (three) years).
For participating in the Bid, the Bidder has to apply for this Bid and pay the Bid 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.

Methods for depositing on line amount

- Online through Internet Banking, Debit Card or Credit Card.
- In case the amount exceeds the online payment limit, the payment may be made through RTGS / NEFT / Transfer in Bank Account Number **675401700586** IFSC Code **ICIC0006754** of ICICI BANK Limited, JDA Campus Jaipur.

In case of RTGS / NEFT / Transfer the bidder is required to deposit the requisite amount in the dedicated bank account number as mentioned above and has to get the UTR / Reference number from the bank. This number requires to be updated while applying the bid on JDA portal.

While participation in the bid, a receipt will be generated through the system showing the submission details as per **Annexure-4**. The bidder is required to fill the instrument numbers for various heads on e-Procurement portal www.eproc.rajasthan.gov.in as mentioned in the receipt.

More details about Registration Process, Terms and Conditions and FAQ along with contact detail is available on JDA website www.jaipurjda.org under [eServices](#)>>JDA Tender

Section A-1

Instructions to Bidders

JAIPUR DEVELOPMENT AUTHORITY JAIPUR

SCHEDULE AND SPECIFICATIONS

Name of work:- P/L/J of DI pipe line for reuse of treated sewage water to Silven Park, Agra Road from 3 MLD STP, Paldimeena.

- | | |
|-------------------------------------|---|
| 1. NIB No. | :- E.E.(PHE-I)/10/2017-18 |
| 2. Bid cost | :- Rs. 99.34 Lac |
| 3. Cost of the tender documents | :- Rs 500/- |
| 4. Earnest Money | :- Rs. @ 1½% Rs. 49,669/-
(For Contractors Enlisted in JDA in class C/B/A/AA, Jaipur)
:- Rs. @ 2 % Rs. 1,98,673/-
(For Contractors Enlisted in other Govt. Deptts. In Class-A/AA category) |
| 5. Download of tender documents | :- 10.11.2017 to 12.12.2017 (upto 6.00 PM) |
| 6. Date & Time of upload of tenders | :- 12.12.2017 (upto 6.00 P.M.) |
| 7. Date & Time of Opening tenders | :- 18.12.2017 at 3.00 P.M. |
| 8. Completion period of work | :- 6 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 part-A and part-B.** The work shall be carried out in accordance with the Rajasthan PWD, PHED and JDA detailed specification and to the entire satisfaction of the Engineer-In charge of the work.

The bid will be opened only of those bidders deposit proper bid security, processing fee, tender fee, VAT clearance certificate (Valid up to Six months back from the opening of Bid) and copy of registration of contractor in required category are found to be in order. The Bid security, tender fee will be accepted only in from of demand draft/banker cheque in the name of Secretary JDA, Jaipur.

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

The drawings may also be seen in the office of undersigned.

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 6 months.**

SCHEDULE 'G' : ATTACHED SEPARATELY BASED ON JDA PHE BSR & JDA PWD BSR 2016.

SCHEDULE 'H' : SPECIAL CONDITION.

SCHEDULE 'I' : SPECIAL TERMS & CONDITION FOR DRINKING WATER PIPE LINE 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

Annexure E : DLP period for various type of works. Office order D-29 date 11.03.2016

SIGNATURE OF CONTRACTOR

with full address & Mobile No. :

EXECUTIVE ENGINEER (PHE-I)

**Jaipur Development Authority,
Jaipur**

Section A-2

General Conditions of Contract

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

Section A-3

Scope of work & Special Conditions of Contract

SCHEDULE 'I'**Name of work:- P/L/J of DI pipe line for reuse of treated sewage water to Silven Park, Agra Road from 3 MLD STP, Paldimeena.****Scope of work:-**

1. P/L/J of DI pipe line for reuse of treated sewage water to Silven Park, Agra Road from 3 MLD STP, Paldimeena. as per site requirement.

SPECIAL CONDITIONS OF THE CONTRACT (Part-A)

2. Contractor shall get the D.I. pipe 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.
3. 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.
4. The quantity of work can be increased or decreased. However, no guarantee is given about the actual quantity of work.
5. 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.
6. 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.
7. The electric connection, if required, for construction and testing purpose shall be arranged by the contractor at his own cost.
8. 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.
9. 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.
10. 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.
11. 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.
12. The contractor shall be fully responsible for structural safety and water tightness of pipeline when tested.
13. No secured advance against material procured at site will be allowed.
14. 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.
15. 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
16. 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.
17. 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.
18. The surplus earth and damaged materials will be immediately removed from the site of work and dumped as per instruction of Engineer-in-charge.
19. 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.
20. 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.
21. The contractor/firm/company is bound to get the workmen insured against accident from the Insurance Company at his own cost.
22. Contractor shall be the sole custodian of the men and material at work and will be fully responsible for any loss of life or otherwise occurred during the execution of the works.

23. 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.
24. 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 lot of supply will also be rejected. The entire cost of samples and testing shall be borne by the contractor.
25. **Defects Liability period**
The defect liability period shall be as per JDA office order no. JDA/Ex.En. (TA to Dir. Eng.-1)/2016/D-29 dated 11.03.16 (Annexure 'E').
26. **As Built Drawings.**
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. 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. If there is any typographical error or otherwise in the 'G' Schedule. The nomenclature and the rates as given in the relevant BSR and JDA approved items/rates on which schedule 'G' is based, shall prevail.
30. There shall be Agra-Jaipur NH-21 crossing by trenchless technology method. For which necessary permission for national highway authority shall be taken by contractor. Department shall assist in obtaining such permission. Necessary fee's shall be deposited by contractor to NHAI authority and shall be reimbursed by JDA on actual basis.
31. Crossing of pipe line through Agra-Jaipur national highway shall be taken in supervision of NHAI and JDA presence in strict compliance of specification & NHAI JDA guide lines and their direction.
32. All pipe laid shall be painted by enamel paint in red or any other color approved by EIC with embossing SEWER LINE at interval of every one meter.
33. MS casing pipes is used for laying of pipe line by trenchless technology method shall be got approved by EIC.
34. If any underground utility or structure is damaged during laying of MS casing pipe same shall be repair immediately by contractor for which no any payment shall be made.
35. All prerequisite permission/survey/investigation shall be carried out by contractor for which no charge shall be paid.

