OFFICE OF THE UJJAIN MUNICIPAL CORPORATION, UJJAIN, DIST. - UJJAIN

TENDER DOCUMENT

ONLINE PERCENTAGETENDER FOR SURVEY, INVESTIGATION, CONSTRUCTION, TESTING AND COMMISSIONING OF SEWERAGE NETWORK WITH HOUSE SERVICE CONNECTION FOR UJJAIN CITY UNDER UJJAIN MUNICIPAL CORPORATION[AMRUT], UJJAIN

NIT Number and Date : 2026_UAD_488167_2 **Date 02-05-2026**

Agreement Number and Date: _____

Name of Work: **Execution of Balance work of Sewerage Network, Manhole, IC, House Service Connection with Road Restoration of Sewer Zone 6 Part – I under AMRUT – 1.0**

Name of the Contractor : _____

Probable Amount of Contract

(Rs. In Figure) : Rs. 9,56,49,573.00

(Rs. In Words) : Nine Crore Fifty-Six Lakh Forty-Nine Thousand Five Hundred Seventy-Three Rupees and Zero Paisa Only.

Contract Amount

(Rs. In Figure) : _____

(Rs. In Words) : _____

Stipulated Period of Completion: 09 months including rainy season

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OFFICE OF THE UJJAINMUNICIPALCORPORATION, UJJAIN, DIST- UJJAIN

Section – 1

Notice Inviting e-Tenders

NIT No**2026_UAD_488167_2** Date: 02-05-2026

Online Percentage bids for the following works Execution of Balance work of Sewerage Network, Manhole, IC, House Service Connection with Road Restoration of Sewer Zone 6 Part – I under AMRUT – 1.0 under "AMRUT" are invited from registered contractors and firms of repute fulfilling eligibility criteria:

S. No.	Work	Probable Amount (Rs. In lakhs)	Completion Period (months)
1.0	Construction, Testing and Commissioning of Sewerage Network and House service connection balance in Ujjain City under Ujjain Municipal Corporation [AMRUT 1.0], Ujjain including, 1.0 Providing house sewer chambers and laterals for connecting sewer to consumer sewer lines 2.0 Providing house sewerage connections 3.0 Execution of Balance work of Sewerage Network, Manhole, IC, House Service Connection with Road Restoration of Sewer Zone 6 Part – I under AMRUT – 1.0	Rs. **9,56,49,573.00**	09 months including rainy season

1. Interested Bidder can view the NIT on website http://www.mptenders.gov.in or and www.mpurban.gov.in
2. The Bid Document can be purchased only Online from 17:00 Hrs of 02-05-2026 to 17:30 Hrs of 18-05-2026 Amendment to NIT, if any, would be published on website only, and not in Newspaper.
3. GST shall be payable as per Govt. rules.

. The initial period of 3 years after completion shall be treated as Defect Liability Period (DLP).

Notice Inviting e-Tenders

OFFICE OF THE UJJAINMUNICIPALCORPORATION,UJJAIN, DIST- UJJAIN

N.I.T. No. **2026_UAD_488167_2** dated 02-05-2026

Online lump-sum bids for the following works under Execution of Balance work of Sewerage Network, Manhole, IC, House Service Connection with Road Restoration of Sewer Zone 6 Part – I under AMRUT – 1.0 "AMRUT" (Estimated on UADD SOR w.e.f 02/08/2021) are invited from registered contractors and firms of repute fulfilling eligibility criteria:

S.No.	Name of the work	Probable amount of contract (Rs. In Lacs)	Time of Completion
1.0	Construction, Testing and Commissioning of Sewerage Network and House connection in Ujjain City under Ujjain Municipal Corporation [AMRUT1.0], Ujjain including, 1.0 Providing house sewer chambers and laterals for connecting sewer to consumer sewer lines 2.0 Providing house sewerage connections 3.0 Execution of Balance work of Sewerage Network, Manhole, IC, House Service Connection with Road Restoration of Sewer Zone 6 Part – I under AMRUT – 1.0	Rs. **9,56,49,573.00**	09 months including rainy season.

1. All details relating to the Bid Document(s) can be viewed and downloaded free of cost from the website mentioned in NIT.
2. Bid document can be purchased after making online payment of portal fees through Credit/Debit/Cash Card/internet banking.
3. At the time of submission of the Bid the eligible bidder shall be required to:
   - i) pay the cost of Bid Document;
   - ii) deposit the Earnest Money;
   - iii) Submit a check list; (As required in Clause 12 of Bid Data Sheet)
   - iv) Submit an affidavit duly Notarized as per Annexure – B
   - v) Undertaking as per Clause no. 13 (Special Condition Regarding Conditional TENDER of Section – 3, Conditions of Contract, Part –II Special Conditions of Contract

     Details can be seen in the Bid Data Sheet
4. **ELIGIBILTY FOR BIDDERS:**
   (a) At the time of submission of the bid, the bidder should have valid registration with the Government of Madhya Pradesh, PWD. However, such bidders who are not registered with the Government of Madhya Pradesh and are eligible for registration can also submit their bids after having applied for registration with appropriate authority.
   (b) The bidder shall be required to have valid registration with MPPWD at the time of signing of the Contract.
   (c) Failure to sign the contract by the selected bidder, for whatsoever reason, shall result in forfeiture of the earnest money deposit.
5. **Pre-qualification –** Prequalification conditions, wherever applicable, are given in the Bid Data Sheet & Annexure - C.
6. **Special Eligibility -** Special Eligibility Conditions, if any, are given in the Bid Data Sheet & Annexure – D

7. The Bid Document can be Purchased only Online from17:00hrs (time) 02-05-2026(date) to 17:30hrs (time18-05-2026(date). Other key dates may be seen in Bid data sheet.

8. Amendment to NIT, if any, would be published on website only, and not in Newspaper.

Commissioner
Nagar Nigam Ujjain

SECTION 2

INSTRUCTIONS TO BIDDERS (ITB)

A. GENERAL

1. SCOPE OF BID

The detailed scope of work, hereinafter referred to as "Work" is "Survey, Construction Testing and Commissioning of waste water collection, and balance Work in Ujjain city under [AMRUT1.0] after completion of construction work. The initial period of 3 years after completion shall be treated as Defect Liability Period (DLP). A brief description of project is as given below,

Background

Population of Ujjain town under Ujjain Municipal Corporation, Ujjain

- Population (as per 2011 census) is 515,215
- The estimated population for the 2020 is 6,13,830
- The estimated population for the 2035 is 7,35,840
- The estimated population for the 2050 is 8,58,585
- The number of households in MUNICIPALCORPORATION (2020) are about122766
- The number of households in MUNICIPALCORPORATION (2033) are about 147168
- The number of households in MUNICIPALCORPORATION (2048) are about 171717
- The UJJAIN MUNICIPAL CORPORATION, UJJAIN has developed/completed water supply project and the water @ 135 litres per capita per day (lpcd) is available for next 30 years period.

With the water availability ensured @ 135 lpcd it is very important to have an integrated sewerage system in town for collection, treatment and safe disposal of generated waste water. At present there is no sewerage system in the town and the sewage from households is generally collected in the individual septic tanks or otherwise disposed off directly to the existing drains. The sewage from the households and septic tanks finally goes into open drains and Nallahas and then finally discharged into Kshipra River thereby polluting holy river and Ghats.

The above open drains/nallahs are creating nuisance for the common man. Therefore, an integrated sewerage system is proposed, wherein it is envisaged that sewage is collected systematically in well-designed sewers, transported upto the sewage treatment plant and it is treated in such a way that the effluent satisfies the parameters prescribed by Central Pollution Control Board of India. After Implementation of project, Treated Water will be reclaimed and is proposed to be used for horticulture, road side irrigation, road washing and irrigation purposes.

Project

Ujjain Municipal Corporation, Ujjain wants to execute sewerage project for the probable population of 2050. The project report prepared by the Municipal Corporation, Ujjain envisage following works in the project area,

i) Providing laying and jointing of sewerage pipelines construction of manholes and sewer appurtenances.

ii) Providing house sewer chambers and laterals for connecting sewer to consumer sewer lines

iii) Providing House Sewerage Connection

iv) The construction shall be ensured in such a way that there is minimum possible inconvenience to the public and the traffic. The reconstruction of roads will be carried out to original surface and pavement conditions.

The tender is hereby invited for the execution of sewerage project wherein the successful Bidder has to lay the sewer lines for entire Ujjain City including all necessary works related to sewer lines, sewer appurtenances, etc. and restore the roads to their original condition with respect to surface and pavement characteristics. The house connections shall also be covered under this project.

The essence of this sewerage project shall be,

a) Providing 100% coverage to un-sewered area of Ujjain town**.**

b) Providing flexibility of connecting existing sewer network in private colonies to proposed sewer network either at the outfall point or inlet of colony septic tank.
c) Providing flexibility to add the sewage from multistoried buildings to the proposed sewerage network with the provision of payment on the basis of per household monthly tariff.
d) The collection of sewage including house hold connections to achieve the desired flow in the sewer lines for generating minimum desired velocity in sewer lines.
.
e) Reconstruction of roads to its original conditions.

Therefore,

i) The bidder by the completion of construction shall ensure house hold connections to each house hold. The sewage connection shall be made upto the individual toilet outlet so as to collect the raw sewage. For making the individual sewage connection, due considerations shall be given to access to the house hold and accordingly side lanes and back lanes are to be identified and used. Existing useful sewer lines, if found, shall also be suitably integrated with the proposed sewerage system.

ii) As far as possible the entire system shall be designed and operated on the principles of gravity flow. The BOQ attached with the present invitation is based on detailed survey, investigation, tentative designing and estimation as given in the Detailed Project Report (DPR). The Bidder shall examine the DPR and its contents. For achieving the desired parameters and desired deliverables, the Bidder shall carryout necessary survey and investigations and would prepare the detail designs and drawings etc. as may be required for collection of sewage including pumping stations or other structures as required on best engineering practices and fulfilling the requirement of CPHEEO MANUAL, MOUD, DELHI. The Bidder shall also prepare detailed construction drawings as per actual working conditions including usage of back lanes and side lanes and minimum obstruction to existing utilities, roadways and railways.

On successful completion of the project as per best engineering practice.

The initial 3years period upon completion of construction work of this project shall be defect liability period (DLP).

The Detailed Project Report (DPR) for the work is available for viewing by the Bidder. However, it is clarified that the data and detailing of project in the DPR could be taken as base data only. The bidder is required to make his own assessment of work before bidding & the bidder shall not be entitled for claim on account of any deficiency / discrepancy in the data /information available in DPR.

2. General Quality of Work:

The work shall have to be executed in accordance with the drawings (approved by the competent authority), technical specifications specified in the Bid Data Sheet/ContractData, and shall have to meet high standards of workmanship, safety and security of workmen and works.

3. PROCEDURE FOR PARTICIPATION IN E-TENDERING

The procedure for participation in e-tendering is given in the Bid Data Sheet.

4. ONE BID PER BIDDER

4.1 The bidder can be an individual entity or a joint venture (if permitted as per Bid Data sheet). In case the J.V. is permitted, the requirement of joint venture shall be as per the Bid Data Sheet.

4.2 No bidder shall be entitled to submit more than one bid whether jointly or severally. If he does so, all bids wherein the bidder has participated shall stand disqualified.

4.3 In case of Bid submitted by the Joint Venture all the members should be essentially registered with the Government

of Madhya Pradesh, PWD.

5. Cost of Bidding

The bidder shall bear all costs associated with the preparation and submission of his bid, and no claim whatsoever for the same shall lie on the ULB.

6. Site Visit and examination of works

The bidder is advised to visit and examine the Site of Works and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the bid and entering into a contract for construction of the work. All costs shall have to be borne by the bidder.

B. BID DOCUMENTS

7. CONTENT OF BID DOCUMENTS

The Bid Document comprises of the following documents:

1. NIT with all amendments.
2. Instructions to Bidders,
3. Conditions of Contract:
    i. Part I General Conditions of Contract and Contract Data; and
    ii. Part II Special Conditions of Contract.
4. Specifications
5. Drawings,
6. Priced Bill of Quantities
7. Technical and Financial Bid
8. Letter of Acceptance
9. Agreement and
10. Any other document(s), as specified.

8. The bidder is expected to examine carefully all instructions, conditions of contract, the contract data, forms, terms and specifications, bill of quantities, forms and drawings in the Bid Document. Bidder shall be solely responsible for his failure to do so.

9. Pre-Bid Meeting (where applicable)

Wherever the Bid Data Sheet provides for pre-bid meeting:

9.1 Details of venue, date and time would be mentioned in the Bid Data Sheet. Any change in the schedule of pre-bid meeting would be communicated on the website only, and intimation to bidders would not be given separately.

9.2 Any prospective bidder may raise his queries and/or seek clarifications in writing before or during the pre-bid meeting. The purpose of such meeting is to clarify issues and answer questions on any matter that may be raised at that stage. The Employer may, at his option, give such clarifications as are felt necessary.

9.3 Minutes of the pre-bid meeting including the list of the questions raised and the responses given together with any response prepared after the meeting will be hosted on the website.

9.4 Pursuant to the pre-bid meeting if the Employer deems it necessary to amend the Bid Document, it shall be done by issuing amendment to the online NIT.

10. Amendment of Bid Documents

10.1 Before the deadline for submission of bids, the Employer may amend or modify the Bid Documents by publication of the same on the website.

10.2 All amendments shall form part of the Bid Document.

10.3 The Employer may, at its discretion, extend the last date for submission of bids by publication of the same on the website.

C. PREPARATION OF BID

11. The bidders have to prepare their bids online, encrypt their Bid Data in the Bid Forms and submit Bid Seals (Hashes) of all the envelopes and documents related to the Bid required to be uploaded as per the time schedule mentioned in the key dates of the Notice Inviting e-Tenders after signing of the same by the Digital Signature of their authorized representative.

12. DOCUMENTS COMPRISING THE BID

The bid submitted online by the bidder shall be in the following parts:

Part 1 – This shall be known as **Envelope A** and would apply for all bids. **Envelop A** shall contain the following as per details given in the Bid Data Sheet:

i) Registration number or proof of application for registration and organizational details in format given in the Bid Data sheet.

ii) Payment of the cost of Bid Document;

iii) Earnest Money;

iv) An affidavit duly notarized.

v) JV Agreement (Original) in case of JV.

vi) Undertaking as per Clause no. 13 (Special Condition Regarding Conditional TENDER of Section – 3, Conditions of Contract, Part –II Special Conditions of Contract

Part 2 – This shall be known as **Envelope B** and required to be submitted only in works where pre-qualification conditions and/or special eligibility conditions are stipulated in the Bid Data Sheet. Online **Envelop B** shall contain a self-certified sheet duly supported by documents to demonstrate fulfillment of pre-qualification conditions.

Part 3 – This shall be known as **Envelope C** and would apply to all bids. **Envelop C** shall contain financial offer in the format prescribed enclosed with the Bid Data Sheet.

13. LANGUAGE

The bid as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Employer shall be in English or Hindi. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages in English. In such case, for the purposes of interpretation of the bid, such translation shall govern.

14. TECHNICAL PROPOSAL

14.1 Only, in case of bids with pre-qualification conditions defined in the Bid data sheet, the Technical Proposal shall comprise of formats and requirements given in the Bid Data Sheet.

14.2 All the documents / information enclosed with the technical proposals should be self-attested and certified by the Bidder. The Bidder shall be liable for forfeiture of his earnest money deposit, if any document / information are found false/fake/untrue before acceptance of Bid. If it is found after acceptance of the Bid, the sanctioning authority may at his discretion forfeit his performance security/guarantee, security deposit, enlistment deposit and take any other suitable action.

15. FINANCIAL BID

i. The bidder shall have to quote rates in format referred in Bid Data sheet, in Lumpsum, and not item wise. If the bid is in absolute amount, overall percentage would be arrived at in relation to the NIT amount. The overall percentage rate would apply for all items of work.

ii. Lumpsum offer shall be quoted in figures as well as in words. If any difference in figures and words found, lower of the two shall be taken as valid and correct.

iii. The bidder shall have to quote rates inclusive of all duties, taxes, royalties and other levies; and the Employer shall not be liable for the same. Excise exemption on pipe shall be available as per norms.

iv. The material alongwith the units and rates, which shall be issued, if any, by the department to the contractor, is mentioned in the Bid Data Sheet.

16. PERIOD OF VALIDITY OF BIDS

The bids shall remain valid for a period specified in Bid Data Sheet after the date of "close for biding" as prescribed by the Employer. The validity of the bid can be extended by mutual consent in writing.

17. EARNEST MONEY DEPOSIT (EMD)

17.1 The Bidder shall furnish, as part of the Bid, Earnest Money Deposit (EMD), of the amount specified in the Bid Data Sheet.

17.2 The EMD shall be in the form of Fixed Deposit Receipt of a scheduled commercial bank, issued in favour of the name given in the Bid Data Sheet. The Fixed Deposit Receipt shall be valid for six months or more after the last date of receipt of bids. However, other forms of EMD may be allowed by the employer by mentioning it in the Bid Data sheet.

17.3 Bid not accompanied by EMD shall be liable for rejection as non-responsive.

17.4 EMD of bidders whose bids are not accepted will be returned within ten working days of the decision on the bid.

17.5 EMD of the successful Bidder will be discharged when the Successful Bidder has signed the Agreement and furnished the Bank Guarantee of required value for Performance Security& Additional Performance Security, if any.

17.6 Failure to sign the contract by the successful/selected bidder, for whatsoever reason, shall result in forfeiture of the Earnest Money Deposit.

D. SUBMISSION OF BID

18. The bidder is required to submit online bid duly signed digitally, and Envelop 'A' in physical form also at the place prescribed in the Bid Data Sheet.

E. OPENING AND EVALUATION OF BID

19 PROCEDURE

19.1 Envelope 'A' shall be opened first online at the time and date notified and its contents shall be checked. In cases where Envelop 'A' does not contain all requisite documents, such bid shall be treated as non-responsive, and Envelop B and/or C of such bid shall not be opened.

19.2 Wherever Envelop 'B' (Technical Bid) is required to be submitted, the same shall be opened online at the time and date notified. The bidder shall have freedom to witness opening of the Envelop 'B'. Envelop 'C' (Financial Bid) of bidders who are not qualified in Technical Bid (Envelop 'B') shall not be opened.

19.3 Envelope 'C' (Financial Bid) of the qualified bidders shall be opened online at the time and date notified. The bidder shall have freedom to witness opening of the Envelop 'C'.

19.4 After opening Envelop 'C' all responsive bids shall be compared to determine the lowest evaluated bid.

19.5 The Employer reserves the right to accept or reject any bid, and to annul the biding process and reject all the bids at any time prior to contract award, without incurring any liability. In all such cases reasons shall be recorded.

19.6 The Employer reserves the right of accepting the bid for the whole work or for a distinct part of it.

20. CONFIDENTIALITY

20.1 Information relating to examination, evaluation, comparison and recommendation of contract award shall not be disclosed to bidders or any other person not officially concerned with such process until final decision on the bid.

20.2 Any attempt by a bidder to influence the Employer in the evaluation of the bids or contract award decisions may result in the rejection of its bid.

F. AWARD OF CONTRACT

21. AWARD OF CONTRACT(ANNEXURE – L)

The Employer shall notify the successful bidder by issuing a 'Letter of Acceptance' that his bid has been accepted.

22. PERFORMANCE SECURITY

22.1 Prior to signing of the Contract, the bidder to whom LOA has been issued shall have to furnish Performance Security and Additional Performance Security of the amount, form and duration, etc. as specified in the Bid Data Sheet.

22.2 If the Bid, which results in the lowest evaluated bid price, is seriously unbalanced or front loaded in the opinion of the employer, the employer after evaluation, taking in to consideration the schedule of the estimated contract price may require Additional Performance Security from the successful bidder for such unbalanced bid price.

23. SIGNING OF CONTRACT AGREEMENT (ANNEXURE- M)

23.1 The successful bidder shall have to furnish Performance security and sign the contract agreement within 15 days of issue of LOA.

23.2 The signing of contract agreement shall be reckoned as intimation to commence the work within 14 days of the signing of contract. No separate work order shall be issued by the Employer to the contractor for commencement of work.

23.3 In the event of failure of the successful bidder to submit Performance Security and Additional Performance Security,if any,or sign the Contract Agreement, his EMD shall stand forfeited without prejudice to the right of the employer for taking action against the bidder.

24. CORRUPT PRACTICES

The Employer requires that bidders observe the highest standard of ethics during the procurement and execution of contracts. In pursuance of this policy, the Employer:

i. may reject the bid for award if it determines that the bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract; and

ii. may debar the bidder if he is being blacklisted by any Department of State Government or GOI for non-performance / substandard execution or any other reason what so ever in similar type of works.

iii. may debar the bidder declaring ineligible, either indefinitely or for a stated period of time, to participate in bids, if it at any time determines that the bidder has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for, or in executing, a contract.

For the purposes of this provision, the terms set forth above are defined as follows:

a. "corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party;

b. "fraudulent practice" means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;

c. "coercive practice" means impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;

d. "Collusive practice" means an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party.

[End of ITB]

Bid Data Sheet

General

S.No.	Particulars	Data	
1	Office inviting Tender	Commissioner, Municipal Corporation, Ujjain (M.P.)	
2	NIT No	**2026_UAD_488167_2**	
3	Date of NIT	02-05-2026	
4	Bid document download available from date & time	From 02-05-2026 17:00 Hrs	To 18-05-2026 17:30 Hrs
5	Website link	**http://www.mptenders.gov.in**	

For Section 1 - NIT

Clause reference	Particulars	Data
2	Portal fees	As applicable
3	Cost of bid document (in the form of Demand Draft)	Rs. 20000
	Cost of bid document payable to	Commissioner, Municipal Corporation, Ujjain (M.P.)
	Cost of bid document in favour of	Commissioner, Municipal Corporation, Ujjain (M.P.)
4	Affidavit	Annexure B
5	Pre-qualifications required	Yes
	If Yes, details	Annexure C
6	Special Eligibility	Yes
	If Yes, details	Annexure D
7	Key Dates	Annexure A

For Section 2 - ITB

Clause reference	Particulars	Data
1	Name of work	Execution of Balance work of Sewerage Network, Manhole, IC, House Service Connection with Road Restoration of Sewer Zone 6 Part – I under AMRUT – 1.0
2	Specifications	Annexure E
3	Procedure for participation in e-tendering	Annexure F
4	Whether Joint-venture is allowed	No
	If yes, requirement for Joint venture	Annexure G
9	Pre bid meeting to held	YES
	If Yes, Date, Time & Place	Date :07-05-2026 Time from : 13:30 Place : UMC Meeteing Hall Chhatrpati Shivaji Bhawan Agar Road Ujjain
12	**Envelope –A** containing: i. Registration number or proof of application for registration and	Submit Online Only

	organizational details as per Annexure 'H' ii. Cost of Bid Document iii. EMD iv. An affidavit duly notarized as per Annexure –B v. JV Agreement in Original (In case of JV) vi. Undertaking as per Clause no. 13 of Section – 3, Part –II Special Conditions of Contract Should reach in physical form	
14	Envelope-B Technical Proposal	Annexure – I and Annexure – I (Format I-1 to I-5)
15	Envelope-C Financial Bid	Annexure – J
	Materials to be issued by the department	No
16	Period of Validity of Bid	180 Days
17	Earnest Money Deposit	Rs. 4,78,247.00
	Forms of Earnest Money Deposit	Online
	EMD valid for a period of	Not less than 180 days
	FDR (Fixed Deposit Receipt) must be drawn in favour of	COMMISSIONER MUNICIPA CORPORATION, UJJAIN (M.P.)
21	Letter of Acceptance (LoA)	**Annexure L**
22	Amount of Performance Security	1. 3%of the Capital cost of the project. Valid up to 3 months beyond the completion of design-built component.
	Additional Performance Security, if any	As per provision of clause 22.2 of ITB
	Performance security& Additional Performance Security in the format	Annexure M
	Performance security & Additional Performance Security in favor of	Commissioner, Municipal Corporation, Ujjain (M.P.)
	Performance security & Additional Performance Security valid up to	Valid contract period plus 3 months

Annexure – A

(See clause 1, 7 of Section 1 NIT)

KEY DATES

S.No	Works Department Stage	Bidder's Stage	Start		Expiry		Envelopes
			Date	Time	Date	Time	
1		Purchase of Tender-Online	02-05-2026	17:00	18-05-2026	17:30	
2		Bid Submission-Online	02-05-2026	17:00	18-05-2026	17:30	
3	Mandatory submission Open (Envelope -A)		19-05-2026	After 17:35			Envelope A
4	Technical proposal open (PQ Envelope-B)		19-05-2026	After 17:35			Envelope B
5	Financial Bid Open (Envelope C)		……	After 10:30			Envelope C

Original Term Deposit Receipt of Earnest Money Deposit, Demand Draft for the cost of Bid Document and Affidavit shall be submitted by the bidder so as to reach the office as prescribed in Bid Data Sheet, at least one calendar day before specified start time and date in key dates for opening of technical proposal as per key dates in Bid Data Sheet.

Annexure – B
(See clause 3 of Section 1-NIT)

|| AFFIDAVIT ||

(To be contained in Envelope A)

I/we _____ who is/ are _____ (status in the firm/ company) and competent for submission of the affidavit on behalf of M/S _____ (contractor) do solemnly affirm an oath and state that:

I/we are fully satisfied for the correctness of the certificates/records submitted in support of the following information in bid documents which are being submitted in response to notice inviting e-tender No. _____ for _____ (name of work) dated _____ issued by the _____ (name of the ULB).

I/we are fully responsible for the correctness of following self-certified information/ documents and certificates:

1. That the self-certified information given in the bid document is fully true and authentic.
2. That:
   a. Term deposit receipt deposited as earnest money, demand draft for cost of bid document and other relevant documents provided by the Bank are authentic.
   b. Information regarding financial qualification and annual turn-over is correct.
   c. Information regarding various physical qualifications is correct.
3. No close relative of the undersigned and our firm/company is working in the department.

OR

Following close relatives are working in the department:
Name _____ Post _____ Present Posting _____

Signature with Seal of the Deponent (bidder)

I/ We, _____ above deponent do hereby certify that the facts mentioned in above paras 1 to 3 are correct to the best of my knowledge and belief.

Verified today _____ (dated) at _____ (place).

Signature with Seal of the Deponent (bidder)

Annexure – C
(See clause 5 of Section 1 NIT)

PRE-QUALIFICATIONS CRITERIA

A. Financial

i. Experience of having successfully executed*,

a) three similar works each costing not less than the amount equal to 20% of the probable amount of contract during the last 7 financial years; or
b) two similar works each costing not less than the amount equal to 30% of the probable amount of contract during the last 7 financial years; or
c) one similar work of aggregate cost not less than the amount equal to 50% of the probable amount of during the last 7 financial years;

In case of Sewerage related works similar works shall mean work related to sewerage project comprising of components mentioned in the scope of work i.e

i. Providing, laying, jointing of sewer pipeline of any material or nature like gravity, pumping main and Construction of Sewer Appurtenances And
ii. House service connections.

B. Physical (Deleted)

(i)Physical qualifications for the work in case of Sewerage related works shall be as below,

Minimum Physical Requirement		
S. No.	Item of Work	Quantity
I	II	III
1	-	-
2	-	-

*Successfully executed would mean successfully completion and commissioning of the project.

Note :

1. Experience of subcontractor to main contractor shall be considered subjected to submission of certificate from principal employer of main contractor.
2. Successfully executed would mean substantially completed (All head works have been completed and House Service Connections more than 75%) including commissioning of the project.
3. Experience at central govt. / State govt./ PSUs shall be considered.
4. Experience Certificate issued by an authority not below the rank of Executive Engineer shall only be considered

Annexure – D
(See clause 6 of Section 1 NIT)

SPECIAL ELIGIBILITY CRITERIA

a) A bidder may participate in any number of tenders; however, a single bidder/firm/company shall be awarded a maximum of three (03) works only out of the total tenders invited for the balance work of AMRUT sewerage project (as per table below). Tenders will be evaluated in Sequence stated in table below. In case a bidder becomes the lowest bidder (L1) in more than three tenders, the bidder will be disqualified technically in next tenders and financial bid will not be open for remaining tenders.

S. No	Name of Work	Pipe Laying (In Km)	House Service Connection (In Nos)	Amount
1	Execution of Balance work of Sewerage Network, Manhole, IC, House Service Connection with Road Restoration of Sewer **Zone - 1, 2 & 4** under AMRUT – 1.0	0.83	2300	2,51,23,068.90
2	Execution of Balance work of Sewerage Network, Manhole, IC, House Service Connection with Road Restoration of Sewer **Zone – 3** under AMRUT – 1.0	4.90	4776	7,44,56,237.09
3	Execution of Balance work of Sewerage Network, Manhole, IC, House Service Connection with Road Restoration of Sewer **Zone 5 Part - I** under AMRUT – 1.0	13.10	3800	9,50,65,111.00
4	Execution of Balance work of Sewerage Network, Manhole, IC, House Service Connection with Road Restoration of Sewer **Zone 5 Part - II** under AMRUT – 1.0	7.20	2800	8,44,15,414.00
5	Execution of Balance work of Sewerage Network, Manhole, IC, House Service Connection with Road Restoration of Sewer **Zone 5 Part - III** under AMRUT – 1.0	8.30	4200	8,96,37,044.10
6	Execution of Balance work of Sewerage Network, Manhole, IC, House Service Connection with Road Restoration of Sewer **Zone 5 Part - IV** under AMRUT – 1.0	4.10	1380	8,66,87,763.00
7	Execution of Balance work of Sewerage Network, Manhole, IC, House Service Connection with Road Restoration of Sewer **Zone 6 Part -** I under AMRUT – 1.0	4.00	3537	9,56,49,573.00
8	Execution of Balance work of Sewerage Network, Manhole, IC, House Service Connection with Road Restoration of Sewer **Zone 6 Part - II** under AMRUT – 1.0	4.83	3000	9,09,93,327.00
9	Execution of Balance work of Sewerage Network, Manhole, IC, House Service Connection with Road Restoration of Sewer **Zone 7 Part – I** under AMRUT – 1.0	1.70	4100	10,63,38,572.65
10	Execution of Balance work of Sewerage Network, Manhole, IC, House Service Connection with Road Restoration of Sewer **Zone 7 Part - II** under AMRUT – 1.0	2.90	4400	6,46,94,418.00
11	Execution of Balance work of Sewerage Network, Manhole, IC, House Service Connection with Road Restoration of Sewer **Zone 7 Part - III** under AMRUT – 1.0	6.10	5000	6,23,72,035.00
12	Execution of Balance work of Sewerage Network, Manhole, IC, House Service Connection with Road Restoration of Sewer **Zone - 8, 9** under AMRUT – 1.0	1.80	4100	7,08,83,577.00

Annexure – E
(See clause 2 of Section 2-ITB & clause 10 of GCC)

Specifications

Enclosed after Annexure – Y

Specifications for Sewage Related Jobs

Table of Contents

(The soft copy of the specifications in four parts namely (1) Water Supply, Sewerage and Tube Well Works (2) Building Water Supply, Drainage and Sanitary Installation (3) Roads & Bridge (4) Electrical Works shall form part of the technical specifications of this work & is available at UADD Website www.mpuraban.gov.in)

ANNEXURE-F
(See clause 3 of Section 2-ITB)

Procedure for participation in e-Tendering

1. Registration of Bidders on e-Tendering System

All the PWD registered bidders are already registered on the new e-procurement portal http://www.mptenders.gov.in The user id will be the contractor ID provided to them from MP Online. The password for the new portal has been sent to the bidders registered email ID. For more details may contact M/s Tata consultancy Services Corporate Block, 5th floor, DB city Bhopal-462011, email id: eproc_helpdesk@mpsdc.gov.in. Helpdesk phone numbers are available on website.

2. Digital Certificate:

The bids submitted online should be signed electronically with a class III Digital Certificate to establish the identity of the bidder submitting the bid online. The bidders may obtain class III Certificate issued by an approved certifying Authority authorized by the controller of certifying Authorities, government of India. A class III digital Certificate is issued upon receipt of the required proofs along with an application. Only upon the receipt of the required documents, a digital certificate can be issued. For details please visit **http:cca.gov.in.**

Note:

i. It may take up to 7 working days for issuance of class III digital certificate; hence the bidders are advised to obtain the certificate at the earliest. Those bidders who already have valid class III digital certificate need not obtain another Digital Certificate for the same.

The bidders may obtain more information and the APPLICATION FORM REQUIRED TO BE SUBMITTED FOR THE ISSUANCE OF DIGITAL CERTIFICATE FROM **http:cca.gov.in.**

ii Bids can be submitted till bid submission end date. Bidder will require digital signature while bid submission. The digital certificate issued to the authorized user of a partnership firm/Private limited company/Public Limited Company and user for online bidding will be considered as equivalent to a no-objection certificate/power of attorney to that user.

In case of Partnership firm, majority of the partners have to authorize a specific individual through authority letter signed by majority of partners o the firm.

In case of Private Limited company, Public Limited company, the Managing Director has to authorize a specific individual through Authority Letter. Unless the certificate is revoked, it will be assumed to represent adequate authority of the specific individual to bid on behalf of the organization for online bids as per Information Technology Act 2000. This Authorized User will be required to obtain a digital certificate. The Digital Signature executed though the use of the responsibility of Management/Partners of the concerned firm to inform the Certifying Authority, if the authorized user changes, and apply for a fresh Digital Certificate for the new Authorized user.

3. Set Up of Bidder's Computer System:

In order for a bidder to operate on the e-tendering System, the Computer system of the bidder is required to be set up for Operating System, Internet Connectivity, Utilities, Fonts, etc. The details are available at http://www.mptenders.gov.in

4. Key Dates:

The bidders are strictly advised to follow the time schedule (Key dates as mentioned in **Annexure - A**) of the bid of their side for tasks and responsibilities to participate in the bid, as all the stages of each bid are locked before the start time and date and after the end time and date for the relevant stage of the bid as set by the Department.

5. Preparation and Submission of Bids

The bidders have to prepare their online, encrypt their bid data in the Bid forms and submit Bid of all the envelopes and documents related to the Bid required to be uploaded as per the time schedule mentioned in the key dates of the notice inviting e- Tenders after singing of the same by the Digital Signature of their authorized representatives.

6. Purchase of Bid Document

For purchasing of the bid document bidders have to pay Service Charge online ONLY which is Rs. [as per Bid Data Sheet]. Cost of Bid document is separately mentioned in the detailed NIT. The Bid Document shall be available for purchase to concerned eligible bidders immediately after online release of the bids and up to scheduled time and date as set in the key dates. The payment for the cost of bid document shall be made online through Debit/Credit card. Net banking or NEFT Challan through the payment gateway provided on the portal.

7. Withdrawal, Substitution and Modification of Bids

Bidder can withdraw and modify the bid before submission end date

ANNEXURE-G

(See clause 4 of Section 2-ITB)

JOINT VENTURE (J.V.)

if J.V. is allowed following conditions and requirements must be fulfilled –

1. Number of partners in a Joint Venture shall not exceed 2 (two). The partners shall comply with the following requirements :

a. One of the partners shall be nominated as being Lead Partner, and this authorization shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the partners;

b. The bid and, in case of successful bid, the Agreement, shall be signed so as to be legally binding on both the partners;

c. The partner in charge shall be authorized to incur liabilities and receive instructions for and on behalf of any and all partners of the joint venture and the entire execution of the contract, including payment, shall be done exclusively with the partner in charge;

d. Both the partners of the joint venture shall be liable jointly and severally for the execution of the contract in accordance with the contract terms, and a statement to this effect shall be included in the authorization mentioned under [c] above, as well as in the bid and in the Agreement [in case of successful bid];

e. Bidder shall submit the joint venture agreement indicating precisely the role and responsibilities of all the members of JV in respect of planning, design, construction equipment, key personnel, work execution, and financing of the project including operation and maintenance of the works. All members of JV should have active participation in execution during the currency of the contract. This should not be varied/modified subsequently without prior approval of the employer;

f. a copy of the Joint Venture Agreement entered into by the partners shall be submitted with the bid.

g. The joint venture agreement shall be registered at the time of agreement, so as to be legally valid and binding on all partners.

2. All the partners should meet out the minimum qualifying criteria required for the bid and collectively must meet the criteria specified in full. Failure to comply with this requirement will result in rejection of the joint venture's bid.
3. The performance security of joint venture shall be in the name of the partner Lead partner/joint venture.
4. Attach the power of attorney of the partners authorizing the Bid signatory(ies) on behalf of the joint venture
5. An individual Bidder cannot at the same time be member of a Joint Venture applying for this Bid. Further, a member of a particular Bidder Joint Venture cannot be member of any other Bidder Joint Venture applying for this bid.
6. A copy of the Joint Venture agreement entered into by the partners made on Rs 500/- Non-judicial stamp duly notarized shall be submitted with the bid. However, at the time of agreement bidder shall get the joint venture agreement registered, so as to be legally valid and binding on all partners.
7. Furnish details of participation proposed in the joint venture as below:

PARTICIPATION DETAILS	FIRM 'A' (Lead partner)	FIRM 'B'	FIRM 'C'
Financial			
Name of the Banker(s)			
Planning			
Construction Equipment			
Key personnel			
Execution of Work (Give details on contribution of each)			

8. The partners of J.V. should satisfy the qualification criteria as below,
   a. The Lead Partner must have the share of 51% in the J.V.
   b. The Other partner must have a share of minimum 49% in the J.V.
   c. The lead partner and the other partner must also meet 51% and 49% of the all qualification criteria respectively except for the requirement of work experience described in Annexure 'C'. However, both the partners must satisfy the full (100%) qualification criteria jointly. For this purpose, the qualification of individual partners shall be added (for annual average turnover, Net-worth and for Bid Capacity Only). For Technical Qualifications, refer point no.9 as below.
9. For the meeting the minimum qualification criteria of experience of similar nature work,

i. Out of 3 similar works of value more than 20% of PAC, at least 2 works must be done by lead partner and one work to be done by other partner jointly,

OR

Out of 2 similar works of value more than 30% of PAC, at least 1(one) work must be done by lead partner and 1 (one) work to be done by other partner jointly,

OR

In case of one similar work of value more than 50% of PAC the lead partner must have executed one work of value more than 25.50% of PAC (51% of 50%). However, the other partner must satisfy the criteria in (i) above jointly i.e., at least one work of 20% of PAC, together the value of works executed by all the partners shall be more than 50% of PAC.

ANNEXURE-H

(See clause 12 of Section 2 ITB & clause 4 of GCC)

ORGANIZATIONAL DETAILS
(To be enclosed with technical proposal)

S.No.	Particulars	Details
1.	Registration No. issued by centralized registration system of Govt. of MP or proof of application for registration	(If applicable, scanned copy of proof of application for registration to be uploaded)
2.	Valid registration of Bidder through centralized registration of Govt. of MP, PWD	Registration no……. date……. (Scanned copy of Registration to be uploaded)
3.	Name of Organization/ Individual Proprietary Firm/ Partnership Firm (Registered under Partnership Act)/ Limited Company (Registered under the Companies Act–1956)/ Corporation/ Joint Venture	
4.	Entity of Organization Individual/ Proprietary Firm/ Partnership Firm (Registered under Partnership Act)/ Limited Company (Registered under the Companies Act–1956)/ Corporation/Joint Venture	
5.	Address of Communication	
6.	Telephone Number with STD Code	
7.	Fax Number with STD Code	
8.	Mobile Number	
9.	E-mail Address for all communications	
	Details of Authorized Representative	
10.	Name	
11.	Designation	
12.	Postal Address with pin code	
13.	Telephone Number with STD Code	
14.	Fax Number with STD Code	
15.	Mobile Number	
16.	E-mail Address	

Note: *In case of partnership firm and limited company certified copy of partnership deed/ Articles of Association and Memorandum of Association alongwith registration certificate of the company shall have to be enclosed.*

Signature of Bidder with Seal
Date: _____

Annexure – I
(See clause 14 of Section 2 of ITB)

Envelope – B, Technical Proposal

Technical Proposal shall comprise the following documents:

S.No.	Particulars	Details to be submitted
1	Experience - Financial and Physical	Annexure – I (Format : I - 1)
2	Annual Turnover	Annexure – I (Format : I - 2)
3	List of technical personnel for the key positions	Annexure – I (Format: I - 3)
4	List of Key equipment's/ machines for quality control labs	Annexure – I (Format: I - 4)
5	List of Key equipment's/ machines for construction work	Annexure – I (Format: I – 5)

Note:

1. *Technical Proposal should be uploaded duly page numbered and indexed.*
2. *Technical Proposal uploaded otherwise will not be considered.*

Annexure – I *(Format: I-1)*
(See clause 14 of Section 2 of ITB

FINANCIAL & PHYSICAL EXPERIENCE DETAILS

A. Financial Requirement

The bidder should have completed either of the below:

a) three similar works each costing not less than the amount equal to 20% of the probable amount of contract during the last 7 financial years; or
b) two similar works each costing not less than the amount equal to 30% of the probable amount of contract during the last 7 financial years; or
c) one similar work of aggregate cost not less than the amount equal to 50% of the probable amount of contract during the last 7 financial years;

To be filled in by the contractor:

i. Details of successfully completed similar works shall be furnished in the following format.
ii. Certificate duly signed by the employer shall also be enclosed for each completed similar work.

Agreement Number & Year	Name of Work	Date of Work Order	Date of Completion	Amount of Completion Value of Contract	Employer's Name and Address

Existing commitments – (Value of 'C' for Bid Capacity formula) (deleted)

Agreement Number & Year	Name of Work	Date of Work Order	Date of Completion	Amount of Contract	Amount	Employer's Name and Address

B. PhysicalRequirement: (DELETED)

Execution of similar items of work in any one financial year during the last 3 financial years should not be less than the minimum physical requirement fixed for the work.

S.No.	Particulars	**Actual Quantity Executed (To be filled in by the contractor)**		
		Year – 1	Year – 2	Year – 3
1	Physical qualification requirement	No		
2				
3				

Note: 1. *Similar works:* ***As described and detailed in Clause 'A' of Annexure 'C'***

Annexure – I *(Format: I-2)*
(See clause 14 of Section 2 of ITB

ANNUAL TURN OVER

Requirement:

Average annual construction turnover on the construction works not less than 50% of the probable amount of contract during the last 5 financial years;

To be filled in by the contractor:

Financial Year	Payments received for contracts in progress or completed
1	
2	
3	
4	
5	

Note:
i. Annual turnover of construction should be certified by the Chartered Accountant.
ii. Audited balance sheet including all related notes, and income statements for the above financial years to be enclosed.

Bid Capacity

Applicants who meet the minimum qualifying criteria in the evaluation as stated above are to be evaluated further for bid capacity as under:

Bid Capacity = (4.0 x A x B) – C

Where,

A = Maximum escalated turnover in any one year during the last 5 financial years preceding bid due date. (10% weightage per year shall be given to bring the value of Work executed at present price level)

B = Prescribed completion period in years for the subject contract

C = Balance amount of contract work in hand to be executed during the contract period

Annexure – I ***(Format: I-3)***
(See clause 14 of Section 2 of ITB & Clause 6 of ITB)

LIST OF TECHNICAL PERSONNEL FOR THE KEY POSITIONS

Minimum Requirement							Available with the bidder						
S.No.	Key Position	Minimum requirement	Qualification	Age	Similar work experience	Total Work Experience	S.No.	Name of Personnel	Key Position	Qualification	Age	Similar work experience	Total Work Experience
1.	Project Manager	1	Degree In Civil		5 years	10 years							
2	Site Engineer	2	Degree In Civil		3 years	5 years							
3.	Material Engineer	1	Degree In Civil		3 years	5 years							
4.	Constriction Engineer	6	Diploma In Civil		3 years	5 years							
5.	Lab In-charge	1	Diploma In Civil		3 years	5 years							

Note: Designation mentioned above are only indicative performing different tasks and may be changed as per the contractor's organization.

Annexure – I *(Format: I-4)*
(See clause 14 of Section 2 of ITB)

List of Key Equipments/ Machines for Quality Control Labs

The Contractor shall be required to carry out all mandatory quality control tests as per specifications of various items of work under the project. The Contractor should demonstrate his capacity with respect to availability of key equipment/ machines required for carrying out mandatory tests under project. The pipes to be procured under this contract shall be as per relevant BIS/IS/ISO codes of practice and inspected by the representatives of PDMC. The request in this regard shall be made by the Contractor to PDMC.

Apart from above for the various civil works following **Equipment/ Machines shall be required for quality control.**

Minimum requirement			**Available with the Bidder**	
S. No.	Name of Equipment/ Machinery	Quantity	Name of Equipment/ Machinery	Quantity
1	Digging tools like pick axe, shovel, etc.	One set		
2	IS Sieves Nos. with lid and pan (90 mm, 80 mm, 63 mm, 53 mm, 45 mm, 37.5 mm, 26.5 mm, 19 mm, 13.2 mm, 11.2 mm, 9.5 mm, 4.75 mm, 2.8 mm, 5.6 mm, 3.35 mm, 2.36 mm, 600 Micron, 425 Micron, 300 Micron, 150 Micron, 180 Micron, 90 Micron and 75 Micron)	ONE SET		
3	Sand Pouring Cylinder with tray complete for field Density test	One set		
4	Speedy moisture meter complete with chemicals	One set		
5	Straight Edges 3.00 metre width	Two set		
6	Liquid Limit and plastic limit testing apparatus complete with water bottle and glass wares	One set		
7	Electronic/digital balance 5 kg	One no.		
8	Pan balance with weight box, 5 kg.	One no.		
9	Slump cone	Two no.		
10	Concrete cube moulds (150 mm X 150mm)	Twelve no.		
11	Free swelling index test Apparatus	Six no.		
12	Flakiness and elongation testing gauges	Two no.		
13	Water absorption test apparatus	One no.		
14	Specific gravity test apparatus	One no.		
15	B.S. compaction apparatus	One no.		
16	Proving rings	One each		
17	Glass ware	One set		
18	Auto level and staff	Three nos.		
19	Rapid moisture meter	One no.		
20	Post Hole Auger with Extensions	One set		
21	Measuring tape, spatula, glassware, porcelain dish, pestle mortar	One set		
22	Standard Proctor Density Test	One set		

	Apparatus with rammer			
23	Electronic/digital balance 1 kg with the least count of 0.01 gm	One set		
24	Camber Board	Two no.		
25	Core Cutter (10 cm dia) 10cm/15cm height complete with dolly and hummer.	One set		
26	CBR Testing machine	One no.		
27	Oven (ambient to 200°C)	One no.		
28	Digital Thermometers	Three no.		
	Aggregate Soundness test apparatus	One no.		
30	Concrete cube testing Machine	One no.		
31	First aid box	One no.		
32	Sampling Pipette	One no.		
33	Balance	One no.		
34	Dial Gauges	Six No.		
35	Thickness gauge	One set		
36	Water still (4 ft.)	One no.		
37	A.I.V. testing equipment	One no.		