SPECIAL CONDITIONS OF THE CONTRACT (Part-B)

1 PROVISION FOR NOMINAL REINFORCEMENT IN PRE-CAST RINGS

The Contractor shall provide steel reinforcement as per design requirement in each Pre-Cast M-40 Grade Circular Rings, along with nominal **reinforcement @ 0.12%** of gross cross sectional area in both the direction i.e. vertical bar & circular rings) subject to a minimum of nominal reinforcement as per Code of "Practice of Plain and Reinforced Concrete" IS:456 2000. **No extra payment shall be made to him/firm on this part. The Contractor should therefore take provisions accordingly.**

SETTING OUT

2. The contractor(s) shall set out the whole of the work in conjunction with an officer to be deputed by the Engineer-in-charge and during the progress of the work to amend on the requisition of the Engineer-in-charge any errors which may arise therein and provide all the necessary Labour materials and equipments for so doing. The contractor has to provide all tools, plant, machinery, Labour and materials which may be necessary and required for the work. All materials and workmanship shall conform to the relevant specifications mentioned in the tender documents.
3. The contractor shall carryout the detailed topographic survey (level survey) with in the site and prepare the pre-commencement maps for approval of the Engineer-in-charge. Based on the approved pre-commencement maps showing spot levels of road crossing, the contractor will prepare the necessary working drawings and L-sections for the purpose of execution of work.

Public Awareness / Information Display

4. 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.
5. 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.

Site office for Engineer-in-charge and other supervisory staff

6. The contractor shall arrange to provide office at his own cost with two tables, five chairs, two steel almirah, display board, etc., fully furnished office accommodation within 15 days from the

date of commencement of work as per requirements/ directions of the Engineer-in-charge including maintenance of the same.

Field Laboratory

7. Within 15 (fifteen days) from the date of commencement of work, the contractor shall arrange to provide at his own cost a fully furnished and adequately equipped field laboratory.
8. The calibration of the laboratory equipment and instrument shall at the initial stages be certified by agencies approved by the Engineer-in-charge. Laboratory equipment shall be properly maintained and calibrated throughout the period of the contract by the
9. Contractor at his own expense. The contractor shall notify the Engineer-in-charge sufficiently in advance prior to conducting any tests for materials at work. The Engineer-in-charge will also inspect the laboratory and the contractor shall provide adequate facilities to the Engineer-in-charge for his independent verification of the accuracy and adequacy of the facilities.

Requirement of Land

10. Land for establishment of site office, field laboratory etc. shall be arranged by the contractor at his own cost.

Transport of material is contractor's responsibility.

11. It shall be mandatory on the part of the contractor to arrange Crane of suitable size for the transportation, loading, unloading, and fixing in position of the Pre-cast manhole elements. No manual labour for such purpose shall be engaged.
12. The tested material will be transported to site by the contractor safely. If any material or pipe/pre-cast elements got damaged during transportation, loading, unloading, stacking and lowering in the trench the same will be rejected and no payment shall be made.
13. The surplus earth and damaged materials will be immediately removed from the site of work and dumped as per instruction of Engineer-in-charge.
14. 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.
15. 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 in writing. failing which, such material shall be removed by the Engineer-In-charge at risk and the contractor after expiry of 3 days period.

Inspection of work/ Materials.

16. The testing of work /samples shall be carried out by Engineer-in-charge/authorized representative or by Third party inspection as selected and directed by the Engineer-in-charge. The test shall be carried out as per relevant I.S. Specification at manufacture's site before transportation to site. Inspection cost/testing charges if any, shall be born by the contractor only. Inspection shall be carried out for various items for SW pipes/RCC pipes, PVC (SWR) pipes, Cast iron ring and frame, manhole cover Ferro-cement footsteps and Pre-cast manhole elements/components etc.

Sewer laying work and construction of manholes.

17. The JDA Site Engineer shall provide the reduced level value of Bench Marks and invert levels in reference to the Bench Marks while starting the work. The contractor/ Firm or company's technical staff will transfer levels in the trench to lay the sewer line at required gradient with standard level instruments and , boning rods, side rails. The Contractor/Firm or company will be fully responsible for any error while transferring levels from Bench Marks to the trench. While doing so, if any, line is laid wrongly and/or is not as per desired gradient it shall be the responsibility of contractor to get the line re-laid at his own cost
18. The contractor shall provide at the site all material he shall be required to use for timbering/stuttering shoring excavation of trenches and which he shall bring to the site, prior to start of excavation for approval of the Engineer-in-charge.
19. RR stone/ Pre-cast manhole chambers shall be constructed/assembled simultaneously with the laying of sewers as per drawing and detailed specification of PWD (B&R) Rajasthan.

20. Concreting work should be done in the presence of an Engineer-in-charge not below the rank of Site Engineer of the JDA after checking of reinforcement by the Sector Engineer. After taking layout, the contractor shall submit daily Schedule of work to the Engineer-in-charge 15 days in advance.
21. Only design mix concrete of grade M-40 shall be used for the precast manhole elements.
22. The contractor shall keep the trenches open between two consecutive manholes while laying the sewer line. Pipes shall be lowered in the trenches and cured minimum for three days, trench shall be refilled with excavated earth as per specification after the inspection of Sector / Site Engineer.
23. No extra payment will be made to the contractor on account of clearance of soakage well/septic falling in the alignment of the sewer line. The sewer line shall be tested at contractor's cost as per I.S. code no. 783-1985 and departmental specifications for water tightness, straightness and gradient by the Engineer In charge. If any leakage is found during testing the same will be replaced by the contractor at his own cost.
24. Two percent amount of each running bill shall be with held on account of testing of sewer system, which will be released only after successful testing. The contractor will be fully responsible for structural safety stability and water tightness of the sewer line and associated work.

Materials

25. Cement and steel shall not be supplied by the department.
26. Steel, when arranged by the contractor shall produce a test certificate for the whole lot as per the IS Code provisions from an authorized laboratory approved by the Engineer-in-charge.
27. Water for construction and testing purpose shall have to be arranged by the contractor at his own cost. In case it is supplied by the JDA, charges @ 1% of total value of item of construction work shall be taken and recovered from each running bill.

Design and Drawings.