The above list of essential equipment for quality control is for guidance and is only illustrative but not complete. Other apparatus and equipment as desired/required by the Engineer-in-Charge shall be procured by the Contractor

Annexure – I ***(Format: I-5)***
(See clause 14 of Section 2 of ITB)

LIST OF EQUIPMENTS / MACHINES FOR CONSTRUCTION WORK

The Contractor shall carryout the construction work in such a way that the requirements of the specifications of each item of work under the project are fully satisfied. For achieving the quality parameters as per the specifications, the contractor shall be required to deploy appropriate machinery and equipment for carrying out the work. In this section, the Bidder is required to demonstrate his capacity with respect to Key equipment and machinery that are required to carry out this work successfully.

Minimum requirement			**Available with the Bidder**	
S. No.	Name of Equipment/ Machinery	Quantity	Name of Equipment/ Machinery	Quantity

Annexure – J
(See clause 15 of Section 2 of ITB)

FINANCIAL BID
(TO BE CONTAINED IN ENVELOPE C)

TENDER FOR A LUMP SUM CONTRACT:

I/We do hereby TENDER to execute the whole of the work described in the drawing and according to the annexed specification for the sum of Rupees (in figures) ……...……..… (in words) …… (To be quoted in lump sum online and to be expressed both in words and figures). I/We have visited the site of work and am/are fully aware of all the difficulties and conditions likely to affect carrying out the work. I/We have fully acquainted myself/ourselves about the conditions in regard to accessibility of site and quarries/kilns, nature and the extent of ground, working conditions including stacking of materials, installation of tools and plant conditions effecting accommodation and movement of labor etc. required for the satisfactory execution of contract.

Should this bid be accepted, I/We hereby agree to abide by and fulfill all the terms and provisions of the said conditions of contract annexed hereto so far as applicable, or in default thereof to forfeit and pay to the Municipal Commissioner, Ujjain Municipal Corporation, Madhya Pradesh or his successors in office the sums of money mentioned in the said conditions.

Note:

i. *Only Lump sum cost for the scope of work given therein shall be quoted.*

ii. *Lump sum offer shall be quoted in figures as well as in words. If any difference in figures and words found lower of the two shall be taken as valid and correct Price. If the bidder is not ready to accept such valid and correct Price and declines to furnish performance security and sign the agreement his earnest money deposit shall be forfeited.*

iii. *In case the price is not given by a bidder, his bid shall be treated as non-responsive.*

iv. *All duties, taxes, and other levies payable by the bidder shall be included in the lump sum offer given by the bidder. Only Exemption in Excise duty shall be available as per norms.*

Dated_____

Signature of Bidder_____

Name of Bidder

Address of Bidder_____

The above said Bid is hereby accepted by me on behalf of the (Ujjain Municipal Corporation)

Dated day of _____2017_____

SECURITIES

Name	Address	Occupation or Profession	Remarks

Commissioner
Nagar Nigam Ujjain

Witnesses :_____

Address:_____

Annexure – K
(See clause 15 of Section 2 of ITB)

~~MATERIALS TO BE ISSUED BY THE DEPARTMENT~~ ~~[DELETED]~~

~~DWC/HDPE pipe will be issued by the Ujjain Municipal Corporation, Ujjain. Total Length of pipe available with the corporation is 68.059 km. Bidder will be supplied this material from the department and the amount of the material will be deducted from the monthly contractor bill.~~

~~Details of Available DWC Pipes at UMC store~~

~~Sr. No.~~	~~DWC Pipe~~	~~Quantity in meter~~	~~Issue Rate~~	~~Total Amount~~
~~1~~	~~170/200 mm dia~~		~~308.00~~	
~~2~~	~~250/295 mm dia~~		~~748.00~~	
~~3~~	~~400/480 mm dia~~		~~1488.00~~	
-	~~**Total**~~		-	

Annexure – L
(See clause 21 of Section 2 of ITB)

LETTER OF ACCEPTANCE (LOA)

Dear Sir (s),

Your bid for the work mentioned above has been accepted on behalf of the (Name of ULB) at your bided lump sum offer as per scope of work given therein.

You are requested to submit the following within **15 (**Fifteen) days from the date of issue of this letter:

a. The performance security/ performance guarantee of Rs. _____ (in figures) (Rupees _____ in words) only being 5% of the capital cost of the project. The performance security shall be in the shape of Term Deposit Receipt/ Bank Guarantee of any nationalized / schedule commercial bank valid up to valid up to Valid Contract Period Plus three months.
(In prescribed Format as per Annexure – M)

b. The Additional Performance Security/ Additional Performance Guarantee of Rs. _____ (in figures) (Rupees _____ in words) only. The performance security shall be in the shape of Term Deposit Receipt/ Bank Guarantee of any nationalized / schedule commercial bank valid up Valid Contract Period Plus three months. (In prescribed Format as per Annexure – M)

c. Duly signed Contract Agreement in Agreement Form as prescribed in Section – 5

Please note that
(i) the time allowed for carrying out the work as entered in the bid is _____ months including/excluding rainy season, shall be reckoned from the date of signing the Contract Agreement and

(ii) the performance security/ performance guarantee of Rs. _____ (in figures) (Rupees _____ in words) only being 5% of O & M and electrical cost, to be submitted before the completion of design built component valid up to 3 months beyond the end of O&M period. The performance security shall be in the shape of Term Deposit Receipt/ Bank Guarantee of any nationalized / schedule commercial bank. (In prescribed Format as per Annexure – M)
Signing the contract agreement shall be reckoned as intimation to commencement of work and no separate letter for commencement of work is required.
Therefore, after signing of the agreement, you are directed to contact Engineer-in-charge within 14days for taking the possession of site and necessary instructions to start the work.

Yours faithfully,

Commissioner
Nagar Nigam Ujjain

Annexure – M
(See clause 22 of Section 2 of ITB)

PERFORMANCE SECURITY/ADDITIONAL PERFORMANCE SECURITY

To

_____[Name of Employer]

_____

_____[Address of Employer]

_____

WHEREAS_____[name and Address of Contractor]

(Hereinafter called "the Contractor") has undertaken, in pursuance of Letter of Acceptance No._____

Dated _____to execute_____[Name of Contract and brief description of Works] (herein after called "the Contract").

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

AND WHREREAS we have agreed to give the Contractor such a Bank Guarantee:

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you on behalf of the Contractor, up to a total of _____[amount of Guarantee]*_____ (in words), such sum being payable in the types and proportions of currencies in which the contract price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of_____[amount of Guarantee] as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

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

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

This Guarantee shall be valid until 3(three) months from the date of expiry of the Defect Liability Period.

Signature, Name and Seal of the Guarantor_____

Name of Bank_____

Address_____

Phone No., Fax No., E-mail Address, of Signing Authority_____

Date_____

***** An amount shall be inserted by the Guarantor, representing the percentage the Contract Price specified in the Contract including additional security for unbalanced Bids, if any and denominated in Indian Rupees.

SECTION 3

Conditions of Contract
Part – I General Conditions of Contract [GCC]

Table of Clauses of GCC

A. General

1. Definitions

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

1.2 **Chief Engineer**: means Chief Engineer of UADD.

1.3 **Completion**: means completion of the work as certified by the Engineer-in-Charge, in accordance with provisions of agreement.

1.4 **Contract:** means the Contract between the Employer and the Contractor to execute, complete and/or maintain the work. Agreement is synonym of Contract and carry the same meaning wherever used.

1.5 **Contract Data Sheet**: means the documents and other information which comprise of the Contract.

1.6 **Contractor**: means a person or legal entity whose bid to carry out the work has been accepted by the Employer.

1.7 **Contractor's bid** : means the completed bid document submitted by the Contractor to the Employer.

1.8 **Contract amount** : means the amount of contract worked out on the basis of accepted bid.

1.9 **Completion of work** : means completion of the entire contracted work. Exhaustion of quantity of any particular item mentioned in the bid document shall not imply completion of work or any component thereof.

1.10 **Day**: means the calendar day.

1.11 **Defect** : means any part of the work not completed in accordance with the specifications included in the contract.

1.12 **Department:** means department of Urban Administration and Development, Madhya Pradesh and UJJAIN MUNICIPAL CORPORATIONas the case may be.

1.13 **Drawings** : means drawings including calculations and other information provided or approved by the Engineer-in-Charge.

1.14 **Employer** : means the party as defined in the Contract Data, who employs the Contractor to carry out the work. The employer may delegate any or all functions to a person or body nominated by him for specified functions. The word Employer/Government/Department wherever used denote the Employer

1.15 **Engineer:** means Engineer as approved by the employer.

1.16 **Engineer in charge:** means Engineer in charge as approval employer.

1.17 **Engineer In Chief :**Engineer In Chief of UADD

1.18 **Equipment** : means the Contractor's machinery and vehicles brought temporarily to the Site for execution of work.

1.19 **Government**: means Government of Madhya Pradesh.

1.20 **In Writing**: means communicated in written form and delivered against receipt.

1.21 **Material** : means all supplies, including consumables, used by the Contractor for incorporation in the work.

1.22 **Schedule of Rates** : means, Schedule of Rates (SOR) of Urban Administration and Development Department, Government of Madhya Pradesh w.e.f. 2021 with up to date amendments.

1.23 **PDMC** : Means Shah Technical Consultant Pvt. Ltd have been appointed as Project Development and Management Consultant (PDMC) by UADD M.P. for AMRUT 2.0 Western UADD Zone (Indore and Ujjain Division UADD)

1.24 **Superintending Engineer**: means Superintending Engineer of the Concerned Division of the MP, UADD as the case may be.

1.25 **Stipulated date of completion**: means the date on which the Contractor is required to complete the work. The stipulated date/ period is specified in the Contract Data.

1.26 **Specification**: means the specification of the work included in the Contract and any modification or addition made or approved by the Engineer-in-Charge.

1.27 **Start Date:**means the 14 days after the signing of agreement for the work.

1.28 **Sub-Contractor**: means a person or corporate body who has a Contract (duly authorized by the Employer) with the Contractor to carry out a part of the construction work under the Contract.

1.29 **Temporary Work**: means work designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the work.

1.30 **Tender / Bid, Tenderer /Bidder**: are the synonyms and carry the same meaning where ever used.

1.31 **UADD** : Urban Administration and Development Department

1.32 **Variation**: means any change in the work which is instructed or approved as variation under this contract.

1.33 **Work**: the expression "work" or "works" where used in these conditions shall unless there be something either in the subject or context repugnant to such construction, be construed and taken to mean the work by virtue of contract, contracted to be executed, whether temporary or permanent and whether original, altered, substituted or additional.

2. Interpretations And Documents

2.1 Interpretations

In the contract, except where the context requires otherwise:

a. words indicating one gender include all genders;
b. words indicating the singular also include the plural and vice versa.
c. provisions including the word “agree”, “agreed” or “agreement” require the agreement to be recorded in writing;
d. written” or “in writing” means hand-written, type-written, printed or electronically made, and resulting in a permanent record;

2.2 Documents Forming Part of Contract:

1. NIT with all amendments.
2. Instructions to Bidders
3. Conditions of Contract:
    i. Part I General Conditions of Contract and Contract Data; with all Annexures
    ii. Part II Special Conditions of Contract.
4. Specifications
5. Drawings
6. Bill of Quantities
7. Technical and Financial Bid
8. Agreement
9. Any other document (s), as specified.

2.2.1 Priority of bid document

1. Bid Data Sheet
2. Contractor Data Sheet
3. Special Condition of Contract
4. General Condition of Contract
5. Scope of Work
6. Specifications
7. Bill of Quantity
8. Drawings

3. Language and Law

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

4. Communications

All certificates, notice or instruction to be given to the Contractor by Employer/Engineer shall be sent on the address or contact details given by the Contractor in [Annexure H of ITB]. The address and contract details for communication with the Employer/Engineer shall be as per the details given in Contract Data Sheet. Communication between parties that are referred to in the conditions shall be in writing. The notice sent by facsimile (fax) or other electronic means (email) shall also be effective on confirmation of the transmission. The notice sent by registered post or speed post shall be effective on delivery or at the expiry of the normal delivery period as undertaken by the postal service. In case of any change in address for communication, the same shall be immediately notified to Engineer-in-Charge

5. Subcontracting

Subcontracting shall be permitted for contracts value more thanamount specified in the Contract Datawith following conditions.

a. The Contractor may subcontract up to 25 percent of the contract price, only with and after the approval of the Employer in writing, but will not assign the Contract. Subcontracting shall not alter the Contractor's obligations.
b. The following shall not form part of the sub-contracting:
    i. hiring of labour through a labour contractor,
    ii. the purchase of Materials to be incorporated in the works,
    iii. hiring of plant & machinery
c. The sub-contractor will have to be registered in the **appropriate category** in the centralised registration system for contractors of the GoMP.

6. Personnel

6.1 The Contractor shall employ for the construction work and routine maintenance the technical personnel as provided in the Annexure I-3 of Bid Data sheet, if applicable. If the Contractor fails to deploy required number of technical staff, recovery as specified in the Contract Data will be made from the Contractor.

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

7. Force Majeure

7.1 The term "Force Majeure" means an exceptional event or circumstance:

a) Which is beyond a party's control,

b) Which such party could not reasonably have provided against before entering into the contract,

c) Which, having arisen, such party could not reasonably have avoided or overcome, and

d) Which is not substantially attributed to the other Party

Force Majeure may include, but is not limited to, exceptional events or circumstances of the kind listed below, so long as conditions (a) to (d) above are satisfied:

(i) War, hostilities (whether war be declared or not), invasion, act of foreign enemies),

(ii) Rebellion, terrorism, sabotage by persons other than he contractor's Personnel, revolution, insurrection, military or usurped power, or civil war,

(iii) Riot, commotion, disorder, strike or lockout by persons other than the Contractor's Personnel,

(iv) Munitions of war, explosive materials, ionising radiation or contamination by radio activity, except ass may be attributed to the Contractor's use of such munitions, explosives, radiation or radio activity, and

(v) Natural catastrophes such as earthquake, hurricane, typhoon or volcanic activity,

7.2 In the event of either party being rendered unable by force majeure to perform any duty or discharge any responsibility arising out of the contract, the relative obligation of the party affected by such force majeure shall upon notification to the other party be suspended for the period during which force majeure event lasts. The cost and loss sustained by either party shall be borne by respective parties.

7.3 For the period of extension granted to the Contractor due to Force Majeure the price adjustment clause shall apply but the penalty clause shall not apply. It is clarified that this sub clause shall not give eligibility for price adjustment to contracts which are otherwise not subject to the benefit of Price adjustment clause.

7.4 The time for performance of the relative obligation suspended by the force majeure shall stand extended by the period for which such cause lasts. Should the delay caused by force majeure exceed twelve months, the parties to the contract shall be at liberty to foreclose the contract after holding mutual discussions.

8. Contractor's Risks

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

8.2 All risks and consequences arising from the inaccuracies or falseness of the documents and/or information submitted by the contractor shall be the responsibility of the Contractor alone, notwithstanding the fact that designs/drawings or other documents have been approved by the department.

9. Liability for Accidents to Person

The contractor shall be deemed to have indemnified and saved harmless the Government and/or the employer, against all action, suits, claims, demands, costs etc. arising in connection with injuries suffered by any persons employed by the contractor or his subcontractor for the works whether under the General law or under workman's compensation Act, or any other statute in force at the time of dealing with the question of the liability of employees for the injuries suffered by employees and to have taken steps properly to ensure against any claim there under.

10. Contractor to Construct the Works

10.1 The Contractor shall construct,install, test, commission, operate and maintain the Works in accordance with the Specifications and Drawings as specified in the Contract Data

10.2 In the case of any class of work for which there is no such specification as is mentioned in contract Data, such work shall be carried as per best Engineering practice or as directed by Engineer In Charge. In the event of any disparity between the written specifications and BIS provisions, the provisions in BIS shall prevail.

10.3 The contractor shall supply and take upon himself the entire responsibility of the sufficiency of the scaffolding, timbering, Machinery, tools implements and generally of all means used for the fulfilment of this contract whether such means may or may not approved of or recommended by the Engineer.

11. Discoveries

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

12. Dispute Resolution System

12.1 No dispute can be raised except before the Competent Authority as defined in Contract data in writing giving full description and grounds of Dispute. It is clarified that merely recording protest while accepting measurement and/or payment shall not be taken as raising a dispute.

12.2 No issue of dispute can be raised after 45 days of its occurrence. Any dispute raised after expiry of 45 days of its first occurrence shall not be entertained and the Employer shall not be liable for claims arising out of such disputes.

12.3 The Competent Authority shall decide the matter within 45 days.

12.4 Appeal against the order of the Competent Authority can be preferred within 30 days to the Appellate Authority as defined in the Contract data. The Appellate Authority shall decide the dispute wiithin 45 days.

12.5 Appeal against the order of the Appellate Authority can be preferred before the Madhya Pradesh Arbitration Tribunal constituted under Madhya Pradesh MadhyasthamAdhikaranAdhiniyam, 1983.

12.6 The contractor shall have to continue execution of the works with due diligence notwithstanding pendency of a dispute before any authority or forum.

B. Time Control

13. Programme

13.1 Within the time stated in the Contract Data, the Contractor shall submit to the Engineer for approval a Programme showing the general methods, arrangements, order, and timing for all the activities in the Works for the construction of works.

13.2 The program shall be supported with all the details regardingkey personnel, equipment and machinery proposed to be deployed on the works for its execution. The contractor shall submit the list of equipment and machinery being brought to site, the list of key personnel being deployed, the list of machinery/equipment being placed in field laboratory and the location of field laboratory along with the Programme

13.3 An update of the Programme shall be a programme showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining Works, including any changes to the sequence of the activities.

13.4 The Contractor shall submit to the Engineer for approval an updated Programme at intervals no longer than the period stated in the Contract Data. If the Contractor does not submit an updated Programme within this period, the Engineer may withhold the amount stated in the Contract Data from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Programme has been submitted.

13.5 The Engineer's approval of the Programme shall not alter the Contractor's obligations

14. Extension of Time

14.1 If the Contractor desires an extension of time for completion of the work on the ground of his having been unavoidably hindered in its execution or on any other grounds, he shall apply, in writing, to the Engineer-in-charge, on account of which he desires such extension. Engineer-in-charge shall forward the aforesaid application to the competent authority as prescribed.

14.2 The competent authority shall grant such extension at each such occasion within a period of 30 days of receipt of application from contractor and shall not wait for finality of work. Such extensions shall be granted in accordance with provisions under **clause -7** or **clause- 15** of this agreement.

14.3 In case of the work already in progress, the contractor shall proceed with the execution of their works, including maintenance thereof, pending receipt of the decision of the competent authority as aforesaid with all due diligence**.**

15. Compensation for delay

15.1 The time allowed for carrying out the work, as entered in the agreement, shall be strictly observed by the Contractor.

15.2 The time allowed for execution of the contract shall commence (14 days from the date of signing of the agreement). It is clarified that the need for issue of work order is dispensed with.

15.3 In the event milestones are laid down in the Contract Data for execution of the works, the contractor shall have to ensure strict adherence to the same.

15.4 Failure of the Contractor to adhere to the timelines and/or milestones shall attract such liquidated damages as is laid down in the Contract Data

15.5 In the event of delay in execution of the works as per the timelines mentioned in the contract data the Engineer-in-charge shall retain from the bills of the Contractor Amount equal to the liquidated damages liveable until the contractor makes such delays good. However, the Engineer-in-charge shall accept bankable security in lieu of retaining such amount.

15.6 If the contractor is given extension of time after liquidated damages have been paid, the engineer in charge shall correct any over payment of liquidated damages by the Contractor in the next payment certificate.

15.7 In the event the contractor fails to make good the delay until completion of the stipulated contract period (including extension of time) the sum so retained shall be adjusted against liquidated damages levied.

16. Contractor's quoted offer : NA

~~The contractor's quoted lump sum offer referred to in the "Bid for works" will be deducted/ added from/to the net amount of the bill after deducting the cost of material supplied by the department~~.

C. Quality Control

17. Tests

17.1 The Contractor shall be responsible for:

a. Carrying out the tests prescribed in specifications, and
b. For the correctness of the test results, whether preformed in his laboratory or elsewhere.

17.2 The contractor shall have to establish field laboratory within the time specified and having such equipment as are specified in the Contract Data.

17.3 Failure of the contractor to establish laboratory shall attract such penalty as is specified in the Contract Data.

17.4 Ten percent of the mandatory tests prescribed under the specifications shall be got carried out through Laboratories accredited by National Accreditation Board of Laboratories (NABL) by the Engineer-In –Charge at the cost of the Contractor or such testing charges will be borne by the employer and will be recovered/deducted from the payments due to the Contractor.

18. Correction of Defects noticed during the Defect Liability Period

18.1 Thedefect liability period of work in the contract shall be the Contract Data

18.2 The Contractor shall promptly rectify all defects pointed out by the Engineer well before the end of the Defect Liability Period. The Defect Liability Period shall automatically stand extended until the defect is rectified.

18.3 If the Contractor has not corrected a Defect pertaining to the Defect Liability Period to the satisfaction of the Engineer, within the time specified by the Engineer, the Engineer will assess the cost of having the Defect corrected, and the cost of correction of the Defect shall be recovered from the Performance Security or any amount due or that may become due to the contractor and other available securities.

D. Cost Control

19. Variations - Change in original Specifications, Designs, Drawingsetc.

19.1 The Engineer in charge shall have power to make any alterations, omissions or additions to or substitutions for the original specifications, drawings, designs and instructions, that may appear to him to be necessary during the progress of the work and the contractor shall carry out the work in accordance with any instructions which may be given to him in writing signed by the Employer, and such alterations, omission, additions or substitutions shall not invalidate the contract and any altered, additional or substituted work, which the contractor may be directed to do in the manner above specified, as part of the work, shall be carried out by the contractor on the same conditions in all respects on which he agree to do the main work.

19.2 The time for the completion of the work shall be extended in the proportion that the altered, additional or substituted work bears to the original contract work and the certificate of the Engineer in charge shall be conclusive as to such proportion.

20. Extra items

20.1 All such items which are not in the priced BOQ shall be treated as extra items.

21. Payments for Variations and / or Extra Quantities

21.1 The rates for the additional (Extra Quantities), altered or substituted work/ extra items under this clause shall be worked out in accordance with the following provisions in their respective order:-

a. The contractor is bound to carry out the additional (Extra quantity), work at the same rates as are specified in the contract for the work.

b. If the item is not in the priced BOQ and is included in the SOR of the department, the rate shall be arrived at by applying the quoted tender percentage on the SOR rate.

c. If the rates of the altered or substituted work are not provided in applicable SOR-such rates will be derived from the rates for a similar class (type) of work as is provided in the contract (priced BOQ) for the work.

d. If the rates are for the altered, substituted work cannot be determined in the manner specified in the sub clause (c) above-then the rates for such composite work item shall be worked out on the basis of the concerned schedule of rates minus/plus the percentage quoted by the contractor.

e. If the rates of a particular part or parts of the item is not in the schedule of rates and the rates for the altered, or substituted work item cannot be determined in the manner specified in sub clause (b) to (d) above, the rate for such part or parts will be determined by the Competent Authority as defined in the Contract data on the basis of the rate analysis derived out of prevailing market rates when the work was done.

f. But under no circumstances, the contractor shall suspend the work on the plea of non acceptability of rates on items falling under sub clause (a) to (d). In case the contractor does not accept the rate approved by Engineer in charge for a particular item, the contractor shall continue to carry out the item at the rates determined by the Competent Authority. The decision on the final rates payable shall be arrived at through the dispute settlement procedure.

22. No compensation for alterations in or restriction of work to be carried out.

22.1 If at any time after the commencement of the work, the Government, for any reason whatsoever, not require the whole or any part of the work as specified in the bid to be carried out, the Engineer in charge shall give notice in writing of the fact to the Contractor and withdraw that whole or any part of the work.

22.2 The Contractor shall have no claim to any payments or compensation whatsoever, on account of any profit or advantage which he might have derived from the execution of work in full or on account of any loss incurred for idle men and machinery due to any alteration or restriction of work for whatsoever reason.

22.3 The Engineer in charge may supplement the work by engaging another agency to execute such portion of the work, without prejudice to his rights.

23. No Interest Payable

No interest shall be payable to the Contractor on any payment due or awarded by any authority.

24. Recovery from Contractors

Whenever any claim against the Contractor for the payment arises under the contract, the Department shall be entitled to recover such sum by:

(a) Appropriating, in part or whole of the Performance Security and additional Performance Security , if any; and/or Security deposit and/or any sums payable under the contract to the contractor..

(b) If the amount recovered in accordance with (a) above is not sufficient, the balance sum may be recovered from any payment due to the contractor under any other contractor of the department, including the securities which become due for release.

(c) The department shall, further have an additional right to effect recoveries as arrears of land revenue under the M.P. Land revenue Code.

25. Tax

25.1 The rates quoted by the Contractor shall be deemed to be inclusive of the sales and other levies, duties, cess, toll, taxes of Central and State Governments, local bodies and authorities. But the rates shall be excluding excise duty exemption on the items as per norms of excise.

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

25.3 Any Changes in the taxes due to change in legislation or for any other reason shall not be payable to the contractor.

26. Check Measurements

26.1 The department reserves to itself the right to prescribe a scale of check measurement of work in general or specific scale for specific works or by other special orders.

26.2 Checking of measurement by superior officer shall supersede measurements by subordinate officer(s), and the former will become the basis of the payment.

26.3. Any over/excess payments detected, as a result of such check measurement or otherwise at any stage upto the date of completion of the defect liability period specified in this contract, shall be recoverable from the Contractor, as per clause 24 above.

27. Termination by Engineer in Charge

27.1 If the contractor fails to carry out any obligation under the Contract, the Engineer in charge may by notice require the Contractor to make good the failure and to remedy it within a specified reasonable time.

27.2 The Engineer in charge shall be entitled to terminate the contract if the Contractor

a) Abandons the works or otherwise plainly demonstrates the intention not to continue performance of his obligations under the contract;

b) the Contractor is declared as bankrupt or goes into liquidation other than for approved reconstruction or amalgamation;

c) without reasonable excuse fails to comply with the notice to correct a particular defect within a reasonable period of time;

d) the Contractor does not maintain a valid instrument of financial Security, as prescribed;

e) the Contractor has delayed the completion of the Works by such duration for which the maximum amount of liquidated damages is recoverable;

f) If the Contractor fails to deploy machinery and equipment or personnel or set up a field laboratory as specified in the Contract Data.

g) if the Contractor, in judgemental of the engineer in charge has engaged in corrupt or fraudulent practices in competing for or in executing the contract;

h) Any other fundamental breaches as specified in the Contract Data.

27.3 In any of these events or circumstances, the engineer in charge may, upon giving 14 days' notice to the contractor, terminate the contract and expel the Contractor from the site. However, in the case of sub paragraph (b) or (g) of clause 27.2, the Engineer in charge may terminate the contract immediately.

27.4 Notwithstanding the above, the Engineer in charge may terminate the contract for convenience by giving notice to the contractor.

28. Payment upon Termination

28.1 If the contract is terminated under clause 27.3, the Engineer shall issue a certificate for value of the work accepted on final measurements, less advance payments and penalty as indicated in the Contract Data. The amount so arrived at shall be determined by the Engineer-in-charge and shall be final and binding on both the parties.

28.2 payment on termination under clause 27.4 above, the Engineer shall issue a certificate for the value of the work done, the reasonable cost of removal of Equipment, repatriation of the contractor's personnel employed solely on the works, and the contractor's costs of protecting and securing the works and less advance payments received up to the date of the certificate, less other recoveries due in terms of the contract and less taxes due to be deducted at source as per applicable law.

28.3 If the total amount due to the Employer exceeds any payment due to the Contractor, the difference shall be recovered as per clause 24 above.

29. Performance Security

The Contractor shall have to submit performance security and additional performance security, if any, as specified in Bid data sheetat the time of signing of the contract. The contractor shall have to ensure that such performance security and Additional performance, if an, security remains valid for the period as specified in the Contract data.

30. Security Deposit

30.1 Security deposit shall be deducted from the each running bill at the rate as specified in the contract data. The total amount of security deposit so deducted shall not exceed the percentage of contract price specified in the Contract data.

30.2 The Security may be replaced by equivalent amount of bank guarantee or fixed deposit receipt assigned to the Employer, with validity up to 3(three) months beyond the completion of defect Liability PERIOD/ extended Defect Liability.

30.3 The Security deposit shall be refunded on completion of defect liability period.

31. Price Adjustment (Deleted)

32. Mobilization Advance

32.1 Payment of advances shall be applicable if provided in the Contract Data.

32.2 If applicable, the Engineer in charge shall make interest bearing advance payment to the contractorof the amounts started in the Contract Data, against provision by the contractor of an unconditional Bank Guarantee in a form and by nationalized/Scheduled banks, in the name as stated in the Contract data, in amounts equal to the advance payment. The Guarantee shall remain effective until the advance payment has been repaid, but the amount of the guarantee shall be progressively reduced by the amounts repaid by the contractor.

32.3 The rate of interest chargeable shall be as per Contract data**.**

32.4 The advance payment shall be recovered as stated in the Contract data by deducting proportionate amounts from payment otherwise due to the Contractor. No account shall be taken of the advance payment or its recovery in assessing valuations of work done, variations, price adjustments, compensation events, or liquidated damages.

33. Secured Advance (Deleted)

34. Payment Certificates

The payment to the contractor will be as follows for construction work:

(a) The contractor shall submit to the engineer monthly statement of the value of the work executed less the cumulative amount certified previously, supported with detailed measurement of the items of work executed as per the Billing Break-up in section 6.

(b) The engineer shall check the Contractor's monthly statement and certify the amount to be paid to the contractor.

(c) The value of work executed shall be determined, based on the measurements approved by the Engineer/Engineer in charge.

(d) The value of work executed shall comprise the value of the quantities of the items in the Billing Breakup given in Section 6.

(e) The value of work executed shall also include the valuation of variations and compensation events.

(f) All payments shall be adjusted for deductions for advance payment, security deposit, other recoveries in terms of contract and taxes at source as applicable under the law.

(g) The Engineer may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

(h) Payment of intermediate certificate shall be regarded as payments by way of advance against the final payment and not as payments for work actually done and completed.

(i) Intermediate payment shall not preclude the requiring of bad, unsound and imperfect or unskilled work to be removed and taken away and reconstructed or be considered as an admission of the due performance of the contractor any part thereof, in any respect or the occurring of any claim.

(j) The payment of final bill shall be governed by the provisions of clause 36 of GCC.

E. Finishing the Contract

35. Completion Certificate

35.1 A completion certificate in the prescribed format in Contract data shall be issued by the Engineer in charge after physical completion of the work.

35.2 After final payment to the contractor, a final completion certificate in the prescribed format in the contract data shall be issued by the Engineer in charge.

36. Final Account

36.1 The Contractor shall supply the Engineer with a detailed account of the total amount that the Contractor considers payable for works under the Contract within 21 days of issue of certificate of physical completion of works. The Engineer shall issue a letter for start of Defects Liability period/O&M period and certify any payment that is due to the Contractor within 45 days of receiving the Contractor's account if it is correct and complete. If the account is not correct or complete, the Engineer shall issue within 45 days a schedule that states the scope of the corrections or additions that are necessary. If the Account is still unsatisfactory after it has been resubmitted, the matter shall be referred to the competent authority as defined in the Contract data, who shall decide on the amount payable to the contractor after hearing the Contractor and the Engineer in Charge.

36.2 In case the account is not received within 21 days of issue of Certificate of Completion as provided in clause 35.2 above, the Engineer shall proceed to finalize the account and issue a payment certificate within 28 days.

F. Other Conditions of Contract

37. Currencies

All payments will be made in Indian Rupees.

38. Labour

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

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

39. COMPLIANCE WITH LABOUR REGULATIONS

39.1 During continuance of the Contract, the Contractor and his sub Contractors shall abide at all times by all existing labour enactments and rules made there under, regulations, notifications and bye laws of the State or Central Government or local authority and any other labour law (including rules), regulations, bye laws that may be passed or notification that may be issued under any labour law in future either by the State or the Central Government or the local authority. Salient features of some of the major labour laws that are applicable to construction industry are given in the Contract data. The Contractor shall keep the Employer indemnified in case any action is taken against the Employer by the competent authority on account of contravention of any of the provisions of any Act or rules made there under, regulations or notifications including amendments. If the Employer is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated in the notifications/byelaws/Acts/Rules/ regulations including amendments, if any, on the part of the Contractor, the Engineer/Employer shall have the right to deduct any money due to the Contractor including his amount of performance security. The Employer/Engineer shall also have right to recover from the Contractor any sum required or estimated to be required for making good the loss or damage suffered by the Employer. The employees of the Contractor and the Sub-Contractor in no case shall be treated as the employees of the Employer at any point of time.

39.2 Construction Safety

The contractor should be well conversant with technical as well as administrative and legal aspects of safety and judicial pronouncement. The contractor shall all times take all reasonable precautions and safety measures to maintain safety of personnel and property. The contractor shall, at his own expenses and throughout the period of the contract ensure appropriate and suitable arrangements for health, safety and hygiene requirements for the surroundings. The State and Central Government prevailing all Statues in this regard must be complied in letter and spirit throughout the period of contract.

40. Audit and Technical examination

Government shall have the right to cause an audit and technical examination of the works and the final bill of the contract including all supporting vouchers, abstract etc. To be made after payment of the final bill and if as a result of such audit and technical examination any sum is found to have been overpaid in respect of any work done by the contractor under the contract or any work claimed by him to have been done under the contract and found not to, have been executed, the contractor shall be liable to refund the amount of overpayment and it shall be lawful for government to recover the same from him in the manner prescribed in clause 24 above and if it is found that the contractor was paid less than what was due to him, under the contract in respect of any work executed by him under it, the amount of such under payment shall be duly paid by government to the Contractor.

41. Death or permanent invalidity of contractor

If the Contractor is an individual or a proprietary concern, partnership concern, dies during the currency of the contract or becomes permanently incapacitated, where the surviving partners are only minors, the contract shall be closed without levying any damages/ compensation as provided for in **clause 28.2** of the contract agreement. However, if the competent authority is satisfied about the competence of the survivors, then the competent authority shall enter into a fresh agreement for the remaining work strictly on the same terms and conditions under which the contract was awarded.

42. Jurisdiction

This contract has been entered into the State of Madhya Pradesh and its validity, construction, interpretation and legal effect shall be subjected to the exclusive jurisdiction of the courts in Ujjain or of the courts at the place where this agreement is entered into. No other jurisdiction shall be applicable.

43. Monthly RA Bills

The payment certificates shall be regulated as per the provisions of clause 34 of the contract.

43.1 Upon the signing of agreement the Engineer shall decide the date of submission of monthly statement (RA Bills) as mentioned in clause 34 (a)

43.2 The Engineer shall check the Contractor's monthly statement (RA Bills) and certify the amount to be paid to the contractor within 7 days of submission of monthly statement (RA Bills).

43.3 The employer shall ensure the payment to the Contractor as per clause 34 (d), (e), (f) &(g) within 10 days of submission of monthly statement (RA Bills).

[End of GCC]

Contract Data

Clause reference	Particulars	Data
1.14	Employer	UJJAIN MUNICIPALCORPORATION, UJJAIN
1.15	Engineer	Engineer as approved by the employer
1.16	Engineer in charge	Engineer in charge as approval by the employer
1.22	Stipulated period of completion	09 months
3	Language & Law of Contract	English & Indian Contract Act 1872
4	Address & contact details of the Contractor	As per Annexure H
	Address & contact details of the Employer/Engineer-phone, Fax, e-mail.	Chhatrpati Shivaji Bhawan Agar Road Ujjain eephenpnujjain@gmail.com 9399955906
5	Subcontracting permitted for contract value	-
6	Technical Personnel to be provided by the contractor – requirement &	As per Annexure I (Format I-3)
	Penalty, if required Technical personal not employed	Rs. 30,000/- per month per person for Degree Holder Rs. 18,000/- per month per person for Diploma Holder
10	Specifications	Annexure E
	Drawings	As per Annexure N
12	Competent authority for deciding dispute under Dispute resolution system	Commissioner Ujjain Municipal Corporation
	Appellate Authority for deciding dispute under Dispute resolution system	Engineer –In-Chief /Chief Engineer UADD
13	Period of submission of updated construction program	30 days upon signing the agreement
	Amount to be withheld or not submitting construction program in the prescribed period	0.20% of the Contract Amount
14	Competent Authority for granting Time Extension	Appropriate authority within the Urban Local Body after scrutiny and recommendation by Chief Engineer/Engineer-in-Chief UADD
15	Milestones laid down for the contract	YES
	If Yes, details of milestones	As per Annexure O
	Liquidated damage	As per Annexure P
17	List of equipments for lab	As per Annexure Q
	Time to establish lab	2 months after signing the agreement
	Penalty for not establishing field Laboratory	0.20% of the Contract amount till the establishment of Lab
18	Defect Liability Period	3 (Three) years after physical completion of work
21	Competent authority for determining the rate	Chief Engineer/Engineer-in-Chief UADD
27	Any other conditions for breach of contract	NIL

Clause reference	Particulars	Data
28	Penalty	Penalty shall include (a)Security deposit as per clause 30 of General conditions of contract and (b)Liquidated damages imposed as per clause 15 or performance security (Guarantee) including additional performance security (Guarantee), if any, as per clause 29 of General conditions of contract, whichever is higher.
29	Performance Guarantee (security) & Additional Performance Guarantee (Security) shall be valid up to	Valid Contract Period Plus Three Months &will be returned after issue of physical completion certificate as per clause 35.1
30	Security deposit to be deducted from each running bill	At the rate of 7 %
	Maximum limit of deduction of security deposit	Up to 7 % of Final contract amount and will be returned after successful completion of Defect Liability Period.
31	Price adjustment formula and procedure to calculate	As per Annexure R **(NOT APPLICABLE)**
31.1(1)	Price adjustment shall be applicable	**(NOT APPLICABLE)**
32	32.1 Mobilization and Construction Machinery Advance applicable	**(NOT APPLICABLE)**
	32.2 If yes, unconditional Bank Guarantee	~~In the format prescribed in Annexure – S~~
	32.3 If yes, Rate of interest chargeable on advance	~~Interest rate as per notified bank rate on the date of inviting tender~~
	32.4 If yes, Type & Amount payment that can be paid	~~1. Mobilization Advance Not more than 10% of contract amount~~
	32.5 If yes, Recovery of Advance payment	~~Recovery of Mobilization and/or Construction Machinery advance shall commence when 10% of the contract amount is executed and recovery of total advance shall be done on pro rata basis and shall be completed by the time work equivalent to 80% of the contract amount is executed.~~ ~~In addition to the recovery of principal amount, recovery of interest shall be carried out as calculated on the outstanding amount of principal at the close of each month. The interest shall accrue from the day of payment of advance and the recovery of interest shall commence when 10% of the contract amount is executed and shall be completed by the time work equivalent to 80% of the contract amount is executed.~~
33	33.1 Secured Advance applicable	No
	33.2If yes, Unconditional bank Guarantee	In the format prescribed in Annexure-T

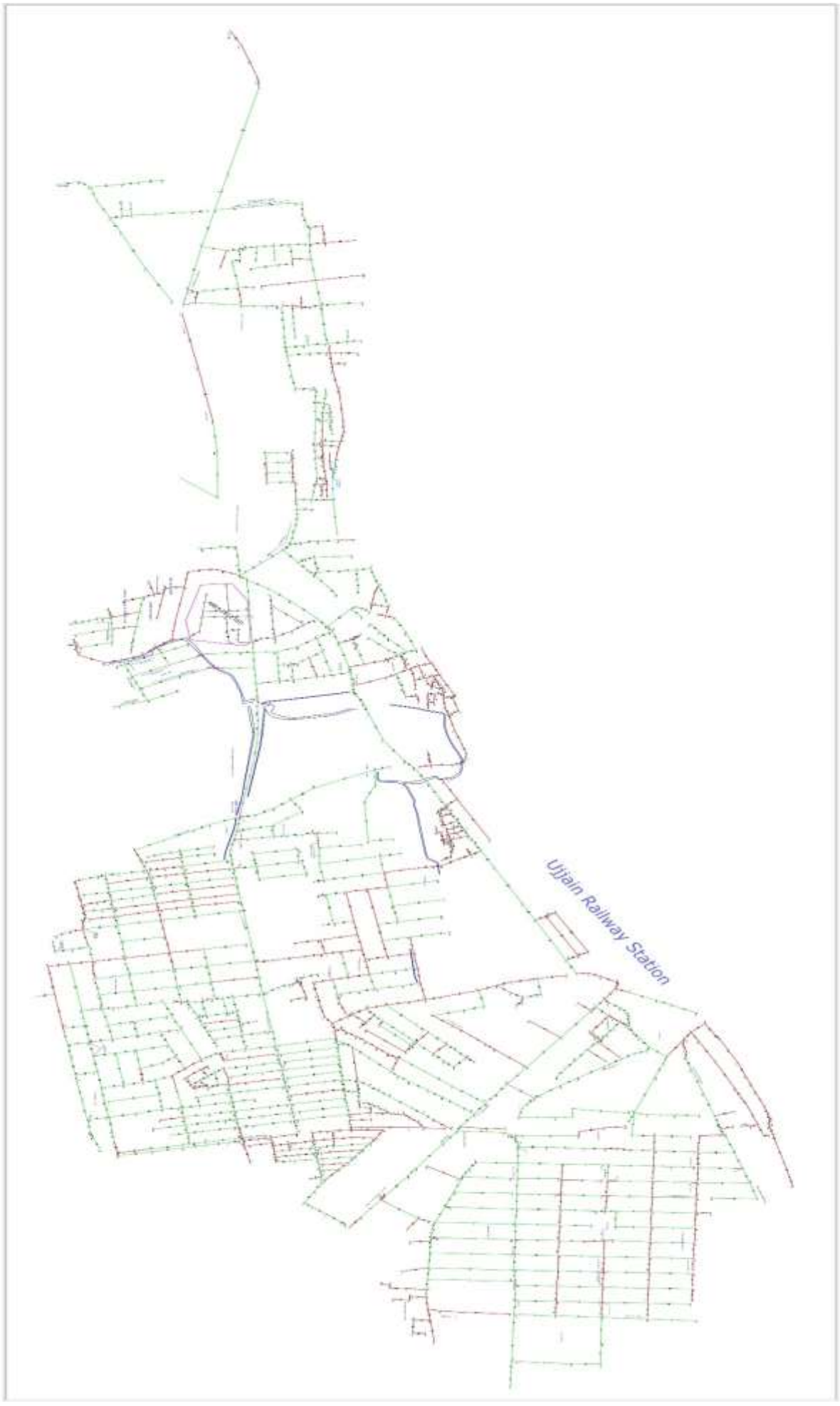
Clause reference	Particulars	Data
	33.3 If yes, Conditions for secured Advance	a) The materials are in accordance with the specification of works, b) Such materials have been delivered to site, and are properly stored and protected against damage or deterioration to the satisfaction of the engineer. The contractor shall store the bulk material in measurable stacks, c) The Contractor's records of the requirements, ordered, receipt and use of materials are kept in a form approved by the Engineer and such records shall be available for inspection by the Engineer; d) The contractor has submitted whit his monthly statement the estimated value off the materials on site together with such documents as may be required by the engineer for the purpose of valuation of the materials and providing evidence of ownership and payment thereof; f) The quantity of materials are not excessive and shall be used within a reasonable time as determined by the engineer.
	33.4 If yes, recovery of secured advance	The advance shall be repaid from each succeeding monthly payments to the extent materials [for which advance was previously paid] have been incorporated into the works.
35	Completion certificate- After physical completion of the work	As per Annexure – U
	Final Completion Certificate – after final payment on completion of the work	As per Annexure – V
36	Competent Authority	Chief Engineer/Engineer-in-Chief, UADD
39	39.1 Salient features of some of the major labour laws that are applicable	As per Annexure – W
	39.2 Salient features of some Construction Safety laws that are applicable	As per Annexure – W1
41	Competent Authority	Appropriate authority within the Urban Local Body (Authority Entering in the agreement in ULB)

Annexure – N
(See clause 10 of Section 3 of GCC)

DRAWINGS

Sewer Network Zone 6 Part – I

S NO.	Name of Drawing
1.	Schematic Drawing
2	Scheme at a Glance Zonal Connectivity Diagram [1-5]


Ujjain Railway Station

Annexure – O

(See clause 15 of Section 3 of GCC)

DETAILS OF MILESTONES

The time allowed for the carrying out the work, as entered in the tender form shall be strictly observed by the contractor and shall be deemed to be essence of the contract and shall be reckoned immediately 14 days after the signing of agreement.

The work shall throughout the stipulated period of contract be proceeded with all due diligence keeping in view that time is the essence of the contract. The contractor shall be bound in all cases, to complete the following financial target,

- 1/8th of the whole work before 1/4th of the whole time allowed under the contract has elapsed,
- 3/8th of the work before 1/2 of such time has elapsed
- 3/4th of the work before 3/4 of such time has elapsed.

Annexure – P
(See clause 15 of Section 3 of GCC)

COMPENSATION FOR DELAY

If the contractor fails to achieve the milestones, and the delay in execution of work is attributable to the contractor, the Employer shall retain an amount from the sums payable and due to the contractor as per following scale –

i. Slippage up to 25% in financial target during the milestone under consideration – 2.5% of the work remained unexecuted in the related time span.

ii. Slippage exceeding 25% but up to 50% in financial target during the milestone under consideration – 5% of the work remained unexecuted in the related time span.

iii. Slippage exceeding 50% but up to 75% in financial target during the milestone under construction – 7.5% of the work remained unexecuted in the related time span.

iv. Slippage exceeding 75% in financial target during the milestone under consideration – 10% of the work remained unexecuted in the related time span.