28. JDA shall not be responsible for any error, in accuracy or permission of any kind in JDA's requirements as originally included in the contract. Any data or information received by the Contractor, from JDA or otherwise, shall not relieve the Contractor from his responsibility for the design and execution and structural stability of the pre-cast elements.
29. The drawings of the pre-cast eccentric conical piece and circular rings is based on the departmental designs. Contractor may study the design, drawings and specifications carefully and if felt necessary, may increase the sectional thickness, reinforcement or the grade of concrete suitably. No extra payment shall be made to the contractor over the rates quoted by the contractor for any modifications / changes proposed by him. The contractor shall be fully responsible for the structural safety of the precast manhole elements/components.

As Built Drawings.

30. The submission of the as-built drawings of the sewer 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 **including L-Section and point file** 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.

Safety aspects associated with the work.

31. **Safety And Accident Prevention Officer:** Due precautions shall be taken by the Contractor, at his own cost, to ensure the safety and protection against accidents of all staff and Labour engaged on the works, local residents in the vicinity of the works, and the public traveling through the works. The contractor shall deploy at least one officer from his staff, qualified to promote and maintain safe working practices. This/these officer(s) shall has/have authority to issue instructions and shall take protective measures to prevent accidents, including but not limited to the establishment of safe working practices and the training of staff and labor in their

implementation. The contractor shall furnish to the department the name(s) of such officer(s) before the start of the work.

32. 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 borne by the contractor only and JDA will not be responsible in any way.
33. The contractor shall not work before sunrise and after the sunset.
34. 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 borne by the contractor only .
35. The contractor/firm/company is bound to get the workmen insured against accident from the Insurance Company at his own cost.
36. The contractor will pay compensation to the house owner or to the owner of any adjoining property or any other works for the damaged sustained on account of this work while in progress or complete from his own pocket.
37. Electric and water connections, if needed, shall be arranged by the contractor himself at his own cost.
38. Contractor shall be the sole custodian of the men and material at work and will be fully responsible for any loss of life or otherwise occurred during the execution of the works

OMMISSIONS AND CORRECTIONS

If there is any typographical error or otherwise in the 'G' Schedule. The nomenclature and the rates as given in the relevant PWD BSR 2014-15 for water supply & sewer work and BSR 2016 for building works JDA approved items/rates on which schedule 'G' is based, shall prevail.

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	8.02 percent
(b) Other Material	89.33 percent
(c) Bitumen	00.00 percent
(d) Diesel and Petrol (POL)	1.66 percent
(e) Cement	0.82 percent
(f) Steel	0.17 percent
Total	100.00 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 prorata 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 require any documents so kept and such other information as the Engineer-in-charge may require. 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.
 18. In case of pipe line testing shall be done as per the relevant Codal 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.
 19. 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.
 20. The contractor shall submit the proof of ownership of suitable machinery for laying of pipeline in all type of strata.
 21. The quantity of work can be increased or decreased. However, no guarantee is given about the actual quantity of work.
 22. 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.
 23. 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.
 24. The electric connection, if required, for construction and testing purpose shall be arranged by the contractor at his own cost.
 25. 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.
26. 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.
 27. 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.
 28. 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.
 29. The contractor shall be fully responsible for structural safety and water tightness of pipeline when tested.
 30. No secured advance against material procured at site will be allowed.
 31. 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 sector engineer. After taking layout, the contractor shall submit day to day schedule of work to the Engineer-in- charge in advance.
 32. 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.
 33. 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.
 34. 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.
 35. The surplus earth and damaged materials will be immediately removed from the site of work and dumped as per instruction of Engineer-in-charge.
 36. 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.
 37. 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.
 38. The contractor/firm/company is bound to get the workmen insured against accident from the Insurance Company at his own cost.
 39. Contractor shall be the sole custodian of the men and material at work and will be fully responsible for any loss of life or otherwise occurred during the execution of the works.
 40. 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.
 41. If there is any typographical error or otherwise in the 'G' Schedule. The nomenclature and the rates as given in the relevant PWD BSR 2014-15 for water supply & sewer work and BSR 2016 for building works and JDA approved items/rates on which schedule 'G' is based, shall prevail.

The above conditions may be read very carefully and adhered strictly.

I/we confirm above

Signature of contractor

**Executive Engineer (PHE-I)
JDA, Jaipur**

Section A-4

Specifications of Work

SUPPLY OF DI /UPVC PIPES, SPECIALS, VALVES AND LAYING OF PIPES FOR WATER SUPPLY**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 pipes 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	

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 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.

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 5382 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 life 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 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.

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 be 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.

Valves

General

The sluice valve will conform 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 / cm² (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 IS 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/cm² 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

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 then 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 rest 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.

Anchorage - 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 to 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 shaved 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.

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.

Sewer Work

1. The site is located at all over JDA, Jurisdiction, Jaipur.

- a) Setting out of works and carrying out confirmatory survey.
- b) Submission of working design and drawings and approval of same by the department.
- c) Providing, laying and jointing of 200 mm diameter SW, 200 mm diameter RCC NP-4 and 250 mm diameter NP-2 sewer pipeline.
- d) Construction of RCC Precast Manhole and as per enclosed drawings and specifications.
- e) Utility shifting.
- f) Restoration of Roads.
- g) Inspection of material at works.
- h) Removal of defects in laying and jointing of all sewers, fittings and manholes after testing and during defect notice periods.
- i) The drawings enclosed in **section–A5**, appended herewith contains a plan of the area, The Schedule 'G' in volume II contains item wise classification of underground strata likely to be excavated but the same is not guaranteed and excavation work may have to be carried out in different strata other than given in schedule 'G'.
- j) Submission of as built drawings.
- k) Any other associated work as required by Engineer-in-charge.
- l) Prior to vacating the site, the contractor shall be responsible for and bear any costs of reinstating the site to a condition at least equal to that in which it was handed over to the contractor.

The contractor is advised to visit site of work before quoting his rate and frame his own opinion about the live conditions prevailing at site.

2. DESCRIPTION OF WORK.

- a) The complete work will be consisting of the following main items as specified in detailed schedule and drawings as per the tender document enclosed herewith.
- b) Excavation of trenches, refilling and removal or surplus earth for laying pipes and construction of appurtenances like manhole and vent shaft along with requisite safety measures.
- c) Providing, laying and Jointing RCC pipes at required gradient and testing of joints and associated works.
- d) Providing and laying suitable bedding of cement concrete for pipes.
- e) Construction of required size RCC in situ manhole along with providing and fixing Ferro cement Manhole covers, C.I. frames and Ferro cement foot steps of required size, duty and weight as per drawing.
- f) Making connection to existing Sewers by dismantling wall and concrete channel and its related repairs.
- g) The drawings enclosed in section A-6 appended herewith contains a plan of the area, The Schedule -G in volume II contains item wise classification of underground strata likely to be excavated but the same is not guaranteed and excavation work may have to be carried out in different strata other than given in schedule-G.
- h) The contractor is advised to visit site of work before quoting his rate and frame his own opinion about the live conditions prevailing at site.
- i) Any other associated work as required by Engineer-in-charge.