Note: For arriving at the dates of completion of time span related to different milestones, delays which are not attributable to the Contractor shall be considered. The slippage on any milestone is if made good in subsequent milestones or at the time of stipulated period of completion, the amount retained as above shall be refunded. In case the work is not completed within the stipulated period of completion along with all such extensions which are granted to the Contractor for either Employer's default or Force Majeure, the compensation shall be levied on the contractor at the rate of 0.05% per day of delay limited to maximum of 10% of contract price.

The decision of appropriate authority within the Urban Local Body after scrutiny and recommendation by Chief Engineer/Engineer-in-Chief UADD shall be final and binding upon both the parties.

Annexure – Q

(See clause 17 of Section 3 of GCC)

LIST OF EQUIPMENT FOR QUALITY CONTROL LAB

(To be filled-in by the bidder)

The following Equipment's / Machines shall be required for quality control for the various civil works.

Minimum Requirement			**Available with the Bidder**	
S. No.	Name of Equipment/ Machinery	Quantity	Name of Equipment/ Machinery	Quantity
1	Digging tools like pick axe, shovel, etc.	One set		
2	IS Sieves Nos. with lid and pan (90 mm, 80 mm, 63 mm, 53 mm, 45 mm, 37.5 mm, 26.5 mm, 19 mm, 13.2 mm, 11.2 mm, 9.5 mm, 4.75 mm, 2.8 mm, 5.6 mm, 3.35 mm, 2.36 mm, 600 Micron, 425 Micron, 300 Micron, 150 Micron, 180 Micron, 90 Micron and 75 Micron)	ONE SET		
3	Sand Pouring Cylinder with tray complete for field Density test	One set		
4	Speedy moisture meter complete with chemicals	One set		
5	Straight Edges 3.00 metre width	Two set		
6	Liquid Limit and plastic limit testing apparatus complete with water bottle and glass wares	One set		
7	Electronic/digital balance 5 kg	One no.		
8	Pan balance with weight box, 5 kg.	One no.		
9	Slump cone	Two no.		
10	Concrete cube moulds (150 mm X 150mm)	Twelve no.		
11	Free swelling index test Apparatus	Six no.		
12	Flakiness and elongation testing gauges	Two no.		
13	Water absorption test apparatus	One no.		
14	Specific gravity test apparatus	One no.		
15	B.S. compaction apparatus	One no.		
16	Proving rings	One each		
17	Glass ware	One set		
18	Auto level and staff	Three nos.		
19	Rapid moisture meter	One no.		
20	Post Hole Auger with extensions	One set		
21	Measuring tape, spatula, glassware, porcelain dish, pestle mortar	One set		
22	Standard Proctor Density Test Apparatus with rammer	One set		
23	Electronic/digital balance 1 kg with the least count of 0.01 gm	One set		
24	Camber Board	Two no.		
25	Core Cutter (10 cm dia) 10cm/15cm height complete with dolly and hammer.	One set		
26	CBR Testing machine	One no.		
27	Oven (ambient to 200°C)	One no.		

28	Digital Thermometers	Three no.		
	Aggregate Soundness test apparatus	One no.		
30	Concrete cube testing machine	One no.		
31	First aid box	One no.		
32	Sampling Pipette	One no.		
33	Balance	One no.		
34	Dial Gauges	Six No.		
35	Thickness gauge	One set		
36	Water still (4 ft.)	One no.		
37	A.I.V. testing equipment	One no.		

The above list of essential equipment for quality control is indicative and for guidance and is not complete. Other apparatus and equipment as desired/required by the Engineer-in-Charge shall be procured by the Contractor

Annexure – R

(See clause 31 of Section 3 of GCC)

PRICE ADJUSTMENT

(DELETED)

The formulas foradjustmentofpriceareasfollow:

R= Value ofWorkas DefinedInClause31.2(3)OfGeneralConditionsOfContract

Weightages*of componentinthework

Sno	Component	Percentageof componentinthework
1	Cement-P_C	
2	Steel-P_S	
3	Bitumen-P_b	
4	POL -P_f	

*Weight agesofvariouscomponentsofthe workshall be asdeterminedbythecompetenttechnicalsanctionauthority.

Adjustmentforcementcomponent

(II) Priceadjustmentforincreaseordecreasein thecost ofcementprocuredbythecontractorshallbepaidinaccordance withthefollowingformula:

VC= 0.85 x PC/100 x R x (C1-C0)/C0

Vc= increase or decrease in the cost of work during the month under consideration due to changes in rates for cement.

Co= The all India wholesale price index for Grey cement on the date of opening of Bids as published by the Ministry of Industrial Development, Government of India, New Delhi. (www.eaindustry.nic.in)

C1= The all India average wholesale price index for Grey cement for the month under consideration as published by Ministry of Industrial Development, Government of India, New Delhi.(www.eaindustry.nic.in)

Pc= Percentage of cement component of the work

Note : For the application of this clause, index of Grey Cement has been chosen to represent Cement group.

Adjustment of steel component

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

Vs= 0.85 x PS x /100 x R x (S1-S0)/S0

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

S0= The all India wholesale price index for steel (Bars and Rods) on the date of opening of Bids as published by the Ministry of Industrial Development, Government of India, New Delhi. (www.eaindustry.nic.in)

Si = The all India average wholesale price index for steel (Bars and Rods) for the month under consideration as published by Ministry of Industrial Development, New Delhi. (www.eaindustry.nic.in)

Ps= Percentage of steel component of the work

Note : For the application of this clause, index of Bars and Rods has beenchosen to represent steel group.

Adjustment of POL (fuel and lubricant) component

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

Vf= 0.85 x Pf / 100 x R x (Fi – Fo) / Fo

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

Fo = The official retail price of High Speed Diesel (HSD) at the existing consumer pumps of IOC at nearest center on the date of opening of Bids.

Fi = The official retail price of HSD at the existing consumer pumps of IOC at nearest center for the 15th day of month of the under consideration.

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

Note:Fortheapplicationofthisclause,thepriceofHighSpeedDieselhasbeen chosentorepresentfuelandlubricantsgroup.

DELETED

Annexure - S
(See clause 32 of Section 3 - GCC)

BANK GUARANTEE FORM' FOR MOBILIZATION AND CONSTRUCTION MACHINERY ADVANCE

To,

_____ [name of Employer]
_____ [address of Employer]
_____ [name of Contractor]

ln accordance with the provisions of the General Conditions of Contract, clause 31 ("Mobilization and Construction Machinery Advance") of the above-mentioned Contract_____[name and address of Contractor] (hereinafter called "the Contractor") shall deposit with _____[name of Employer] a bank guarantee to guarantee his proper and faithful performance under the said Clause of the Contract in an amount of [amount of Guarantee* [in words].

We, the _____ [bank of financial institution] as instructed 'by the Contractor, agree unconditionally and irrevocably to guarantee as primary obligator and not as surety merely, the payment to _____ [name of Employer] on his first demand without whatsoever right of obligation on our part and without his first claim to the Contractor, in the amount not exceeding [amount of guarantee]*[in words].

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

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

Yours truly,

Signature and Seal :
Name of Bank/Financial Institution:
Address : '
Date :

* An amount shall be inserted by the Bank or Financial Institution representing the amount of the Advance Payment, and denominated in Indian Rupees.

Annexure –T
(See clause 33 of Section 3- GCC)

Bank Guarantee Form for Secured Advance

INDENTURE FOR SECUREDADVANCES

Thisindenturemadethe…….dayof…… 20_between
(hereinaftercalledthecontractorwhichexpressionshallwherethecontextsoadmitsorimpliesbedeemedtoincludehisexecutors,administrators andassigns)ortheonepartandtheemployeroftheotherpart.

Whereasbyanagreementdated..... (hereinaftercalledthe said agreement) the contractor has agreed.

ANDWHEREAS,thecontractorhasappliedtotheemployerthathemaybeallowedadvancedonthesecurityofmaterialsabsolutelybelongingto himandbroughtbyhimtothesiteoftheworksthesubjectofthesaidagreementforuseintheconstructionof suchoftheworksashehasundertakentoexecutiveatratesfixedforthefinishedwork(inclusiveof thecostofmaterialsandlabourandothercharges) andwhereastheemployerhasagreedtoadvancetothecontractorthesumofrupees onthesecurityofmaterialsthequantities andotherparticularsofwhicharedetailedinaccountsofsecuredadvanceattachedtotherunningaccountbillforthesaidworkssignedbythecontractoron andtheemployerhasreservedtohimselftheoptionofmakinganyfurtheradvanceoradvanceson thesecurityofothermaterialsbroughtbythecontractortothesiteofthesaidworks.

NowTHISINDENTUREWITNESSETHthatinpursuanceofthesaidagreementand inconsideration ofthesum ofrupees…….. onor beforetheexecutionofthesepresentspaidtothecontractorbytheemployer(thereceiptwhereofthecontractordoth herebyacknowledge)andofsuchfurtheradvances(ifany)asmaybemadetohimasaforsaidthecontractordothherebycovenantandagreewiththepresi dentanddeclareas follows:

That thesaidsumofrupees……. soadvancedbytheemployerto

(1) Thecontractorasaforesaidandall oranyfurthersumofsumsadvancedas aforesaid shallbeemployedbythecontractorinortowardsexpendingtheexecutionofthesaid worksandfornootherpurposewhatsoever.

(2) Thatthematerialsdetailsinthesaidaccountofsecuredadvanceswhichhavebeen offeredtoandacceptedbytheemployerassecurityareabsolutelythecontractor's ownproprietyandfreefromencumbrancesofanykindandthecontractorwillnot makeanyapplicationfororreceiveafurtheradvanceonthesecurityofmaterials whicharenotabsolutelyhisownpropertyandfreefromencumbrancesofanykind andthecontractorindemnifiedtheemployeragainstallclaimstoanymaterialsin respectof which an advance has been madetohimasaforesaid.

(3) That the materials detailed in the said account of Secured Advances and all other materials on the security of which any further advance or advances may hereafter be made as aforesaid (hereafter called the said materials) shall be used by the Contractor solely in the execution of the said works in accordance with the directions of the Engineer.

(4) That the Contractor shall make at his own cost all necessary and adequate arrangements for the proper watch, safe custody and protection against all risks of the said materials and that until used in construction as aforesaid the said materials shall remain at the site of the said works in the Contractor's custody and on his own responsibility and shall at all times be open to inspection by the Engineer or any officer authorized by him. In the event of the said materials or any part thereof being stolen, destroyed or damaged or becoming deteriorated in a greater degree than is due to reasonable use and wear thereof the Contractor will forthwith replace the same with other materials of like quality or repair and make good the same required by the Engineer.

(5) That the said materials shall not be removed from the site of the said works except with the written permission of the Engineer or an officer authorized by him on that behalf.

(6) That the advances shall be repayable in full when or before the Contract receives payment from the Employer of the price payable to him for the said works under the terms and provisions of the said agreement. Provided that if any intermediate payments are made to the Contractor on account of work done than on the occasion of each such payment the Employer will be at liberty to make a recovery from the Contractor's bill for such payment by deducting there from the value of the said materials than actually used in the construction and in respect of which recovery has not been made previously, the value for this purpose being determined in respect of each description of materials at the rates at which the amounts of the advances made under these presents were calculated.

(7) That if the Contractor shall at any time make any default in the performance or observance in any respect of any of the terms and provisions of the said agreement or of these presents the total amount of the advance or advances that may still be owing of the Employer shall immediately on the happening of such default be re- payable by the Contractor to be the Employer together with interest thereon at twelve percent per annum from the date or respective dates of such advance or advances to the date of repayment and with all costs, charges, damages and expenses incurred by the Employer in or for the recovery thereof or the enforcement of this security or otherwise by reason of the default of the Contractor and the Contractor hereby covenants and agrees with the Employer to reply and pay the same respectively to him accordingly.

(8) That the Contractor hereby charges all the said materials with the repayment to the Employer of the said sum of Rupees.....and any further sum of sums advanced as aforesaid and all costs, charges, damages and expenses payable under these presents PROVIDED ALWAYS and it is hereby agreed and declared that notwithstanding anything in the said agreement and without prejudice to the power contained therein if and whenever the covenant for payment and repayment here-in-before contained shall become enforceable and the money owing shall not be paid in accordance therewith the Employer may at any time thereafter adopt all or any of the following courses as he may deem best.

(a) Seize and utilize the said materials or any part thereof in the completion of the said works on behalf of the contractor in accordance with the provision in that behalf contained in the said agreement debiting the contractor with the actual cost of effecting such completion and the amount due to the contractor with the value of work done as if he had carried it out in accordance with the said agreement and at the rates thereby provided. If the balance is against the Contractor, he is to pay same to the Employer on demand.

(b) Remove and sell by public auction the seized materials or any part thereof and out of the moneys arising from the sale retain all the sums aforesaid repayable or payable to the Employer under these presents and pay over the surplus (if any) to the Contractor.

(C) Deduct all or any par of the moneys owing out of the security deposit or any sum due to the Contractor under the said agreement.

(9) That except in the event of such default on the part of the contractor as aforesaidinterest on the said advance shall not be payable.

(10) That in the event of any conflict between the provisions of these presents and the said agreement the provisions of these presents shall prevail and in the event of any dispute or difference arising over the construction or effect of these presents the settlement of which has not been here-in-before expressly provided for the same shall be referred to the Employer whose decision shall be final and the provision of the Indian Arbitration Act for the time being in force shall apply to any such reference.

Annexure - U

(See clause 35 of section 3 -GCC)

Physical Completion Certificate

Name of Work:

_____

_____

_____

Agreement No. _____Date_____

Amount of Contract Rs _____

Name of Agency: _____

Used MB No.: _____

Last measurement recorded

a. Page No. & MB No.:_____

b. Date:_____

Certified that the above mentioned work was physically completed on..... (Date) and taken over on..... (Date) and that I have satisfied myself to best of my ability that the work has been done properly.

Date of issue

Engineer In Charge

_____

_____

Annexure-V
(See clause 35 of section 3 -GCC)

Final Completion Certificate

Name of Work:

_____
_____
_____

Agreement No._____ Date: _____

Name of Agency:_____

Used MB No._____

Last Measurement recorded

b. Page No. & MB No._____

c. Date_____

Certified that the above mentioned work was physically completed on_____(date)

And taken over on_____(date).

Agreement amount Rs._____

Final amount paid to contractor Rs._____

Incumbency of officers for the work

I have satisfied myself to best of my ability that the work has been done properly.

Date of Issue

Engineer In Charge

_____

_____

Annexure – W

(See clause 39 of Section 3 -GCC)

Salient Features of Some Major Labour Laws Applicable

(a) Workmen Compensation Act 1923: - The Act provides for compensation in case of injury by accident arising out of and during the course of employment.

(b) Payment of Gratuity Act 1972: - Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed the prescribed minimum years (say, five years) of service or more or on death the rate of prescribed minimum days'(say, 15 days) wages for every completed year of service. The Act is applicable to all establishments employing the prescribed minimum number (say, 10) or more employees.

(c) Employees P.F. and Miscellaneous Provision Act 1952: The Act Provides for monthly contributions by the Employer plus workers at the rate prescribed (say, 10% or 8.33%). The benefits payable under the Act are:

i. Pension or family pension on retirement or death as the case may be. '

ii. Deposit linked insurance on the death in harness of the worker.

iii. Payment of P.F. accumulation on retirement/death etc.

(d) Maternity Benefit Act 1951: - The Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.

(e) Contract Labour (Regulation & Abolition) Act 1970: - The Act provides for certain welfare measures to be provided by the Contractor to contract labour and in case the Contractor fails to provide, the same are required to be provided, by the Principal Employer by Law. The principal Employer is required to take Certificate of Registration and the Contractor is, required to take license from the designated Officer. The Act is applicable to the establishments or Contractor of Principal Employer if they employ prescribed minimum (say 20) or more contract labour.

(f) Minimum Wages Act 1948: - The Employer is to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the Act if the employment is a scheduled employment. Construction of buildings, roads, runways is scheduled employment.

(g) Payment of Wages Act 1936: - It lays down as to by what date the wages are to be paid, when it will be paid and what deductions can be made from the wages of the workers.

(h) Equal Remuneration Act 1979: - The Act provides for payment of equal wages for work of equal nature to male and female workers and for not making discrimination against female employees in the matters of transfers, training and promotions etc.

(i) Payment of Bonus Act 1965: - The Act is applicable to all establishments employing prescribed minimum (say, 20) or more workmen. The Act provides for payments of annual bonus 'within the prescribed range of percentage of wages to employees drawing up to the prescribed amount of wages, calculated in the prescribed manner. The Act does not apply to certain establishments. The newly set-up establishments are exempted for five years in certain circumstances. States may have different number of employment size.

(j) Industrial Disputes Act 1947: - The Act lays down the machinery and procedure for resolution of industrial disputes, in what situations a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.

(k) Industrial Employment (Standing Orders) Act 1946: - It is applicable to all establishments employing prescribed minimum (say, 100, or 50). The Act provides for laying down rules governing the conditions of employment by the Employer on matters provided in the Act and gets these certified by the designated Authority.

(l) Trade Unions Act 1926: - The Act lays down the procedure for registration of trade unions of workmen and Employers. The Trade Unions registered under the Act have been given certain immunities from civil and criminal liabilities.

(m) Child Labour (Prohibition & Regulation) Act 1986: - The Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulations o employment of children in all other occupations and processes. Employment of child labour is prohibited in building and construction industry.

(n) Inter-State Migrant Workmen's (Regulation of Employment & Conditions of Service) Act 1979: - The Act is applicable to an establishment which employs prescribed minimum (say, five) or more inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another state).

The inter-State migrant workmen, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as Housing, Medical-Aid, Travelling expenses from home up to the establishment and back etc.

(o) The Building and Other Construction workers (Regulation of Employment and Conditions of Service) Act 1996 and the Cess Act of 1996: - All the establishments who carry on any building or other construction work and employs the prescribed minimum (say, 10) or more workers are covered under this Act. All such establishments are required to pay cess at the rate not exceeding 2% of the cost of construction as. may be modified by the Government., The Employer of the establishment- is required to provide safety measures at the building or construction work and other welfare measures, such as canteens, first-aid facilities, ambulance, housing accommodations for workers near the-work place etc. The Employer to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Government.

(p) Factories Act 1948: - The Act lays down the procedure for approval of plans before setting up a factory, health and safety provisions, welfare provisions, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrences to designated authorities. it is applicable to premises employing the prescribed minimum (say, 10) persons or more with aid of power or another prescribed minimum (say, 20) or more persons without the aid of power engaged in manufacturing process.

Annexure – W1
(See clause 39 of Section 3 -GCC)

CONSTRUCTION SAFETY

1) IS: 3696(Part-1, 2) Safety code for scaffolds and ladder
2) IS: 3764 Safety code for excavation work
3) IS: 7205 Safety code for erecting of structural steel work
4) SP: 70-2001 Handbook on Construction Safety Practices

1. On all excavation work, safety precautions for the protection of life and property are essential: While measures to avoid inconveniences to the public are desirable. Such measures and precautions include the erection and maintenance signs (to forewarn public), barricades, bridges, and detours: placing and maintenance of lights both for illumination and also as danger signals, provision of watchmen to exclude unauthorised persons particularly children, from trespassing on the work: and such other precautions as local conditions may dictate.

2. Suitable scaffolds should be provided for workmen for all works that cannot safely be done from the ground, or from solid construction except such short period work as can be done safely from ladders. When a ladder is used, an extra mazdoor shall be engaged for holding the ladder and if the ladder is used for carrying materials as well suitable footholds and hand-hold shall be provided on the ladder and the ladder shall be given an inclination not steeper than ¼ to 1(¼ horizontal and 1 vertical.)

3. Scaffolding of staging more than 3.6 m (12ft.) above the ground or floor, swung or suspended from an overhead support or erected with stationary support shall have a guard rail properly attached or bolted, braced and otherwise secured at least 90 cm. (3ft.) high above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends there of with only such opening as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the building or structure.

4. Working platforms, gangways and stairways should be so constructed that they should not sag unduly or unequally, and if the height of the platform or the gangway or the stairway is more than 3.6 m (12ft.) above ground level or floor level, they should be closely boarded, should have adequate width and should be suitably fastened as described in (2) above.

5. Every opening in the floor of a building or in a working platform shall be provided with suitable means to prevent the fall of person or materials by providing suitable fencing or railing whose minimum height shall be 90 cm. (3ft.)

6. Safe means of access shall be provided to all working platforms and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9m. (30ft.) in length while the width between side rails in rung ladder shall in no case be less than 29 cm. (11½") for ladder upto and including 3 m. (10 ft.) in length. For longer ladders, this width should be increased at least ¼" for each additional 30 cm. (1 foot) of length. Uniform step spacing of not more than 30 cm shall be kept. Adequate precautions shall be taken to prevent danger from electrical equipment. No materials on any of the sites or work shall be so stacked or placed as to cause danger or inconvenience to any person or the public. The contractor shall provide all necessary fencing and lights to protect the public from accident and shall be bound to bear the expenses of defence of every suit, action or other proceedings at law that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay any damages and cost which may be awarded in any such suit; action or proceedings to any such person or which may, with the consent of the contractor, be paid to compensate any claim by any such person.

7. (a) Excavation and Trenching - All trenches 1.2 m. (4ft.) or more in depth, shall at all times be supplied with at least one ladder for each 30 m. (100 ft.) in length or fraction thereof, Ladder shall extend from bottom of the trench to at least 90 cm. (3ft.) above the surface of the ground. The side of the trenches which are 1.5 m. (5ft.) or more in depth shall be stepped back to give suitable slope or securely held by timber bracing, so as to avoid the danger of sides collapsing. The excavated materials shall not be placed within 1.5 m. (5ft.) of the edges of the trench or half of the depth of the trench whichever is more.

Cutting shall be done from top to bottom. Under no circumstances, undermining or undercutting shall be done.

(b) Safety Measures for digging bore holes:-

(i). If the bore well is successful, it should be safely capped to avoid caving and collapse of the bore well. The failed and the abandoned ones should be completely refilled to avoid caving and collapse;

(ii). During drilling, Sign boards should be erected near the site with the address of the drilling contractor and the Engineer in-charge of the work.

(iii). Suitable fencing should be erected around the well during the drilling and after the installation of the rig on the point of drilling, flags shall be put 50m alround the point of drilling to avoid entry of people;

(iv). After drilling the borewell, a cement platform (0.50m x 0.50m x 1.20m) 0.60m above ground level and 0.60m below ground level should be constructed around the well casing;

(v). After the completion of the bore well, the contractor should cap the bore well properly by welding steel plate, cover the bore well with the drilled wet soil and fix thorny shrubs over the soil. This should be done even while reparing the pump;

(vi). After the bore well is drilled the entire site should be brought to the ground level.

8. Demolition - before any demolition work is commenced and also during the progress of the work, (i) All roads and open areas adjacent to the work site shall either be closed or suitably protected.

(ii) No electric cable or apparatus which is liable to be a source of danger or a cable or apparatus used by the operator shall remain electrically charged.

(iii) All practical steps shall be taken to prevent danger to persons employed from risk of fire or explosion or flooding. No floor, roof or other part of the building shall be so overloaded with debris or materials as to render it unsafe.

9. All necessary personal safety equipment as considered adequate by the Engineer-in-Charge should be kept available for the use of the person employed on the site and maintained in a condition suitable for immediate use, and the contractor should take adequate steps to ensure proper use of equipment by those concerned. The following safety equipment shall invariably be provided:--.

(i) Workers employed on mixing asphaltic materials, cement and lime mortars shall be provided with protective footwear and protective goggles.

(ii) Those engaged in white washing and mixing or stacking of cement bags or any material which is injurious to the eyes, shall be provided with protective goggles.

(iii) Those engaged in welding works shall be provided with welder's protective eyeshields.

(iv) Stone breaker shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.

(v) When workers are employed in sewers and manholes, which are in active use, the contractors shall ensure that the manhole covers are opened and ventilated at least for an hour before the workers are allowed to get into the manholes, and the manholes so opened shall be cordoned off with suitable railing and provided with warning signals or boards to prevent accident to the public. In addition, the contractor shall ensure that the following safety measure are adhered to :-

(a) Entry for workers into the line shall not be allowed except under supervision of the JE or any other higher officer.

(b) At least 5 to 6 manholes upstream and downstream should be kept open for at least 2 to 3 hours before any man is allowed to enter into the manhole for working inside.

(c) Before entry, presence of Toxic gases should be tested by inserting wet lead acetate paper which changes colour in the presence of such gases and gives indication of their presence.

(d) Presence of Oxygen should be verified by lowering a detector lamp into the manhole. In case, no Oxygen is found inside the sewer line, workers should be sent only with Oxygen kit.

(e) Safety belt with rope should be provided to the workers. While working inside the manholes, such rope should be handled by two men standing outside to enable him to be pulled out during emergency.

(f) The area should be barricaded or cordoned of by suitable means to avoid mishaps of any kind. Proper warning signs should be displayed for the safety of the public whenever cleaning works are undertaken during night or day.

(g) No smoking or open flames shall be allowed near the blocked manhole being cleaned. (h) The malba obtained on account of cleaning of blocked manholes and sewer lines should be immediately removed to avoid accidents on account of slippery nature of the malba.

(i) Workers should not be allowed to work inside the manhole continuously. He should be given rest intermittently. The Engineer-in-Charge may decide the time up to which a worker may be allowed to work continuously inside the manhole.

(j) Gas masks with Oxygen Cylinder should be kept at site for use in emergency.

(k) Air-blowers should be used for flow of fresh air through the manholes. Whenever called for, portable air blowers are recommended for ventilating the manholes. The Motors for these shall be vapour proof and of totally enclosed type. Non sparking gas engines also could be used but they should be placed at least 2 metres away from the opening and on the leeward side protected from wind so that they will not be a source of friction on any inflammable gas that might be present.

(l) The workers engaged for cleaning the manholes/sewers should be properly trained before allowing to work in the manhole.

(m) The workers shall be provided with Gumboots or non sparking shoes, bump helmets and gloves,non sparking tools, safety lights and gas masks and portable air blowers (when necessary). They must be supplied with barrier cream for anointing the limbs before working inside the sewer lines.

(n) Workmen descending a manhole shall try each ladder stop or rung carefully before putting his full weight on it to guard against insecure fastening due to corrosion of the rung fixed to manhole well.

(o) If a man has received a physical injury, he should be brought out of the sewer immediately and adequate medical aid should be provided to him.

(p) The extent to which these precautions are to be taken depend on individual situation but the decision of the Engineer-in-Charge regarding the steps to be taken in this regard in an individual case will be final.

(vi) The Contractor shall not employ men and women below the age of 18 years on the work of painting with products containing lead in any form. Wherever men above the age of 18 are employed on the work of lead painting, the following precaution should be taken:

- (a) No paint containing lead or lead products shall be used except in the form of paste or readymade paint.

(b) Suitable face masks should be supplied for use by the workers when paint is applied in the form of spray or a surface having lead paint is dry rubbed and scrapped.

(c) Overall shall be supplied by the contractors to the workmen and adequate facilities shall be provided to enable the working painters to wash during and on the cessation of work.

10. An additional clause (viii)(i) of Safety Code (iv) the Contractor shall not employ women and men below the age of 18 on the work of painting with product containing lead in any form, wherever men above the age of 18 are employed on the work of lead painting, the following principles must be observed for such use :

(i) White lead, sulphate of lead or product containing these pigment, shall not be used in painting operation except in the form of pastes or paint ready for use.

(ii) Measures shall be taken, wherever required in order to prevent danger arising from the application of a paint in the form of spray.

(iii) Measures shall be taken, wherever practicable, to prevent danger arising out of from dust caused by dry rubbing down and scraping.

(iv) Adequate facilities shall be provided to enable working painters to wash during and on cessation of work.

(v) Overall shall be worn by working painters during the whole of working period.

(vi) Suitable arrangement shall be made to prevent clothing put off during working hours being spoiled by painting materials.

(vii) Cases of lead poisoning and suspected lead poisoning shall be notified and shall be subsequently verified by medical man appointed by competent authority.

(viii)The employer may require, when necessary medical examination of workers. (ix) Instructions with regard to special hygienic precautions to be taken in the painting trade shall be distributed to working painters.

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

12. Use of hoisting machines and tackle including their attachments, anchorage and supports shall conform to the following standards or conditions:-

(i) (a) These shall be of good mechanical construction, sound materials and adequate strength and free from patent defects and shall be kept repaired and in good working order.

(b) Every rope used in hoisting or lowering materials or as a means of suspension shall be of durable quality and adequate strength, and free from patent defects.

(ii) Every crane driver or hoisting appliance operator, shall be properly qualified and no person under the age of 21 years should be in charge of any hoisting machine including any scaffolding winch or give signals to operator.

(iii) In case of every hoisting machine and of every chain ring hook, shackle swivel and pulley block used in hoisting or as means of suspension, the safe working load shall be ascertained by adequate means. Every hoisting machine and all gear referred to above shall be plainly marked with the safe working load. In case of a hoisting machine having a variable safe working load each safe working load and the condition under which it is applicable shall be clearly indicated. No part of any machine or any gear referred to above in this paragraph shall be loaded beyond the safe working load except for the purpose of testing.

(iv) In case of departmental machines, the safe working load shall be notified by the Electrical Engineerin-Charge. As regards contractor's machines the contractors shall notify the safe working load of the machine to the Engineer-in-Charge whenever he brings any machinery to site of work and get it verified by the Electrical Engineer concerned.

13. Motors, gearing, transmission, electric wiring and other dangerous parts of hoisting appliances should be provided with efficient safeguards. Hoisting appliances should be provided with such means as will reduce to the minimum the risk of accidental descent of the load. Adequate precautions should be taken to reduce to the minimum the risk of any part of a suspended load becoming accidentally displaced. When workers are employed on electrical installations which are already energized, insulating mats, wearing apparel, such as gloves, sleeves and boots as may be necessary should be provided. The worker should not wear any rings, watches and carry keys or other materials which are good conductors of electricity.

14. All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in safe condition and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities should be provided at or near places of work.

15. To ensure effective enforcement of the rules and regulations relating to safety precautions the arrangements made by the contractor shall be open to inspection by the Engineer-in-Charge or their representatives.

16. Notwithstanding the above clauses from (1) to (14), there is nothing in these to exempt the contractor from the operations of any other Act or Rule in force in the Republic of India.

Section 3

Conditions of Contract

Part-II Special Conditions of Contract [SCC]

1. GENERAL:

The special conditions are supplementary conditions to the TENDER and shall form the part of the contract.

1.1 It shall be the responsibility of BIDDER to co-ordinate with traffic authority, Railways, MPRDC, M.P. Electricity Board, Telephone authority, various authorities including Public Health Engineering, Water resource Department for obtaining necessary permissions regarding crossing of road/railway tracks, shift of various types of public utilities like existing pipe line, sewer line, cable etc. as may be required for the due fulfillment of the obligations under this contract. UJJAIN MUNICIPALCORPORATION, UJJAIN shall deposit all charges including charges for Electric Connection, Crossing of Railway and Road way etc. as may be necessary for seeking required permissions from different authorities but it shall be the primary responsibility of the contractor/firm to pursue with various authorities and obtain the permissions at the earliest. If as a result of excavation of trenches the underground services such as water main electric telephones cable, sewer lines become naked and unsupported it shall be the responsibility of the contractor to make suitable and necessary arrangement as per direction of the Engineer-in-Charge for their protection and no extra payment on this account will be made to the contractor. Any damages caused to the above mentioned underground services due to negligence of the contractor or otherwise the same shall be made good by the contractor at his own cost.

2.0 Accuracy of Lines, Levels and Grades

2.1 The various works shall be done true to line, level and grade. The periodical checking of these by the Engineer or Engineer's representative shall not absolve the Contractor of his responsibility regarding their accuracy. In case of any deviation or discrepancy in line, level or grade at the meeting faces, the contractor shall make good the discrepancy at his own cost and without any compensation for the additional work if any involved. Whenever such a discrepancy is found to arise at the junction of works being carried out by different Contractors the responsibility to set right their respective discrepancies shall be fixed by the Engineer whose decision shall be final and binding on the Contractors concerned. Engineer shall further have the unquestioned right if need be to rectify the discrepancies and recover the cost from the Contractor or Contractors according to proportions as he May consider reasonable.

2.2 The details of location and the nearest permanent bench marks. Reference Grid Marks shall be obtained by the Contractor in writing from the Engineer. Temporary bench mark for day to day use shall be fixed with reference to above permanent bench marks with double leveling. The Grid Co-ordinates and its references May be obtained from the Engineer.

3.0 Arrangements of Water and Electric Power

Arrangement for water and electric power required by the Contractor for the works shall be made by him at his own cost. Employer will however recommend to the State Electricity Board for giving the connection and power to the Contractor. However the Employer will bear no responsibility in this respect.

4.0 Measures for Prevention of Fire

4.1 The Contractor shall not set fire to any standing Jungle, trees, brush wood or grass without a written permission from the Engineer.

4.2 When such permission is given and also in all cases when destroying out of dug trees, brush wood, grass etc. by fire, the Contractor shall take necessary measures to prevent such fire spreading to or otherwise damaging surrounding property.

4.3 Any damage caused by the spreading of such fire, whether in or beyond limits of the Employer's property, the amount of the damage shall be recovered by the Engineer from the Contractor's Bills as damages or deducted by any other duly authorized officer from any sums that May be due or become due from the Employer to the Contractor under the contractor otherwise.

4.4 The Contractor shall bear the expenses of defending any action or law proceedings that May be brought by any person by injury sustained owing to neglect of precautions to prevent the spread of fire and shall pay any damage and cost that May be awarded in consequence.

5.0 Site Order Book

A site order book shall be kept at the Employer's office on the site of the work. As far as possible all orders regarding the works are to be entered in this book. All entries therein shall be signed by the Engineer on his representative and the contractor or his authorized representative. In important cases the Engineer will countersign the entries which have been made. The site order book shall not be removed from the work site except with written permission of the Engineer and the Contractor or his representative shall be bound to take note of all instructions and directions meant

for the Contractor as entered in the site order book without having to be called on separately to note them. The Engineer shall submit periodically copies of the remarks in the site order book to the Employer for record and to the contractor for submitting compliance report.

6.0 Foundations Depth/Levels.

The drawings indicate the general foundation levels to be adopted for the different conditions of the structures. During execution these levels May be modified to suit the site conditions. The Contractor shall not be liable to any compensation for any minor delays on this account. However this May be considered for granting suitable extension in the completion period if necessitated by such events.

7.0 Approach Road

Necessary approach roads for various construction of components of the work like Sump Well, STP, etc. shall be satisfactorily constructed and maintained by the Contractor at his own cost.

8.0 Regulation and Bye-Laws----

The contractor shall conform to the regulations, bye laws or any other statutory rules made by any local authorities or by the Government and shall protect and indemnify the Employer against any claims or liability arising from or based on the violations of any such laws, ordinance, regulations, orders and decrees etc.

9.0 Contractor to use Excavated Hard Rock

All useful materials like hard rock etc. excavated by the Contractor at site shall be the property of Employer and shall be issued to the Contractor at the issue rate of Rs. 200/- per cum. It shall be binding on the Contractor to use it as rubble, metal aggregate etc. after breaking into the required size for concrete work and as directed by the Engineer.

10.0 Income Tax

During the course of contract period, deductions of Income Tax shall be made at the prevailing rate of Department of Income Tax Government of India and as revised from time to time as per the advice of Income Tax authorities.

11.0 Supply and Arrangement of Materials

(1) The contractor shall make his own arrangement for supply of materials including cement and steel. The contractor shall be responsible for all transportation and storage of the materials at site and shall bear all the related costs. The Engineer shall be entitled at any time to inspect or examine all such materials. The contractor shall provide reasonable assistance for such inspection or examination as May be required.

(2) The contractor shall keep an accurate record of use of materials like cement and steel used in the works in a manner prescribed by the Engineers.

12.0 Cement

(a) The Contractor shall stock his requirement so as to ensure utilization of cement within 60 days but in no case later than 90 days Cement older than the period aforesaid shall not be used on any work except with the written permission of the Engineer, and after satisfactorily passing such lest as he May specify. The Contractor shall forthwith remove from the work such cement that Engineer has not allowed. The final disposal of such cement shall comply with the rules in force at the time and as the Engineer May approve

(b) Large stocks of cement shall not be kept at the works but only sufficient quantities shall be kept to assure continuity of the work. The Contractor shall provided and maintain efficient water proof storage sheds for cement on the site of work. It shall be stacked on the platform 30 cms. above the floor level and shall be covered with tarpaulin or any other impervious covering materials in order to protect the cement bags from moisture. The cement shall be neatly stacked in an orderly manner so as to allow an easy access and count. The arrangement of storage and utilization shall be such as to ensure the utilization of cement in the order of its arrival at the stores and the Contractor shall maintain satisfactory records which would at any time show the date of receipt and proposed utilization of cement laying in the stores at site.

(c) The Engineer shall at all time have access to the stores at sites of the Contractor. He shall have authority to check and examine the method of storage, record accounting and security provided by the Contractor. The Contractor shall comply with instructions that May be issued by the Engineer in this connection. The Contractor shall further at all times satisfy the Engineer on demand and by the production of records and books or submission of returns and proforma or by other proofs that May be demanded that the cement brought from the approved manufacturer with date of receipt & consumption etc. The Contractor shall at all times keep his records up to date to enable the Engineer to apply such checks as he May desire to impose.

The contractor shall provide a double locking arrangement to the store the key of one of the locks being with the Engineer or his representative at site. The Engineer or his authorized agent will have the authority to verify the stocks and check the consumption in any manner he thinks proper.

13.0 Special Condition Regarding Conditional TENDER

The BIDDER will have to give an under taking with the instrument of Earnest Money to the effect that there are no conditions in the TENDER and if any conditions are found the same shall be ignored.

If such an under taking is not found with the Earnest Money, the TENDER will not be opened and not taken into consideration. However in case the contractor gives such an undertaking at the time of opening of TENDER, the same may

be considered.

14.0 Design and Drawings

(1) The Detailed project report prepared by UJJAIN MUNICIPAL CORPORATION will be basic data for guidance of Contractor. The contractor will not claim whatsoever on account of deficiency in the data of Detailed Project Report.

(2) Bidder shall carryout detail survey and investigations (including soil test) as may be required for preparation of detail designs and drawings.

(3) The detailed design and drawing shall be prepared by Contractor and submitted to Government Engineering College and PDMC for examination through MUNICIPAL COMMISSIONER and the observations made by the examining institute shall be duly incorporated by Contractor without any claims what so ever in this regard. Thereafter the drawing duly vetted by engineering college shall be submitted to chief engineer for final approvals.

(4) The approved drawings shall remain in the sole custody of the Engineer. The Contractor shall obtain and make at his own expense any further copies required by him. At the completion of the contract the Contractor shall return to the Engineer all Drawings provided under the Contract.

(5) **One copy of the Drawings to be kept on Site.**

One copy of the Drawings furnished to the Contractor as aforesaid, shall be kept by the Contractor on the site and the same shall at all reasonable times be available for inspection and use by the Engineer and the Engineer's Representative and by any other person authorized by the Engineer in writing.

(6) **As- Built Drawings**

The contractor shall submit to the Engineer-in-Charge within 21 days of Physical completion, "Completion" Drawings as detailed below. These drawings shall be accurate and correct in all respects and shall be shown to and approved by the Engineer-in-charge.

Completion drawings as below on two prints and one polyester copy shall be supplied by the contractor along with a soft copy in CD. These drawings shall be developed in latest version of Auto-CAD. Drawings shall be of standard as stated below.

I. Site plan showing all features existing and as constructed under this contract with all external dimensions of clear spaces among those, diameter and materials of pipeline etc. complete.

II. Architectural, Civil and Structural details of all components of the plant including plans at different levels, elevations from all sides as well as sectional etc. complete with all dimensions including Structural Thickness, Concrete Grade, Reinforcement details, finishing details, schedules of doors and windows, details of associated fittings and features complete.

III. All piping, plumbing and electrical details with dimensions, diameters etc. complete at specific cases isometric views of piping may be necessary.

IV. Dimensioned details of all electrical, mechanical and instrumentation equipments including accessories along with arrangement inside the buildings or enclosures, connected piping and cabling layout etc. all complete.

V. Dimensioned details of all control and measuring device lined weirs, V-notches, probes, valves, gates, consoles, panels, switch diagrams/Circuit diagrams shall be used wherever applicable.

VI. L-sections for pipelines laid externally, showing pipe profile, ground profile, soil condition, bedding, location of specials, valves and other accessories complete.

VII. Dimensioned details of all site development works such as roads, drainage, cables pipelines, landscaping etc. complete with layout, cross – sections, levels etc. complete.

All drawings shall be prepared in appropriate scale and with adequate notes, legends, titles etc. for clarity.

(7) **Disruption of Progress**

The Contractor shall give written notice to the Engineer whenever planning or progress of the works is likely to be delayed or disrupted unless any further drawing or order, including a direction, instruction or approval is issued by the Engineer within a reasonable time. The notice shall include details of the drawing or order required and of why and by when it is required and of any delay or disruption likely to be suffered if it is late.

(8)**Delay and Cost of delay of Drawings**

If, by reason of any failure or inability of the Engineer to issue within a time reasonable in all the circumstances any drawing or order required by the Contractor in accordance with sub-clause (3) of this Clause, the Contractor suffers delay then the Engineer shall take such delay into account in determining any extension of time to which the Contractor is entitled under Clause 44 hereof. However the Contractor shall not be entitled to any compensation for such delay, except extension of time.

(9)**Further Drawings and Instructions**

The Engineer shall have full power and authority to supply to the Contractor from time to time during the progress of the Works such further drawings and instructions as shall be necessary for the purpose of the proper and adequate execution and maintenance of the Works The Contractor shall carry out and be bound by the same.

15.0 Operation and Maintenance

Contractor shall operate and maintain the Sewerage project of MUNICIPALCORPORATION, UJJAINfor 10 years after successful completion of works, for which Contractor shall be paid separately as per Annexure 'J' Financial

Bid. The details of the operation and maintenance charges payable along with the payment schedule are given in Annexure Y.

16.0 Sufficiency of TENDER

The Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his TENDER for the Works and of the rates and prices of various Quantities and the Schedule of Rates and Prices, if any, which TENDER rates and prices shall, except in so for as it is otherwise provide in the Contract, cover all his obligations under the Contract and all matters and things necessary for the proper execution and maintenance of the Works. If, however, during the execution of the Works the Contractor shall encounter physical conditions, other than climatic conditions on the Site, or artificial obstructions, which conditions or obstruction could, in his opinion, not have been reasonable foreseen by an experienced contractor the Contractor shall forthwith give written notice thereof to the Engineer's Representative and if in the opinion of the Engineer, such conditions or artificial obstructions could not have been reasonably foreseen by an experienced contractor, than the Engineer shall certify and the Employer shall pay the additional cost to which the Contractor shall have been put by reason of such conditions, including the proper and reasonable cost. However the Engineer in charge decision shall be final & binding.

17.0 Planned Reconstruction of Roads Damaged By Project Elements Laying of Pipeline

17.1 In case the pipelines are to be laid under the existing roads / lanes/Bye-lanes, the dismantling of existing roads/lanes/bye-lanes shall be made in such a way that after laying of pipes or other such structures that are required to be constructed / placed under the road, the road /lanes/bye-lanes shall be restored to the original position. This mean that if prior to proposed construction, the road was Black topped with specific composition of the pavement than after construction, the road shall be constructed by the contractor with the same composition and specifications. This will also apply for concrete road or any other surface of roads.

17.2 The laying of pipes or other structures under the road is likely to involve public inconvenience such as interruption to traffic or interference in normal right of way. The Contractor shall ensure that because of the execution of work minimum possible public inconvenience is caused. For ensuring this, pipeline laying and road reconstruction work shall be carried out and completed in lengths specified by Employer (not more than 250 mtr. in one defined stretch of road).The further excavation, dismantling of road and laying of pipes in the same stretch of road shall not be started unless the earlier work of laying has been completed with full reconstruction of roads. The scheduling of work shall be got approved by the Engineer In Charge.

18.0 Guidelines for Supervision and Monitoring of Execution of Works Under AMRUT

Procedures to be adopted by the contractor/PDMC as per the following guidelines and format as mentioned below.