2.1 DRAWING TO BE SUPPLIED BY CONTRACTOR

The following drawings are required to be supplied by the tenderer when required by the Engineer-in-charge and work should commensurate only after obtaining his approval in writing.

- a) Drawing of measuring boxes for cement, sand and other construction material supplied at site.
- b) Drawing of Ferro-cement manhole covers with cast iron ring, frame and Ferro-cement steps supplied at site.
- c) **AS-BUILT DRAWINGS:-**The submission of the as-built drawings for the equipment 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, including L- section man hole to man hole with point file 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. Any other drawings related to works included in the contract.

2.2 DRAWINGS TO BE SUPPLIED BY THE DEPARTMENT.

The drawings of the various manhole elements (Ferro-cement manhole cover, Ferro cement footsteps, Cast iron rim and frame), drawings showing the trench width for various invert depth of the corresponding diameters and the map/plan of the area showing the proposed lateral sewer network in enclosed in the section A-6 of the tender document shall be supplied by the department.

2.3 WORKING DRAWING:

The working drawings showing plan and positions of proposed sewers are available for inspection at the office of the undersigned. The interested may inspect these drawings during office Hrs. on any working day.

2.4 GENERAL DESIGN OBLIGATIONS

- a) The Contractor shall be deemed to have scrutinized, prior to submission of bid, design criteria, calculations, and drawing as per the JDA requirements.
- b) JDA shall not be responsible for any error, in accuracy or permission of any kind in JDA's requirements as originally included in the contract. Any data or information received by the Contractor, from JDA or otherwise, shall not relieve the Contractor from his responsibility for the design and execution of the works.

2.5 SUBMISSION PROCEDURE FOR DETAILED DESIGN AND EXECUTION DRAWINGS:

- a). The contractor shall carry out the preparatory works such as to prepare the plans, L-Section, designs, working drawings etc.
- b). The drawings shall be sufficient in details and the scale has to be chosen accordingly in coordination with the Engineer in charge.
- c). If required, the detailed design and the execution drawings shall be submitted only after verification by an institute or agency approved by the Engineer In charge or any authorized representative of the JDA.

3. SAMPLES OF MATERIAL

- 3.1 The Contractor shall submit samples of the following items, to the Engineer In charge for carrying out tests as specified under Schedule 'D' in specified quantities as mentioned against each item before the commencement of work or within 15 days of issue of order, whichever ever accrues earlier ' and shall obtain his approval before using any such material at site free of cost by the contractor.

a) Rubble stone / Brick (First Class)	10 Nos.
b) Fine Aggregate (Bajari)	0.05 Cum.
c) Coarse Aggregate: Size 20mm and below	0.05 Cum
d) Steel (for each size of bar)	0.05 Kg.
e) Spun Yarn	0.05 Kg.
f) Cement	One bag.
g) Bitumen Paint.	0.05 kg.

The following samples shall be submitted from each lot of supply as per I.S.S. for approval of Engineer In charge as to the quality of material. These samples shall be returned to the Contractor after completion of work.

a) S.W. Pipes ISI marked.	5 Nos
b) RCC NP-2/NP-4Pipes ISI marked	5 Nos
c) Ferro cement steps for manholes	1 No
d) Ferro cement manhole cover	1 No
e) Pre-cast RCC manhole element	1 No.

- 3.3 Any other sample of material that may be required by the Engineer In charge from time to time.

- 3.4 All the above samples are to be delivered in suitable packing at the office of the Executive-Engineer-In -charge or as desired by the engineer-in-charge

4. TESTS OF MATERIALS

The Engineer In charge or his authorized representative will carry out tests as and when considered necessary for the quantity and quality of work done and for the material used at the work. The contractor, unless otherwise specifically mention to do so, shall provide all facilities and arrangements to undertake those tests.

- 4.1 The contractor shall provide all necessary facilities to undertake tests for a lot of material supplied at site.

- 4.2 The testing of all the building material shall be conducted as per relevant Indian Standard specification. If relevant Indian standard specifications are not available for a particular item, the testing for quality of material shall be done in accordance with detailed specification of PWD (B.S.R.) Rajasthan, however it is not possible for the contractor to take suitable arrangements for testing of sample the same shall be taken to the laboratory authorized by the Executive Engineer-in-charge. The contractor shall get the quality of material obtained from each source approved from the Engineer In charge. In case the source of supply of building material is changed at subsequent date sample as required above shall be got approved before using the material.

- 4.3 The samples submitted by the contractor required under schedule -G, Volume -II shall invariably be supplemented with the manufacturer's test certificate for approval of the Executive Engineer In charge. The Executive Engineer, in charge may ask for further testing of material before, approval and subsequent use at site. The contractor in such case shall supply required quantity of samples as desired by Executive Engineer, in charge. The samples as obtained shall be sent to authorized laboratory for testing. In case the material is not found to be as per specification the whole lot of supply shall be rejected.

The relevant standards for complying testing and specification for each material are as given below:

1. Stone ware pipe : IS 651-1983 (As amended upto date)
2. RCC pipes: IS 458 As amended upto date)
3. Ferro cement circular manhole cover and frames as per (Departmental specifications and drawing).
4. Ferro cement foot steps for manholes.
5. Precast manhole elements (Departmental specifications and drawing).

5. LIST OF MATERIAL TO BE SUPPLIED BY THE DEPARTMENT

Nil.

6. DETAILED SPECIFICATIONS

The detailed specifications of the work to be executed shall be as per the provision of detailed specification PWD (B.S.R.) Rajasthan and the relevant Indian standard specifications unless otherwise mentioned above in the specification for work explained under scope of work. Wherever a reference to the I.S. code mentioned herein appears, it shall be taken as reference to the latest edition of the standard. The complete scope and detailed specification of work is as detailed herein after, item wise given in Schedule 'G' and drawings given in, volume-II and section A-5 of bid document respectively.