MUNICIPAL COMMISSIONER
UJJAIN MUNICIPAL CORPORATION

Section 4
Price Break-Up Schedule

S. No	Item	Unit	Zone 6 Part - I		
			Quantity	Rate	Amount
	Dismentaling of Cement Concrete Pavement including bracking of pices not exceed 0.02 Cum in volume and stock pilling at designated location and disposal of dismentaling material up to a lead of 1000 m, staking serviceable and unserviceable materials separately and as per leavent clauses of section-200 (MP UADD SOR 202, Volume – I, Item No – 18.12, Page No - 229)	Cum	6,670.00	749.00	49,95,830.00
	Dismantaling of flexible pavement and disposal of dismantaled material upto a lead of 1000 meters, staking serviceable and.unserviceable materials separately and as per leavent clauses of section-200. (MP UADD SOR 2021, Volume – I, Item No – 18.11, Page No - 229)				
	Bituminous courses (MP UADD SOR 2021, Volume – I, Item No – 18.11.1, Page No - 229)	Cum	670.00	420.00	2,81,400.00
	Granular courses (MP UADD SOR 2021, Volume – I, Item No – 18.11.2, Page No - 229)	Cum	6,110.00	378.00	23,09,580.00
	Earth work in excavation for foundation, trenches for pipes /cables or drains etc. by mechanical means /manual means (exceeding 30cm in depth.) including ramming of bottom, dressing of sides, disposal of excavated earth including of all lift and lead up to 50m. Disposed earth to be levelled and neatly dressed. (MP UADD SOR 2021, Volume – I, Item No – 18.2, Page No - 227)				
	All kinds of ordinary soil (MP UADD SOR 2021, Volume – I, Item No – 18.2.1, Page No - 227)	Cum	1,510.00	151.00	2,28,010.00
	Ordinary rock (MP UADD SOR 2021, Volume – I, Item No – 18.2.2, Page No - 227)	Cum	7,300.00	261.00	19,05,300.00
	In or under foul position, including pumping out water as required.(Excavation, where sewage, sewage gases or foul conditions are met with from any source, shall fall in this category. Decision of the. Engineer-in-Charge whether the work is in foul position or not shall be final.) (MP UADD SOR 2021, Volume – I, Item No – 18.2.7.2, Page No - 228)	Cum	8,110.00	181.20	14,69,532.00

	Filling with moorum for pipe bedding or over the pipe including supply of moorum/sand (MP UADD SOR 2021,Volume – I, Item No – 18.3.3, Page No - 228)	Cum	1,340.00	720.00	9,64,800.00
	Extra for every additional lift of 1.5m or part thereof over item 16.2 (Note: Only for depth of trench exceeding 1.5m for laying of sewer line & water line and manhole/ chambers including all site clearances, adequate barricades, construction signs, red lanterns and guards as required, dewatering, scaffolding, timbering, machinery, tools implements and generally of all means used for the fulfilment of these items.) MP UADD SOR 2021, Volume – I, Item No – 18.2.5 (Page No - 227)	Cum	23,000.00	45.60	10,48,800.00
	Providing. Laying, Jointing and supply of DWC Pipes of renowned duly tested inclusive of all taxes related to central, state. and municipal, inclusive of excise duty. Inspection Charges, Transportation charges, transit insurances/ loading and unloading and stacking at site/store etc. complete (MP UADD SOR 2021, Volume – I, Item No – 11.2, Page No - 147)				
	170/200 mm DWC pipe (MP UADD SOR 2021, Volume – I, Item No – 11.2.5, Page No - 147)	Meter	11,720.00	343.00	40,19,960.00
	200/238 mm DWC pipe (MP UADD SOR 2021, Volume – I, Item No – 11.2.6, Page No - 147)	Meter	4,663.00	538.00	25,08,694.00
	250/295 mm DWC pipe (MP UADD SOR 2021, Volume – I, Item No – 11.2.7, Page No - 147)	Meter	-	882.00	-
	300/345 mm DWC Pipe (MP UADD SOR 2021, Volume – I, Item No – 11.2.8, Page No - 147)	Meter	-	1,260.00	-
	400/480 mm DWC Pipe	Meter	700.00	1,753.00	12,27,100.00
	Providing and Laying non-pressure (NP3) RCC socket & spigot pipes with rubber gasket joint including testing of joints. MP UADD SOR 2021, Volume – I, Item No – 12.3 (Page No - 155)				
	450mm Dia RCC NP3 (MP UADD SOR 2021, Volume – I, Item No – 12.3.7, Page No - 155)	Meter	175.00	2,287.00	4,00,225.00
	600mm Dia RCC NP4	Meter	270.00	-	-
	800mm Dia RCC NP4	Meter	-	-	-
	Filling by available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m. (MP UADD SOR 2021, Volume – I, Item No – 18.2.8, Page No - 228)	Cum	31,500.00	89.00	28,03,500.00

	Construction of Dry lean cement concrete Sub-base over a prepared sub-grade with coarse and fine aggregate conforming to IS: 383, the size of coarse aggregate not exceeding 26.5mm, aggregate cement ratio not to exceed 15:1, aggregate gradation after blending to be as per MORTH Specifications Table 600-1, cement content not to be less than 150 kg/cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with paver with electronic sensor/mechanical paver, compacting with 8-10 tonnes vibratory roller, finishing and curing and as per relevant clauses of section- 601.	Cum	2,250.00	2,504.00	56,34,000.00
	Providing and laying Cement Concrete grade M-20 (Nominal mix 1:1.5:3) with 20 mm graded crushed stone aggregate, mixing shall be in mechanical mixer, laying with paver compacting by use of pin, plate / screed vibrators including form work by strong steel girders fixed by spikes, separation membrane 125 micron thick, i/c cutting of joints @ 4 to 5 m interval & filling it with hot applied bituminous sealant (without dowel bars). (max. thickness 20cm)g	Cum	4,150.00	5,029.00	2,08,70,350.00
	Construction of plain cement concrete pavement in M-30 grade concrete over a prepared sub base with 43 or higher grade cement, coarse and fine aggregate conforming to IS:383 maximum size of coarse aggregate not exceeding 25 mm, mixed in a batching and mixing plant as per approved mix design, transported to site, laid with a fixed form or slip form paver with spreading the concrete by shovels, rakes compacted using needle, screed and plate vibrator and finished in a continuous operation including provision of contraction, expansion, and longitudinal joints, joint filler, separation membrane, scalant primer, joint sealant, debonding strip, placing of dowel bar, tie rod admixtures as approved, curing compound, finishing to lines and grades as per approved drawings as per IRC-15 2011 and as per relevant clauses of section-602 of specifications complete	Cum	910.00	5,192.00	47,24,720.00
	Construction of granular sub-base by providing Coarse graded material (CBR>30), spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method at OMC and compacting with vibratory roller of 80-100 KN Static weight to achieve the desired density, complete in all respect as per per relevant clauses of section-400 (MP UADD SOR 2021, Volume – III, Item No –4.1, Page No - 29)	Cum	3,750.00	689.00	25,83,750.00
	Transportation rate of different other material in comparison with 20mm metal.				
	Total Qty excavated stuff to be transported				
	For Lead up to 5 km	Cum	38,000.00	148.81	56,54,780.00

	Providing, fixing and constructing of pre-cast RCC M-30 grade circular manholes with internal dia. 900 mm and 1055 mm depth, conical piece, wall thickness 125 mm, and jointing of circular rings of required height as per depth of manhole below conical piece and having steel reinforcement in all pieces of manhole including cast-in-situ PCC M-10 grade (1:3:6) foundation, PCC M-10 grade benching and channel portion complete with curing, compaction and formwork, supplying and fixing of plastic encapsulated CI / MS footsteps, supply & fixing of heavy duty (HD-20) SFRC cover and frame as per IS 12592 fixed in Cement concrete 1:2:4 (nominal mix) with stone aggregate 20mm nominal size including centering and shuttering , steel reinforcement etc. complete in all respect including testing for water tightness, as per specification and the direction of the Engineer, Depth of manhole shall be considered as the vertical distance from top of the manhole cover to the outgoing invert of main drain channel (as per Drawing No. - 15A,B,C,D,) {Note:- Excavation as per actual shall be paid separately} (MP UADD SOR 2021, Volume – I, Item No – 17.13, Page No - 216)	No	125.00	11,954.00	14,94,250.00
	Extra for increasing depth of manhole mentioned at Item No. 17.4 above 900mm and up to 1650mm. (only excavation as per actual shall be paid separately (MP UADD SOR 2021, Volume – I, Item No – 17.4.1, Page No - 211)	Meter	45.00	4,524.00	2,03,580.00
	Providing, fixing and constructing of pre-cast RCCM-30 grade circular manholes with internal dia. 1200 mm and 1255 mm depth, conical piece, wall thickness 125 mm, and jointing of circular rings of required height as per depth of manhole below conical piece and having steel reinforcement in all pieces of manhole including cast-in-situ PCC M-10 grade (1:3:6) foundation, PCCM-10 grade benching and channel portion complete with curing, compaction and form work, supplying and fixing of plastic encapsulated CI/MS footsteps, ,supply & fixing of heavy duty(HD-20) SFRC cover and frame as per IS 12592 fixed in Cement concrete 1 : 2 : 4 (nominal mix) with stone aggregate 20mm nominal size including centering and shuttering , steel reinforcement etc. complete in all respect including testing for water tightness, asper specification and the direction of the Engineer, Depth of manhole shall be considered as the vertical distance from top of the manhole cover to the outgoing invert of main drain channel (as per Drawing No. - 15E,F,G,H) {Note:- Excavation as per actual shall be paid separately} (MP UADD SOR 2021, Volume – I, Item No – 17.14, Page No - 217)	No	120.00	17,986.00	21,58,320.00
	Extra for increasing depth of manhole beyond 1255 mm and upto1554 mm with extension piece of internal Dia 1200 mm as per drawing and direction of Engineer. (Excavation as per actual shall be paid separately) (MP UADD SOR 2021, Volume – I, Item No – 17.14.1, Page No - 217)	Meter	35.00	8,965.00	3,13,775.00

	Providing, fixing and constructing of pre-cast RCC M-30 grade circular manholes with internal dia. 1500mm and 1555mm depth, conical piece, wall thickness 125mm, and jointing of circular rings of required height as per depth of manhole below conical piece and having steel reinforcement in all pieces of manhole including cast-in-situ PCC M-10 grade (1:3:6) foundation, PCC M-10 grade benching and channel portion complete with curing, compaction and form work, supplying and fixing of plastic encapsulated CI/MS footsteps, supply & fixing of heavy duty (HD-20) SFRC cover and frame as per IS 12592 fixed in Cement concrete 1:2:4 (nominal mix) with stone aggregate 20mm nominal size including centering and shuttering, steel reinforcement etc. complete in all respect including testing for water tightness, as per specification and the direction of the Engineer, Depth of manhole shall be considered as the vertical distance from top of the manhole cover to the outgoing invert of main drain channel (as per Drawing No. 151,J,K,L) {Note:- Excavation as per actual shall be paid separately} (MP UADD SOR 2021, Volume – I, Item No – 17.15, Page No - 217)	No	47.50	23,890.00	11,34,775.00
	Extra for increasing depth of manhole beyond 1555mm and upto 6000mm with extension piece of internal dia 1500mm as per drawing and direction of Engineer. (Excavation as per actual shall be paid separately) (MP UADD SOR 2021, Volume – I, Item No – 17.15.1, Page No - 217)	Meter	13.00	11,434.00	1,48,642.00
	Man hole for property connection (House connection) in narrow lanes. (MP UADD SOR 2021, Volume – I, Item No – 17.2.6, Page No - 210)				-
	Man hole with above specifications having inside size 600x450 mm and 900 mm deep including SFRC rectangular ManholeCover and frame (medium Duty) 600 mm x 450 mm complete. (MP UADD SOR 2021, Volume – I, Item No – 17.2.6.2, Page No - 210)	No	2,344.00	5,854.00	1,37,21,776.00
	Manhole with above specifications having inside size 90 x 80 cm and 60 cm deep including C.I.cover with frame (light duty) 450x600 mm clear opening as per IS : 1726 : 1991. (MP UADD SOR 2021, Volume – I, Item No – 17.2.2, Page No - 209)	No	250.00	9,563.00	23,90,750.00
	Providing, laying and jointing following P.V.C. - U pipes with solvent cement joint for Non-pressure gravity drain and sewer applications including testing of joints, cost of jointing materials etc. complete in all respect. (MP UADD SOR 2021, Volume – I, Item No – 11.1, Page No - 147)				
	110 mm dia (MP UADD SOR 2021, Volume – I, Item No – 11.1.1, Page No - 147)	Meter	15,500.00	214.00	33,17,000.00
	Providing and laying in position following PVC bends suitable for 6, 8 and 10 Kg/Sq. cm. pressure pipes. (MP UADD SOR 2021, Volume – I, Item No – 5.5, Page No - 82)				

	110 mm dia - 6 kg (MP UADD SOR 2021, Volume – I, Item No – 5.5.2, Page No - 82)	Each	21,222.00	202.00	42,86,844.00
	Providing and laying in position following PVC Tees, suitable for 6, 8 and 10 Kg/Sqcm. Pressure pipes. (MP UADD SOR 2021, Volume – I, Item No – 5.6, Page No - 82)				
	100 mm dia - 6kg (MP UADD SOR 2021, Volume – I, Item No – 5.6.2, Page No - 82)	Each	14,140.00	137.00	19,37,180.00
	Providing and laying in position PVC coupler suitable for 6, 8 and 10 Kg/Sq. cm. Pressure pipes (MP UADD SOR 2021, Volume – I, Item No – 5.9, Page No - 83)				
	110 mm dia - 6 kg (MP UADD SOR 2021, Volume – I, Item No – 5.9.2, Page No - 83)	Each	3,550.00	80.00	2,84,000.00
	Providing and laying in position of following PVC Reducers suitable for 6, 8 and 10 Kg/Sq cm. Pressure pipes. (MP UADD SOR 2021, Volume – I, Item No – 5.10, Page No - 83)				-
	110x90 mm dia. (MP UADD SOR 2021, Volume – I, Item No – 5.10.1, Page No - 83)	Each	3,550.00	57.00	2,02,350.00
	140x110 mm dia (MP UADD SOR 2021, Volume – I, Item No – 5.10.4, Page No - 83)	Each	3,550.00	75.00	2,66,250.00
	P - Trap	Each	3,550.00	45.00	1,59,750.00
	Installation of Pipe by Manual Pipe Jacking method including making of entry and exit pits upto 3 mtr depth, all related civil works like excavation, shoring/strutting, etc., manual shielded excavation, lowering of pipe segments in the jacking pit, laying and jointing of pipeline through jacking process from the jacking pit after project completion as per the instructions of the Engineer-in-Charge all complete except the cost of the pipe. (upto 60 meter installation length) (MP UADD SOR 2024, Item No – 20, Page No - 6)				-
	In hard soil (MP UADD SOR 2024, Item No – 20.40.3.1, Page No - 6)	Meter	-	23,000.00	-
	In hard rock (MP UADD SOR 2024, Item No – 20.40.3.2, Page No - 6	Meter	-	78,000.00	-
Total					**9,56,49,573.00**

Note:

1.0 Under this agreement, it is clarified that any payment for the work of feeder/ distribution/ road reconstruction/ house service connection/ HT feeder for any executed quantity shall only be made on the item rates given against each item of the work, after these given rates are adjusted by a factor explained in point no. 2 below. Accordingly, the total lumpsum accepted tender cost shall be adjusted as per actual work done under these items.
Thus, any increase or decrease in the work described above (pipe line, road reconstruction and house connection work) shall be paid or deducted from the total agreement cost of the work on the basis of the unit rates of actual quantities of these items executed.

2.0 The final rates of above items shall be the rates plus or minus the overall percentage of the approved lumpsum tender cost. If the accepted cost of this tender is "x" than all the above mentioned rates shall be adjusted by a factor of "x" / (__) and the increase/reduction shall be done on the basis of such adjusted rates.

3.0 As per clause 21 of GCC if any order for change of scope is issued the contractor shall be liable to execute quantities more than the above quantities, if required as per site conditions and payment for such excess work shall also be made on the adjusted rates mentioned in point no. 2 above. Such excess quantities shall however remain within the 10% of the agreement cost of the total work.

4.0 Bidder shall be responsible for road reconstruction of pipe trenches till one rainy season. In case of any repair to be made because of bad quality of construction the same shall be made good without any extra cost. .

5.0 The scope of work includes shifting of electric poles, crossing of Railway/Highway as may be required for laying of pipeline. No extra payments shall be made to the contractor for doing the same.

6.0 For Manhole Item contractor can use Precast Manholes with prior approval from Engineer-In-Charge. However, payment for such item will be restricted to rates provided in BOQ for similar items.

SECTION 5

AGREEMENT FORM
AGREEMENT

This agreement, made on the day of _____between (name and address of Employer) (hereinafter called "the Employer) and _____(name and address of contractor) hereinafter called "the Contractor" of the other part.

Whereas the Employer is desirous that the Contractor execute _____(name and identification number of Contract) (hereinafter called "the Works") and the Employer has accepted the Bid by the Contractor for the execution and completion of such Works and the remedying of any defects therein, at a cost of Rs. _____

NOW THIS AGREEMENT WITNESSED as follows:

1. In this Agreement, words and expression shall have the same meanings as are respectively assigned to them in the conditions of contract hereinafter referred' to and they shall be deemed to form and be read and construed as part of this Agreement.
2. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all aspects with the provisions of the contract.
3. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying the defects wherein Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.
4. The following documents shall be deemed to form and be ready and construed as part of this Agreement viz.
    i. Letter of Acceptance
    ii. Contractor's Technical and Financial Bid
    iii. Condition of Contract: General and Special
    iv. Contract Data
    v. Bid Data
    vi. Drawings
    vii. Bill of Quantities and _
    viii. Any other documents listed in the Contract Data as forming part of the Contract.

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

The Common Seal of affixed in the presence of:

Signed, Sealed and Delivered by the said _____ in the presence of:

Binding Signature of Employer _____

Binding Signature of Contractor_____

Section-6

ANNEXURE :X

BILLING BREAK-UP

Sewerage Network

1 75% shall be payable after laying of pipeline as per actual work done on unit rate basis.
2 10% shall be payable on Successful Testing of the pipeline.
3 5% shall be payable on Successful connection of HSC on the laid pipeline
4 5% shall be payable after completion of the whole work and trial run for a period of 1 month.

Sewer Manholes and House Service Chambers

1 75% shall be payable on civil construction as per actual work done on unit rate basis.
2 10% shall be payable after successful Testing of the connection.
3 5% shall be payable on Successful connection of HSC on the laid pipeline
4 5% shall be payable after completion of the whole work and trial run for a period of 1 month

House Service Connections

1 Payment for house service connection work shall be made as per actual work done on unit rate basis.

Excavation, pipe bedding, refilling, Road restoration work for Sewer Network

1 Payment for Excavation, pipe bedding, refilling, road restoration work shall be made as per actual work done on unit rate basis.

As Built drawings (5% of total sanctioned cost)

1 Payment will be made after approval of as-built drawings

Annexure 'E'
Specifications for Sewage Related Jobs

Table of Contents

Chapter 1

General:

The specifications for this project & various components thereof shall be as follows:

1.0 The specifications for various material to be used for the project shall confirm to BIS/IS/ISO standards with uptodate amendments as given below:

S. No.	BIS/BS/ISO CODE No. (YEAR)	Title
1	IS 5 (2007)	Colour for Ready Mixed Paints and Enamels
2	IS 210 (2009)	Grey Iron Castings
3	IS 269 (1989)	Specification for Ordinary Portland Cement (33 Grade)
4	IS 383 (1970)	Specification for Coarse and Fine Aggregates From Natural Sources For Concrete
5	IS 432-1 (1982)	Mild Steel and Medium Tensile steel bars and hard steel wire for concrete Reinforcement part-01 Mild Steel And Medium Tensile Steel Bars
6	IS 432-2 (1982)	Mild Steel and Medium Tanium Tensile Steel Bars and Hard Drawn Steel Wire for Concrete Reinforcement part-02 Hard Drawn Steel Wire
7	IS 438 (2006)	Aluminium power for explosive and pyrotechnic compositions
8	IS 455 (1989)	Portland Slag Cement
9	IS 456 (2000)	Plain and Reinforced Concrete
10	IS 457 (1957)	Code Of Practice For General Construction Of Plain And Reinforced Concrete For Dams and Other Massive Structure
11	IS 458 (2003)	Precast Concrete Pipes (With And Without Rein For Cement
12	IS 516 (1959)	Method Of Tests For Strength OF Concrete
13	IS 779 (1994)	Water Meters
14	IS 783 (1985)	Code of Practice for Laying of Concrete Pipes
15	IS 875-1 (1987)	Code of Practice for Design loads for Buildings and Structures
16	IS 875-2 (1987)	Code of Practice for Design loads for Buildings and Structures Imposed Loads
17	IS 875-3 (1987)	Code of Practise for Design Loads for building and Structures Wind Loads
18	IS 875-4 (1987)	Code of Practice for Design Loads
19	IS 875-5 (1987)	Code of Practice for Design Loads
20	IS 1199 (1959)	Methods of sampling and analysis of concrete
21	IS 1239 Part 1 (2004)	Steel Tubes, Tubulars And other Wrought Steel Fitting
22	IS 1239 Part 2 (2011)	Steel Tubes, Tubulars And other Steel Fittings
23	IS 1343 (1980)	Code of practice for Pre-stressed Concrete
24	IS 1489-1 (1991)	specification for Portland -Pozzolana Cement
25	IS 1489-2 (1991)	specification for Portland Pozzolana Cement, Part 2 (Calcined Clay Based)
26	IS 1538 (1993)	Cast iron fittings for pressure pipes for water, Gas and sewage
27	IS 1786 (2008)	High strength deformed steel bars and wires for concrete
28	IS 1834 (1984)	Hot applied sealing compounds for joints in Concrete specification
29	IS 1834 (1984)	Hot applied sealing compounds for joints in Concrete specification
30	IS 1865 (1991)	Iron Castings with Spheroidal or nodular Graphite
31	IS 1893-1 (2002)	Criteria for Earthquake Resistant Design of Structures
32	IS 1893-4 (2005)	Criteria for Earthquake Resistant Design of Structures
33	IS 2386-1 (1963)	Methods of test for aggregates for concrete
34	IS 2386-2 (1963)	Methods of test for aggregates for concrete
35	IS 2386-3 (1963)	Methods of test for aggregates for concrete
36	IS 2386-4 (1963)	Methods of test for aggregates for concrete Part 4 (Mechanical properties)
37	IS 2530 (1963)	Method Of Tests For Polyethylene moulding materials and polyethylene compounds
38	IS 2720-1 (1983)	Method Of Tests For Soils, Part 1(Preparation of Dry soil samples for various test)
39	IS 2720-7 (1980)	Method Of Tests For Soils, Part 7 (Determination of Water Content-Dry

		density relation using light compaction)
40	IS 2720-8 (1983)	Method Of Tests For Soils, Part 8 (Determination of Water Content-Dry density relation using heavy compaction)
41	IS 2720-15 (1965)	Method Of Tests For Soils, Part XV (Determination of Consolidation Properties)
42	IS 3370-1 (2009)	Code Of Practice Concrete Structure For The Storage of Liquids, Part 1 (General Requirements)
43	IS 3370-2 (2009)	Code Of Practice Concrete Structure For The Storage of Liquids, Part 2 (Reinforced Concrete Structures)
44	IS 3370-3 (1967)	Code Of Practice Concrete Structure For The Storage of Liquids, Part 3 (Pre stressed Concrete Structures)
45	IS 3370-4 (1967)	Code Of Practice Concrete Structure For The Storage of Liquids, Part 4 (design tables)
46	IS 3389 (2001)	Steel pipe for water and sewerage
47	IS 3597 (1998)	Concrete pipe (methods of test)
48	IS 3812-1 (2003)	Specification for polarized fuel Ash, part 1 for use as pozzolana in cement (Cement Mortar and Concrete)
49	IS 3812-2 (2033)	specification for pulverized Fuel Ash Part 2 For use as Admixture in Cement Mortar and Concrete)
50	IS 3913 (2005)	Suspended sediment load samplers
51	IS 3917 (2003)	Scoop Type Bed Material Samplers
52	ISO 4064 -1 (2014) Fourth Edition	Water meters for cold potable water and hot water Part -1: Matrological and technical requirements
53	ISO 4064 -2 (2014) Fourth Edition	Water meters for cold potable water and hot water Part -2:Test methods
54	ISO 4064 -3 (2014) Fourth Edition	Water meters for cold potable water and hot water Part -3:Test Report format
55	ISO 4064 -1 (2005) Third Edition	Measurement of water flow in fully charged closed conduits - Meters for cod potable water and hot water Part :1 Specifications
56	ISO 4064 -2 (2014) Third Edition	Measurement of water flow in fully charged closed conduits - Meters for cod potable water and hot water Part 2 : Installation requirements
57	ISO 4064 -3 (2014) Third Edition	Measurement of water flow in fully charged closed conduits - Meters for cod potable water and hot water Part 3: Test methods and equipment
58	ISO 4422-4	Pipes and fittings made of un plasticized polyvinyl chloride (PVC-U) for Water Supply Part -4 Valves and ancillary equipment
59	BS ISO 4427- Part 1 (2007)	General – Plastic Piping Systems for Polyethylene (PE) Pipes and Fittings for Water Supply
60	ISO 4427- Part 2 (2007)	Pipes - Plastic Piping Systems for Polyethylene (PE) Pipes and Fittings for Water Supply
61	ISO 4427- Part 3 (2007)	Fittings - Plastic Piping Systems for Polyethylene (PE) Pipes and Fittings for Water Supply
62	ISO 4427- Part 5 (2007)	Fitness for the purpose of the system - Plastic Piping Systems for Polyethylene (PE) Pipes and Fittings for Water Supply
63	IS 4890 (1968)	Methods for Measurement of Suspended Sediment in open channels
64	IS 4905 (1968)	Methods for random sampling
65	IS 4926 (2003)	Code of Practise Ready Mixed Concrete
66	IS 4984 (1995)	High Density Polyethylene Pipe For Water Supply
67	IS 5120 (1977)	Technical Requirements for roto dynamic Special Purpose
68	IS 5330 (1984)	Criteria for design of Anchor Block for penstock with joints (First Revision)
69	IS 5382 (1985)	Rubber Sealing Rings for Gas Mains, Water Mains and Sewers
70	IS 5477-1 (1999)	Fixing the capacities of Reservoirs methods ,part 1
71	IS 5477-2 (1994)	Fixing the capacities of Reservoirs methods ,part 2
72	IS 5477-3 (2002)	Methods for fixing the capacities of Reservoirs methods ,part 3
73	IS 5477-4 (1971)	Methods for fixing the capacities of Reservoirs methods ,part 4
74	IS 5600 (2002)	Sewage and Drainage