6.1 TRANSFER OF LEVELS AND ESTABLISHMENT OF GRADIENTS:

- a) The contractor should furnish his work programme, construction methodology within 15 days after the letter of Notice to proceed for work and prior to start of the construction activities at site.
- b) To carry out the leveling survey of whole area or part of the area as a confirmatory survey as per Engineer-in-charges instructions and confirm the ground levels, chain age, road network, etc. with the data available in design reports and got it approved from the Engineer-in-charge prior to commencement of the work.
- c) The transfer of level at ground from the specific bench mark (to be given with in 100 meter from the starting point of line) shall be done by contractor. The grade line shall be done with the help of sight rail and boning rods. The necessary equipment and manpower required shall be arranged by contractor for transfer of levels.

6.2 EXCAVATION AND REFILLING WORKS

- a) The excavation and refilling work shall be done in accordance with the detailed specification PWD (B.S.R.) Rajasthan and as per drawing appended in section A-5.
- b) The provision of IS 3764/1966 safety code for excavation work and is 4091-1967 safety code for blasting and related drilling operation shall be strictly met with at each site of work. The work shall be stopped in case these requirements are not met with.
- c) Excavation work for different size of sewers, manholes, as per working drawings in different soils / described item wise in schedule 'G' shall be carried out in the manner specified here in drawing No.1.
- d) Before excavating the trench the alignment of sewer line shall be approved by the Engineer.
- e) Before carrying out the excavation work the trial pits shall be taken along the proposed sewer line alignment by the contractor after mutual agreement and approval of the Engineer in advance of the excavations for the purpose of satisfying himself as to the location of underground obstructions or conditions. The contractor shall proceed with caution, in any excavation and shall use every means to determine the exact location of underground structures, pipelines, conduits etc, and prior to excavation in the immediate vicinity thereof. The contractor shall be solely responsible for the cost of protections or repair or replacement of any structure, pipeline, conduit etc, above or below ground which may be broken or otherwise damaged by his operations.
- f) The trench shall be shored and timbered wherever necessary and specified. The blasting and dewatering work shall be carried out in the manner specified and all material and T & P shall be arranged by the contractor at his own cost. All hard and soft patches shall be treated in the manner specified after obtaining approval from Engineer-In-charge. Unless the description of items for excavation specified so, separate measurement shall not be taken for these time.
- g) The lighting, barricading, guarding of the trenches and the provision of watchman shall be done by the contractor at his cost.
- h) The barricading shall in no case be removed until the trench is excavated, the pipes are laid and Engineer-in - charge gives permission to proceed with the backfilling
- i) Contractor shall not be paid any additional compensation for excess excavation over what is specified as well as for any remedial measures that are specified.
- j) The excess excavated material shall be carried away from the site of works as specified, failing which in view of public safety and traffic convenience, Engineer-in-charge may carry out the work by any other agency at Contractors risk and cost.

6.3 UNDER BED AND BEDDING WORK BELOW PIPES.

- a) The type of bedding as per specification of G schedule, working drawing along with under bed, where ever, required shall be provided in stages and manners specified in drawings and as per directions of engineer-in-charge. The complete material placement in specified dimensions and specified levels, connection etc. is included in scope of work.
- b) The bedding shall preferably be provided continuously between consecutive manholes. In case, it is not possible to do so, the vertical joints in bedding material shall be provided at outer edge of socket. No horizontal joints shall be permitted in concrete cradle.

6.4 SUPPLYING, LAYING, JOINTING AND TESTING OF PIPES:

- a) The Stone ware pipe (socket end) of specified internal diameter shall be supplied in accordance with I.S. 651-1992 specification for "Salt, glazed stone ware pipes and fittings". Stone ware pipes with spigot and socket ends of size and class as per working drawings, specifications given herein after and in standard length specified therein shall be supplied at site of work. No extra measurements will be taken for increase in number of joints on account of shorter lengths of pipe use and also for cutting of pipes wherever required as per site conditions. Any balance pipe lengths from a cut or rejected pipe lengths including their cost of transportation to and from the site will not be measured separately.
- b) The RCC S&S NP-2 pipes ISI Marked shall be supplied conforming to IS:458:1988 (Amended up to date) with anticorrosive bitumenastic paint of approved brand two or more coats (make Shalimar or equivalent) with ISI marked rubber ring/gasket lubricant etc.
- c) The laying and jointing of pipes shall be done in accordance with I.S. 4127-1967 "Code of practice of laying glazed stone ware pipes".
- d) The laying and jointing of RCC S&S pipes NP-2 shall be done in accordance with IS: 783: 1995 (Amended up to date) with hydraulic testing of sewer line.

- e) All pipes supplied shall be free from cracks, chipped ends and irregular angular space between pipes and socket /spigot end and should have smooth interior finish. All pipes shall be subjected to sound test by a suitable wooden hammer and ensured against invisible cracks. Any defective pipe, even after lowering into the trench shall be rejected and shall be immediately removed from site. The storage of pipes at site shall be in accordance with the provisions of ISS 4032-1977.
 - f) The pipe shall be lifted towards alignment of sewer line covered and laid in the trenches, in the manner specified with equipments like chain-pulley etc. all arrange by the contractor. Any pipe damaged during above operation shall be removed and replaced by the contractor at his cost. Any material falling into the trench while lowering or otherwise shall be removed and trenches shall be kept clear all the time.
 - g) The pipes fittings and other construction material shall be placed along the alignment in advance with utmost care during transit so that they are not damaged. Any damage due to these reasons shall be Contractor's liability.
 - h) Laying of the pipe prior to install the pipe bedding in the pipe trench, the Trench Bottom Level (TBL) shall be checked to confirm the slope and relative depth with respect to design level and got it approved from the Engineer. At first stage bedding shall be done up to pipe bottom level and same shall be checked before laying the pipe. At second stage the remaining bedding shall be done with proper careful compaction and finally the pipe top level shall be checked to confirm the proper slope.
 - i) All the sewer lines are to be laid perfectly true both in alignment and to gradient specified. In case of spigot and socket pipe, the socket end of the pipe shall face upstream.
 - j) The sewer lines shall be laid such that the making on pipes appears at the top of the pipes.
 - k) Properly fitted temporary wooden stoppers shall be provided to close the ends of all incomplete sewer line. The stoppers are only to be removed when pipes are being laid and jointed. Opening of sewer at end of day's work shall be capped and sealed.
 - l) Sewer pipe laying and jointing shall be started and completed only section wise as per the instruction of the Engineer-in-charge. The sections shall be chosen manholes to manhole. However in unavoidable circumstances the section of sewer line shall be changed as per site condition and as directed by Engineer. The work of sewer line laying, manhole construction and vent shaft shall be done simultaneously so that all the necessary testing can be done efficiently. The construction of the works should progress from downstream end (i.e. the discharge point) and proceed towards upstream. Also, as the work to facilitate the house sewer connection shall be done simultaneously, it will help in the commissioning of the works. As far as possible the testing of pipeline shall be done from manhole to manhole.
 - m) The bedding for sewer lines shall be provided as specified in the drawings and as per direction of the Engineer.
 - n) After 24 Hrs. of PCC bedding and laying of pipe line the trench shall be filled up to top of pipe with moist soil. The trench can be filled up to the top of the pipe level with moist soil to ensure curing of concrete and then after testing of sewer line, trench should be filled. In the duration before filling the trench, soil should be kept moist to ensure adequate curing.
 - o) All the testing of sewer lines and other appurtenances, at both factory and site shall be carried out in presence of the Engineer or his representative.
 - p) Special arrangements such as cranes, tripods with chain pulley block for lowering the pipes and fittings shall be made by contractor at his own cost. In no case pipes and fittings shall be dropped.
 - q) The payment for the sewer lines and manholes shall be made only after satisfactory testing of the works, as directed by the Engineer.
 - r) The reinstatement of road/footpath shall be done as specified and as per the requirements of the local authorities, on completion of all the works.
- 6.5 CONSTRUCTION OF MANHOLE CHAMBER AND TESTING FOR WATER TIGHTNESS.**
- a) The manholes shall be circular and constructed as RCC insitu for varying invert depths as per design and specification. The manholes shall generally conform to relevant I.S. and departmental specifications. The location of manhole shall be as per the drawing or layout given by the Engineer-in-charge or as directed by the Engineer-in-charge. The Manhole dimensions and other details shall be as per the enclosed drawing. The location of manholes shall be as per drawing or layout given by the Engineer-in-charge.
 - b) The inspection and testing of manhole chambers frames and covers shall be done at factory in presence of Engineer or his representative or shall be got done through third party inspection. The load test for covers shall be done in accordance with Table 1 of IS 12592 (Part-I).
 - c) The entire height of the manhole shall be tested for water tightness as per CPHEEO Manual or relevant IS code. The required water for testing and any other requirements shall be arranged by the Contractor at his own cost. .
 - d) The testing shall be preferably be done between manhole to manhole lengths. In case of steep slopping sewers, the test pressure at lower end of pipe, length tested should not exceed the allowable static pressure, the pipe length should be subdivided, and plug at end shall be effectively fixed. The pipe length under test shall be charged gradually. The pipe length under test should remain filled with water at least 24 hrs. Before testing.
 - e) Any defect noticed during the testing shall be immediately repaired removed and replaced. The testing should again be repeated if it satisfies above requirements. The test water should be left in pipe during bedding and back filling operations.
- 6.6 MAKING CONNECTION WITH EXISTING SEWER.**
- a) The connections in the existing sewer where required as per working drawings shall be made by cutting precast manhole walls preferably by using core cutting machine or other suitable means as specified by Engineer-in-charge. .
- 1.7 WORK TO FACILITATE HOUSE SEWER CONNECTION:** House Connection of 110 mm uPVC pipe to be done by contractor.
- 6.8 OTHER SERVICES**

- a) Contractor shall take the necessary precautions to avoid the damage to other services such as water supply lines, telephone cables, electrical cables, storm water drains etc. In case of any damages to any of the services, Contractor shall be responsible for restoring the facilities in bare minimum time at his own cost.

1.8 PRECAST REINFORCED CONCRETE

Nil

7.0 CONTRACTOR'S STAFF AND EQUIPMENT

- a) The contractor shall employ for the execution of the work only such persons as are skilled and experience in all activities required for the completion of the work, from reconnaissance surveys to detailed design, manufacturing, and execution and testing to commissioning.
- b) The contractor shall provide either one graduate or one diploma Engineer to supervise the construction of the work and to act as the contractor's Representative. The Engineer shall be B.E. Civil Eng. with minimum 1-year experience or a diploma in Civil Eng. with minimum 3 years experience in the field of sewer line work. The contractor shall also provide sufficient skilled, semi-skilled and un-skilled labor as are necessary to ensure completion of the various sections of the work in the time required the contractor shall not deploy/remove any supervisory staff or Labour from the site without approval of the Engineer in charge.
- c) The Engineer in charge shall be at liberty to object and direct the contractor to remove from the work any person who in the opinion, of the engineer in charge misconduct himself or is incompetent or negligent in the proper performance of his duties such person shall not be again employed without permission of the engineer in charge.
- d) The contractor shall at all times during progress of the work take all requisite precautions and use his best endeavors to prevent any notorious or unlawful behavior by or amongst the workers and other persons employed on the works and for the preservation of peace and protection of the inhabitants and the security of property in the neighborhood of the work.
- e) The contractor shall, if required by the Engineer in charge deliver to him a return in detail in such form and at such intervals as the Engineer in charge may prescribe, showing the supervisors and Labour employed by the contractor on the site The contractor shall make his own suitable arrangements for lodging and boarding of his, Labour supervisors and engineers

8.0 PROGRESS OF WORK

All components of works shall ensure a logical sequence of supply, installation, testing, and commissioning. If any supply of a material is made, not in conformity to the logical sequencing of the work component, no payments will be entitled against such supplies and installations.

9.0 SCHEDULE OF PROGRESS

- a) The complete work defined in the scope of work in the schedule 'E' and detailed item wise under schedule 'G' appended herewith shall be completed in all respects and to the entire satisfaction of the Engineer In charge and handed over the Department or to the persons nominated by the department to take over within a period of months from the date of written order to the contractor to commence the work.
- b) Date of Order to commence the work
- c) Stipulated date of completion
- d) The contractor will be required to maintain prorata progress as per clause 2 of agreement.

Executive Engineer (PHE-I)
JDA, Jaipur

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 and 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 Redressed 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 Executive Committee (E.C.), JDA, Jaipur.**

(1) Filing an appeal

- a. 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:
- b. 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:
- c. 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

- (f) 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.
- (g) 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.
- (h) 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 thereof 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 an 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. If 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/CSB	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) ET 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 <i>4*</i>

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

Table-II

S. No.	Released SD DLP period	1 st year	2 nd year	3 rd year	5 th 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 RTTP 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 IDC, 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

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

SCHEDULE 'H'**SPECIAL CONDITIONS**

1. 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.
2. The contractor shall follow the contractor labour regulation and abolition Act 1970 & Rule 1971.
3. 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 than 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 by the JDA to the contractor.
4. The contractor shall not work after the sunset and before sunrise without specific permission of the authority Engineer.
5. Tax exemption/ Tax liabilities if any shall be applicable as per prevailing government rule and bidder has to consider this while quoting the rates. As per latest provision of Government rule.
6. 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 at 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.
7. The rate quoted by the contractor shall remain valid for a period of 120 days from the date of opening of the tenders.
8. 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.
9. No conditions are to be added by the contractor and conditional tender is liable to be rejected.
10. If any Bid withdraws his Bid prior to expiry of said validity period given at S.No. 6 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 and fails to furnish performance guarantee 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 Bid does not execute the agreement or start the work or does not complete the work and the work has to be put to re-bidding, he shall stand debarred from participating in bidding in JDA for Six Months in addition to forfeiture of Earnest Money / Security Deposit /Performance Guarantee and other action under agreement
11. 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. Bids with incomplete or incorrect information are liable to be rejected.
12. 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.
13. 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.
14. The rates provided in Bid documents are inclusive of all Taxes, royalty.
15. 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.
16. Undersigned has full right to reject any or all Bids without given any reasons.
17. Mortar of Masonry work and lean concrete will be permitted mixer with hopper.
18. 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."
19. The Bidder are required to submit copy of their enlistment as contractor.
20. Conditions of RPWA-100 will be mandatory & acceptable to the contractor.
21. Any Bid received with unattested cutting/overwriting in rates shall be rejected and such bidder will be debarred from Bidding for three months in JDA.
22. 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 shall be applicable.

Signature of Contractor
with full address & Mobile No.

Executive Engineer (PHE-I)
JDA, Jaipur

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 **“P/L/J of DI pipe line for reuse of treated sewage water to Silven Park, Agra Road from 3 MLD STP, Paldimeena.”**

WHEREAS, _____ [name of Bidder with address] (**hereinafter called “the Bidder”**) has submitted his Bid dated for the work of **“P/L/J of DI pipe line for reuse of treated sewage water to Silven Park, Agra Road from 3 MLD STP, Paldimeena.” (Name of Work)** (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/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 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

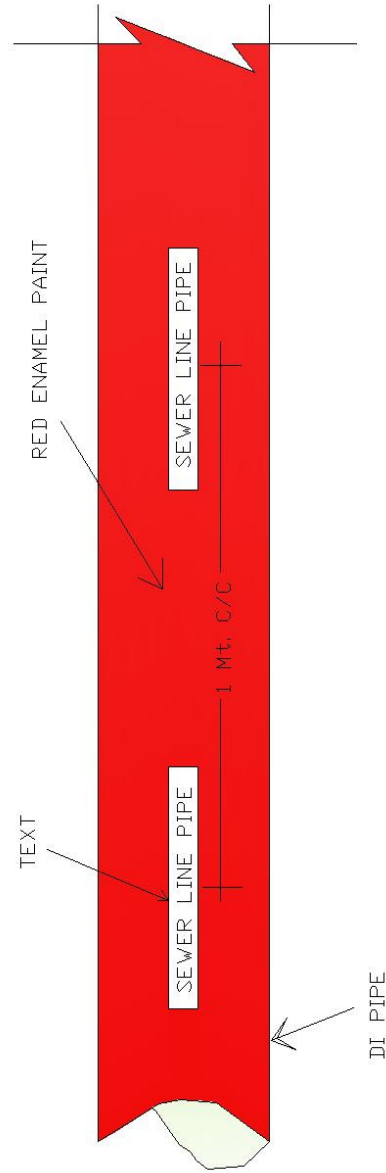
After confirming payment, the bidder will get Bid Participation Receipt on the basis of which user will get the payment details along with other details for bidding on e-Procurement portal of GOR

- 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 (NEFT/RTGS), 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

Section A6

Drawings



PAINING DI PIPE LINE WITH EMBOSSING
SEWER LINE PIPE @ PER METER FOR
PROPOSED PIPE LINE FROM 3 MLD STP,
PAALDI MEENA TO SILVEN PARK, AGRA
ROAD.

Validate

Print

Help

Percentage BoQ**Tender Inviting Authority: Jaipur Development Authority, Jaipur****Name of Work: P/L/J of DI pipe line for reuse of treated sewage water to Silven Park, Agra Road from 3 MLD STP, Paldimeena.****Contract No: 10/2017-18****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 relevant 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 and refiling 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	150 mm	1830.000	P.Mtr.	2013.00	3683790.00	INR Thirty Six Lakh Eighty Three Thousand Seven Hundred & Ninety Only
1.02	200 mm	2000.000	P.Mtr.	2455.00	4910000.00	INR Forty Nine Lakh Ten Thousand Only
2	Supply and fixing of cast iron double sluice valves IS 14846/2000 specification (ISI marked) of PN-1 rating including cost of rubber flange gasket and nut bolts complete as required for following sizes. (D-547 dt. 20.12.2011)					
2.01	150 mm	3.000	Each	8107.00	24321.00	INR Twenty Four Thousand Three Hundred & Twenty One Only

2.02	200 mm	4.000	Each	12565.00	50260.00	INR Fifty Thousand Two Hundred & Sixty Only
3	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)	800.000	Kg.	90.00	72000.00	INR Seventy Two Thousand Only
4	Supply and fixing of cast Iron Air valves 14845/20 specification (ISI marked) including cost of MS clamp, GI pipe, MS/GI flange, rubber flange gasket and nut bolts complete as required for following sizes. (D-547 dt. 20.12.2011)					
4.01	50 mm Double air valve	2.000	Each	3730.00	7460.00	INR Seven Thousand Four Hundred & Sixty Only
5	Supply of cast iron specials (class-10) as per IS : 5531-1988) specification as required. (D-547 dt. 20.12.2011)					
5.01	80 mm to 150 mm	250.000	Kg.	58.00	14500.00	INR Fourteen Thousand Five Hundred Only
5.02	200 mm to 300 mm	250.000	Kg.	62.00	15500.00	INR Fifteen Thousand Five Hundred Only
6	Providing, fabricating and installing MS specials including rolling, cutting, welding in different shape and size. (D-547 dt. 20.12.2011)	300.000	Kg.	80.00	24000.00	INR Twenty Four Thousand Only

7	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)	2.000	Each	2512.00	5024.00	INR Five Thousand &Twenty Four Only
8	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)					
8.01	150 mm	16.000	Each	458.00	7328.00	INR Seven Thousand Three Hundred & Twenty Eight Only
8.02	200 mm	16.000	Each	652.00	10432.00	INR Ten Thousand Four Hundred & Thirty Two Only

9	<p>Providing Laying and Jointing of 300mm dia RCC S&S Class NP-2 ISI marked pipe with anti corrosive bitumen paint of approved brand (two or more coats) (IS458:1988) amended upto date) approved make with ISI marked rubbering /gasket lubricants etc. with 10 cm thick and 50 cm wide plain cement concrete 1:4:8 (1 Cement : 4 coarse sand : 8 graded stone aggregate 20 mm nominal size) bedding and haunching up to ¼ of outer dia of pipe of sewer and laying RCC S&S pipes conforming to IS:783-1995 (Amended upto date) with hydraulic testing of sewer line including cost of water and equipment for testing. The work includes earthwork in all types of soil such as murrum, sand, silt, black cotton soil, kankar etc. disposing off surplus excavated material within a lead of 50 meter including cost of close timbering shoring & strutting and than refilling of trenches with excavated material, watering and ramming barricading along trenches as per drawings & specification complete in all respect and as per direction of Engineer incharge for following average invert depths. (D-142 Dt. 28.04.2008)</p>					
9.01	At av. Depth 1.8 meter [From 1.8 m to 2.09 m]	30.000	Mtr.	691.00	20730.00	INR Twenty Thousand Seven Hundred & Thirty Only
9.02	At av. Depth 2.1 meter [From 2.1 m to 2.39 m]	60.000	Mtr.	726.00	43560.00	INR Forty Three Thousand Five Hundred & Sixty Only
9.03	At av. Depth 2.4 meter [From 2.40 m to 2.69 m]	195.000	Mtr.	759.00	148005.00	INR One Lakh Forty Eight Thousand & Five Only
9.04	At av. Depth 2.7 meter [From 2.70 m to 2.99 m]	20.000	Mtr.	803.00	16060.00	INR Sixteen Thousand & Sixty

						Only
10	Construction of Pre-cast RCC M-40 grade circular manhole chamber for invert depth from 1.800 meter to 2.990 meter having 1200 mm internal diameter including required excavation of earth in all types of soils such as murrum, sand, sandy silt, black cotton soil, hard soil, kankar etc., disposing of surplus excavated material within a lead of 50 meters. The work includes laying of 150 mm thick plain cement concrete 1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 20 mm nominal size) 1600 mm dia bedding in foundation, providing and laying of plain cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate) in channel & circular starter base wall up to 50 mm above outer diameter of sewer pipe and P&F in position of 125 mm thick 150/225 mm high precast M-40 grade cement concrete ring at bottom and consecutive standard size 300 mm high rings. The work includes P&F pre-cast reinforced cement concrete eccentric conical piece of M40 grade, 125 mm thick having 560 mm and 1200 mm internal diameter at top & bottom respectively, fitted with Ferro-cement cover of 33 kg Cast Iron double seal ring & frame (heavy-duty) etc., to withstand for Class-AA loading including supply and fixing of Ferro-cement foot steps and sealing of all joints with cement mortar 1:1 complete job as per detailed specifications, drawings and directions of Engineer- In-charge, for following average invert depths: (D-142 Dt. 28.04.2008)					
10.01	For 300 mm dia Sewer line					
10.02	At av. Depth 1.8 meter [From 1.80 m to 2.09 m]	2.000	Each	10446.00	20892.00	INR Twenty Thousand Eight Hundred & Ninety Two Only

10.03	At av. Depth 2.1 meter [From 2.10 m to 2.39 m]	2.000	Each	11689.00	23378.00	INR Twenty Three Thousand Three Hundred & Seventy Eight Only
10.04	At av. Depth 2.4 meter [From 2.40 m to 2.69 m]	6.000	Each	12935.00	77610.00	INR Seventy Seven Thousand Six Hundred & Ten Only
10.05	At av. Depth 2.7 meter [From 2.70 m to 2.99 m]	2.000	Each	14182.00	28364.00	INR Twenty Eight Thousand Three Hundred & Sixty Four Only
11	Painting with synthetic enamel paint of approved brand and manufacture of give an even shade:					
11.01	Two or more coats on new work	2700.400	Sqm	39.60	106935.84	INR One Lakh Six Thousand Nine Hundred & Thirty Five and Paise Eighty Four Only
12	Cement Concrete (CAST-IN-SITU) Providing and laying in position cement concrete including curing, compaction etc. complete in specified grade excluding the cost of centering and shuttering - All work up to plinth level					
12.01	M20 grade Nominal Mix 1 : 1.5 : 3 (1 Cement : 1.5 Coarse sand : 3 graded stone aggregate 20mm nominal size).	5.400	Cum	3246.30	17530.02	INR Seventeen Thousand Five Hundred & Thirty and Paise Two Only
13	Horizontal boring below National Highway-11, Jaipur-Agra Road by mobilization of TBM at site and pulling of 400 mm MS casing pipe & 200 mm dia DI treated water caring pipe.	50.000	R.Mtr.	3659.00	182950.00	INR One Lakh Eighty Two Thousand Nine Hundred & Fifty

						Only
14	Providing welding & laying of MS 400 mm dia. Casing pipe below National Highway including hydraulic testing as per NH supervision.	4500.000	P.Kg.	94.00	423000.00	INR Four Lakh Twenty Three Thousand Only
Total in Figures					9933629.86	INR Ninety Nine Lakh Thirty Three Thousand Six Hundred & Twenty Nine and Paise Eighty Six Only
Quoted Rate in Figures			Select		0.00	INR Zero Only
Quoted Rate in Words			INR Zero Only			

Executive Engineer (PHE-I)
JDA, Jaipur

I/We Quote as % Above/ Below the schedule " G "

(In Words.....)'

Signature of Contractor
With full Address & Mobile No.