75	IS 6295 (1986)	code of Practice for water supply and drainage in high altitudes and /or sub –zero temperature regions
76	IS 6518 (1992)	Code of practice for control of Sediment in reservoirs
77	IS 7328 (1992)	High Density Polyethylene Materials for Moulding and Extrusion
78	IS 7357 (1974)	Code of Practice for Structural design of surge tanks
79	IS 7634-1 (1975)	Code of Practise for plastic pipes work for potable water supplies
80	IS 7634-2 (2012)	Plastics Pipe Selection Handling Storage and Installation for Potable Water supplied
81	IS 7634-3 (2003)	Plastics Pipe Selection Handling Storage and Installation for Potable Water supplies
82	IS 8008-1 (2003)	Code of practice for control of sediment in reservoirs
83	IS 8062-1 (1976)	Code of Practice for Cathodic protection of steel Structure :General principles
84	IS 8062-2 (1976)	Code of Practice for Cathodic protection of steel Structure : Underground pipelines
85	IS 8062-3 (1977)	Code of Practice for Cathodic protection of steel Structure
86	IS 8062-4 (1979)	Code of Practice for Cathodic protection of steel Structure
87	IS 8112 (1989)	Specification for 43 grade ordinary Portland cement
88	IS 8329 (2000)	Centrifugally cast ductile iron Pressure Pipes for water, Gas and Sewage
89	IS 9137 (1978)	Code for Acceptance test for centrifugal, maxed flow and axial pumps class c
90	IS 9523 (2000)	Ductile Iron Fittings for Pressure Pipes for water, Gas and Sewage
91	IS 9668 (1990)	Code of practice for Provision and Maintenance of water supplies and fire fighting
92	IS 9845 (1998)	Determination of overall Migration of Constituents of Plastics Materials and articles intended to come in contract with foodstuffs
93	IS 10141 (2001)	Positive List of constituents of polyethylene in Contact with Foodstuffs, Pharmaceuticals and Drinking Water
94	IS 10146 (1982)	Polyethylene for its safe use in Contact with Foodstuffs Pharmaceuticals and Drinking Water
95	IS 10221 (2008)	Casting and wrapping of underground mild steel pipelines
96	IS 11433-1 (1985)	Specification for one part gun- grade polysulphide based joints sealants
97	IS 11433-2 (1986)	Speciation for one part gun- grade polysulphide based joints sealants
98	IS 11682 (1985)	Criteria for Design for Overhead Water Tanks
99	IS 11906 (1986)	Recommendations for cement mortar lining for cast iron mild steel and ductile iron pipes and fittings for Transportation of water
100	EN 12201-2 (2011)	Plastics piping systems for Water Supply and for Drainage and Sewerage under pressure- Polyethylene (PE)-Part 2 : Pipes
101	BS EN 12201 -3:2003	Plastics piping systems for Water Supply Polyethylene (PE) Part 3: Fittings
102	IS 12330 (1988)	Specification for sulphate resisting Portland
103	IS 12235-1 TO 19 (2004)	Thermoplastics Pipes and Fittings
104	IS 12269 (1987)	53 Grade Ordinary Portland cement
105	IS 12288 (1987)	Code of Practise for use and Laying of Ductile iron Pipes
106	IS 12592 (2002)	Precast Concrete Manhole Cover And Frame
107	IS 13920:1993	Ductile detailing of reinforcement concrete structures subjected to seismic forces
108	IS 14333 (1996)	High Density Polyethylene Pipe For Sewerage
109	IS 14846 (2000)	Sluice Valve For Works Purposes
110	IS 15388 (2003)	Specifications for Silica Fume
111	IS 16098-1 (2013)	Structured -Wall Plastics Pipe Systems For pressure drainage and sewerage
112	IS 16098-2 (2013)	Structured -Wall Plastics Pipe Systems For Non-Drainage And sewerage
113	IS 16098 PART 2 (2013)	Structured -Wall Plastics Pipe Systems For Non-Drainage And sewerage

NOTE:- Any other BIS/IS/ISO standards as may be required will also be applicable. Quality assurance program of the manufacturer shall have to be enclosed with the detailed design and drawings.

2.0 The other part of the specifications for various components of the project shall be as per provisions of clauses and sub clauses of chapters of Manual on Sewerage and Sewage Treatment (Second Edition), CPHEEO Ministry of Urban Development Govt. of India

Design of Sewer	Chapter 3
Sewer Appurtenances	Chapter 4
Construction of Sewers	Chapter 7
Maintenance of Sewerage System	Chapter 8
Sewage and storm water pumping stations	Chapter 9
Basic Design Considerations	Chapter 10
Pre-treatment Screening and Grit Removal	Chapter 11
Sedimentation	Chapter 12
Aerobic Suspended Growth system	Chapter 13
Aerobic attached growth system	Chapter 14
Sludge Thickening, Dewatering, Digestion and Disposal	Chapter 17
Sludge Pumping	Chapter 18
Tertiary treatment of sewage for reuse	Chapter 19
Effluent disposal and utilisation	Chapter 20
Treatment plant operation and maintenance	Chapter 23
Plant Control Laboratory	Chapter 24

Disclaimer : Any specifications not covered above shall be as per best Engineering practice or as directed by Engineer In Charge. In the event of any disparity between the written specifications and BIS/IS/ISO provisions, the provisions in BIS/IS/ISO shall prevail.

The item wise specifications to be followed by the Contractor are given in the subsequent Chapters.

Providing, Laying and Jointing of Pipelines

1.0 Laying of Pipe Line

1.1. Excavation for Pipe Line Trenches/ Horizontal drilling

The pipe shall be laid by horizontal drilling. However where it is not possible open excavation will have to be carried out. Tendered rate is supposed to cover cost of all such means i.e, either drilling or excavation (soil, rock) by manual, mechanical or blasting.

1.2. Site Clearance

The pipe line alignment shall be cleared of all bushes, shrubs, roots, grass, weeds and if required trees, coming in the alignment of pipe line in the trench width portion. The rates for excavation shall cover all such site clearance work and no extra payment will be allowed on this account.

1.3. Alignment marking

After the work site is cleared as above, pipe line alignment with required trench width shall be marked on the ground with apex points, curves etc, as shown on the drawings or as directed by the Engineer-in-Charge in charge for the stretch where the work is to be started. The contractor shall provide all labour, survey instruments, and materials such as strings, pegs, nails, bamboos, stones, mortar, concrete etc. required for setting out and establishment of bench marks. The contractor shall be responsible for the maintenance of bench marks and other marks and stakes as long as they are required for the work in the opinion of the Engineer-in-Charge.

1.4. Working survey

Working survey of the pipeline alignment shall be carried out by the contractor before start of the excavation work. The contractor shall provide all the instruments such as levelling instruments, steel tape, ranging rods, strings, pegs etc. for carrying out the survey. Based on the working survey, the alignments, L-section (depth of laying), grade, and location of manholes and inspection chambers shall be finalized and got approved from the Engineer-in-charge.

1.5. Use of Machinery:

All excavations shall be carried out by Mechanical Equipment/Machinery unless, in the opinion of the Engineer-in-Charge, the work involved and time schedule permit manual excavation.

1.6 Trench Width and Depth:

All buried pipelines shall be minimum 1 metre +/- 0.2 metre below ground level to maintain proper grade unless other depths are approved by the engineer in charge. The trench width for respective pipe diameters permissible as required under respective IS code for Pipeline laying and installation.

The trench width shall be constant throughout the trench depth, which will provide a clearance of about 0.30 m on either side of the pipe line.

The contractor may, for the facility of work or similar other reasons, excavate and also backfill later, if so approved by the Engineer-in-Charges, at his own cost, outside the allowable trench width specified above. Should any excavation be taken below the specified trench bottom, contractor shall fill it up to required level, at his own cost, with the same material available at the trench bottom including watering and compaction.

The excavation shall be taken down to such depths as shown in drawings. Excavation for extra depth equal to the thickness of proposed pipe bedding shall be done below pipe soffit level for providing bedding below pipe line wherever bedding is required. The trench bottom shall be excavated to proper grade as shown on drawings. The contractor shall provide site rails and levelling instruments required for checking the grade during excavation, bottom bedding and pipe laying Projections in rock excavation shall be removed by chipping.

The contractor shall carryout extra excavation at the pipeline joints to be welded in the trench, as required (minimum 0.6 m deep and 0.9 m lengthwise, all around the pipe), for facilitating proper welding of the bottom joint from outside. The work of trench excavation should be commensurate with laying and jointing of the pipe line. 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 minimum cover on pipe is to be maintained 1 metre+/- 0.2 metre. However the cover on pipe may be modified to suitgradients and site conditions as per direction of Engineer-in-Charge.

1.7 Barricading and Guarding:

To protect persons from injury and to avoid damage to property, adequate barricades, construction signs, red lanterns and guards as required shall be placed and maintained

During the progress of work, till filling of the trenches after pipes are laid and jointed. The lighting, barricading, guarding of the trenches and the maintenance of watchman shall be done by the contractor at his cost.

All precautions shall be taken during excavation and laying operation to guard against possible damage to any existing structures, underground cables, pipe lines of water, gas, sewage etc. Any damage done to such properties will have to be repaired / rectified by the contractor at his cost. 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.

1.8. Re-use of Surface Material

All surface materials, which in the opinion of the Engineer-in-Charge, suitable for reuse in restoring the surface shall be kept separate from the general excavation material, as directed by the Engineer-in-Charge.

1.9. Stacking of Excavated Material

All excavated materials shall be stacked in such a manner that it does not endanger the work and avoids obstructing foot paths and roads. Hydrants under pressure, surface boxes, fire and other utility controls shall be left unobstructed and accessible until the work is completed. Gutters shall be kept clean or other necessary provisions made for street drainage and natural water courses shall not be obstructed. All the excavated material shall be the property of the Employer and shall be stacked or disposed of as directed by the Engineer-in-Charge.

1.10. Maintenance of Traffic

The work of excavation and pipe laying shall be carried in such a manner that it causes the least interruption to traffic and the road / street may be closed in such a manner that it causes the least interruption to the traffic. Where it is necessary for traffic to cross open trenches, suitable bridging arrangement shall be provided. When the street is closed for traffic, suitable signs indicating that street is closed shall be placed and necessary detour signs for proper maintenance of traffic shall be provided.

1.11. Structure Protection

Temporary support, adequate protection and maintenance of all underground and surface structures, drains, sewers and other obstructions encountered in the progress of work shall be furnished under the direction of the Engineer-in-Charge. The structures which have been disturbed shall be restored upon completion of work.

1.12. Protection of Property

Trees, shrubbery fences, poles and all other property shall be protected unless their removal is allowed by the Engineer-in-Charge. When it is necessary to cut roots and tree branches, such cutting shall be done under the supervision and direction of the Engineer-in-Charge.

1.13. Avoidance of Existing Services

As far as possible, the pipeline shall be laid below existing services, such as water and gas pipes, cables, cable ducts and drains but not below sewers. Excavation of the trenches shall be carried out to the required depth accordingly. If it is unavoidable, the pipeline shall be suitably protected and lesser trench depth in such cases can be allowed. A minimum clearance of 150 mm shall be provided between the pipeline and such other services. When thrust or auger boring is proposed for laying pipeline across roads, railway or other utilities, larger clearance as required shall be provided. Adequate arrangements shall be made to protect and support the other services during excavation and pipe laying operations. The work shall be so carried out as not to obstruct access to the other services for inspection, repair and replacement. When such utilities are met with during excavation, the authority concerned shall be intimated and arrangements made to support the utilities in consultation with them.

1.14. Bailing out of Water/Open and Close Timbering

1.14.1 Bailing out of Water

During the excavation if subsoil water is met with, contractor shall provide necessary equipment and labour for dewatering the trenches. If pumping out subsoil water is found necessary, contractor shall provide sufficient number of pumps for the same. The tendered rate shall cover all costs for bailing out of water including hire charges of pumps, cost of diesel and labour etc. and hence, no extra payment shall be allowed.

1.14.2 Open and Close Timbering

Contractor shall provide necessary materials labour& equipment's for open timbering/close timbering/ steel or any other protection work required to be done during excavation. In case of open areas, shafts, wells, cesspits, manhole including strutting, shoring and packing cavities(wherever required). The tender rate shall cover all cost of materials, labour and equipments required and hence no extra payment shall be allowed even timbering material is left permanent at site.

1.15. Disposal of loose boulders etc.

All loose boulders, Semidetached rocks, (along with earthy stuff which might move therewith), not directly in the excavation but close to the area to be excavated, as to be liable, in the opinion of the Engineer-in-Charge, to fall or otherwise endanger the workman equipment, or the work etc. shall be stripped off and removed away from the area of the excavation. The method used shall be such as not to shatter or render unstable or unsafe the portion which was originally sound and safe. The tendered rate is supposed to cover this job and no extra payment will be allowed on this account.

1.16. Disposal of Excavated Material

All the excavated surplus material shall be disposed of on low lying Government land or as directed by the Engineer-in-charge.

1.17. Moorum / Sand Bedding below Pipeline

In case of hard rock and black cotton soil, before lowering of the pipes in trenches, a layer of selected moorum, available from excavated material under the same contract shall be provided below the pipe line to act as bedding. The bedding shall be compacted properly including required watering and the thickness of well compacted layer shall not be less than 150 mm. The bedding shall be provided for full trench width with proper grade as shown on drawings.

2.0 Refilling the trenches

2.1. Use of selected excavated material

Filling of excavated material in trenches shall be commenced as soon as the joints of pipes and specials have been tested and passed. The backfilling material shall be properly consolidated by watering and ramming, taking due care that no damage is caused to the pipes and the outer coating.

Selected surplus spoils from excavated material shall be used as backfill. Fill material shall be free from clods, salts, sulphate, organic or other foreign material. All clods of earth shall be broken or removed. Where excavated material is mostly rock, the boulders shall be broken into pieces not larger than 150 mm size, mixed with properly graded fine material consisting of moorum or earth to fill up the voids and the mixture used for filling.

2.2. Filling zones

For the purpose of back-filling, the depth of the trench shall be considered as divided in to the following three zones from the bottom of the trench to its top:

Zone A: From the bottom of the pipe (top of bedding) to the level of the centre line of the pipe	Back-filling by hand with selected approved material available from excavation, placed in layers of 150 mm and compacted by tamping. The back-filling material shall be deposited in the trench for its full width on each side of the pipe, specials and appurtenances simultaneously. Special care shall be taken to avoid damage of the pipe and the coating or moving of the pipe.
Zone B: From the level of the centre line of the pipe to a level 300 mm above the top of the pipe	Back-filling and compaction shall be done by hand or approved mechanical methods in layers of 150 mm; special care shall be taken to avoid damage of the pipe and the coating or moving of the pipe.
Zone C:	Back-filling shall be done by mechanical methods in 150 mm.

2.3. All excavations shall be backfilled to the level of the original ground surfaces unless otherwise shown on the drawings or ordered by the Engineer-in-Charge, and in accordance with the requirements of the specification. The material used for backfill, the amount thereof, and the manner of depositing and compacting shall be subject to the approval of the Engineer-in-Charge, but the Contractor will be held responsible for any displacement of pipe or other structures, any damage to their surfaces, or any instability of pipes and structures caused by improper depositing of backfill materials.

The back filled layers shall be wetted and compacted to a density of not less than 90 percent of the maximum dry density at optimum moisture content of the surrounding material. Any deficiency in the quantity of material for backfilling the trenches shall be supplied by the Contractor at his expense.

The Contractor shall at his own expense make good any settlement of the trench backfill occurring after backfilling and until the expiry of the defects liability period.

On completion of pressure and leakage tests exposed joints shall be covered with approved selected backfill placed above the top of the pipe and joints in accordance with the requirements of the above specifications. The Contractor shall not use backfilling for disposal as refuse or unsuitable soil.

2.4. Fillings of the trench excavated in rock

In case of excavation of trenches in rock, the filling up to a level of 300 mm above the top of the pipe shall be done with fine materials, such as soft soil, moorum etc. The filling up of the level of the centre line of the pipe shall be done by hand compaction in layers not exceeding 150 mm, whereas the filing above the centre line of the pipe shall be done by hand compaction or mechanical means in layers not exceeding 150 mm. The filling from a level of 300 mm above the top of the pipe to the top of the trench shall be done by mechanical methods with broken rock filing of size not exceeding 150 mm mixed with fine material as available to fill up the voids.

2.5. Consolidation

The consolidation of the filled material shall be done to attain 95 % proctor density. The density of the filled and compacted material shall be tested regularly and record maintained accordingly.

3.0 Ductile Iron PIPES (Pipes shall be procured only from the Manufacturers.)

3.1Supply, laying and jointing of DI Pipesand fittings.

The ductile iron pipe to be supplied and laid shall be DI K-7/K-9 as per IS 8329-2000, fittings for the pipe shall conform to the provisions of IS 5382-1985, DI fittings confirming to IS 9523:1980 complete.

3.2 The laying of pipe shall be as per IS 12288:1987 with up to date amendments.

3.3 The manufacturer and their associates(if any) should have the facility to carry out the internal coating / lining and external coating / painting at factory for pipes and specials confirming to IS 11906:1986.

3.4 The DI pipe manufacturer should have valid BIS license from last 5 years (or valid BIS license from last 2 years with an experience of manufacturing and supplying at least 500 kms of various diameters of DI pipe to any State/Central Govt. / board/organization of repute in last 3 years) and the pipes should be manufactured conforming to IS 8329-2000 specification and further amendment to the code as on date and duty ISI marked.

3.5 The DI pipe manufacturer should have in-house facility for carry out the following test for size DN 80-DN1000:-

a) C -value determination arrangement

b) Type test for leak tightness as per ISO 2531:2009/BS EN 545/IS 8329:200.

3.6 DI pipe manufacturer should have the ISO 9001:2008 & ISO 2531:2009 certification for manufacture of DI pipe.

3.7 A certificate for having supplied DI pipe of size proposed in the project for quantity 1/3 of the TENDER requirement during last 3 years to any state/central Govt. department /board to be submitted by pipe manufacturer.

The manufacturer should be able to demonstrate the conformity of the product to the requirement by controlling the manufacturing process and by carrying out the various tests as specified in IS wherever possible, statistical sampling techniques should be used to control the process so that the product is produced within the specified limit. The successful bidder is required to submit the **Quality Assurance Program (QAP) of the manufacturer along with the documentary evidence of the production capacity, BIS & ISO Certification as mentioned above for obtaining the approval of Employer & Engineer-in-charge before production of pipes.**

3.8 **Each pipe or Fittings shall be marked with the standard mark, Lot/ Batch No., Period of Manufacturing and as per the employer/purchasers requirement.**

4.0 Supply, laying and jointing of Double Wall (Non-Smooth External Surface) Corrugated (DWC) wall & Smooth Internal wall) Polyethylene Class SN 8 /High Density Poly Ethylene (HDPE) Pipe PN 2.5 PE 100 for Piping System for Non-Pressure underground Sewerage & Drainage Applications.

4.1 Scope

The specification for manufacturing, supplying, transportation, handling, stacking, installation, jointing, and testing of Piping System for non-pressure underground Sewerage & Drainage Applications shall be as below,

4.2 Applicable Codes

The manufacturing, testing at factory, supplying, transportation, handling, stacking, installation, jointing, and testing at sites shall comply with all currently applicable National statutes, standards & codes. If requirements of these specifications are at variance with any other standards, this particular document shall be governed by the proceedings of:

IS16098 (Part-1): 2013	Structured Wall Plastics piping Systems for non-pressure drainage and sewerage-Specification Part 1: Pipes and fittings with smooth external surface, Type A
IS16098(Part-2): 2013	Structured Wall Plastics piping Systems for non-pressure drainage and sewerage-Specification Part 2: Pipes and fittings with non-smooth external surface, Type B
ISO 9001: 2008	Quality Management Systems

The testing, supplying, laying, jointing and testing at work sites of DWC/HDPE pipes shall be as per standards and Codes. If requirements of this Specification conflict with the requirements of the standards / Codes, this Specification shall govern.

Code No.	Title/Specification
IS 14333	High Density Polyethylene Pipes for sewerage
IS 2530	Methods of test for polyethylene moulding materials and polyethylene compounds DI K7 Pipes, Joints and Fittings for use for Potable Water Supply
IS 5382	Rubber sealing rings for gas mains, water mains and sewers.
IS 4905	Methods for random sampling
IS 7328	High density polyethylene materials for moulding and extrusion
IS 7634	Laying & Jointing of Polyethylene (PE) Pipes

Other Indian standards which are integral part of above standard as normative references form a significant portion of this specification document.

4.3 Inspection

The Contractor shall be responsible for the performance tests at the Manufacturer's place in presence of the Engineer-in-charge or the authorized representative(s) of the client and/or by the authorized representative of PDMC, AMRUT.

The Pipe Manufacturer shall produce all necessary test certificates related to relevant Material Characteristics of PE Material in Granular Form for each lot of Pipes as specified in the IS code. At the time of inspection, before supply of the designated lot to the contractor, such certificates from the manufacturer, duly supported by the purchaser's invoices shall be made available to the employer with proper endorsement from the inspecting agency.

The employer reserves the right to inspect the Pipe Manufacturer's unit if required to evaluate the capacity/ capability/ Quality Assurance before extending their clearance to the contractor towards procurement of pipes.

The Employer reserves the right to test Pipe samples of Pipe & Fittings picked up at random from project site stack yard/storage for performance test at any Govt. authorized National Testing Laboratories or NABL Accredited laboratory.

4.4 Transportation

While loading the pipes onto the truck, care should be taken that the coupler- end should be arranged alternatively in the corresponding layers so as to avoid the damage to the coupler/ socket ends.

4.5 Handling

Following Recommendations shall be followed while handling the pipes:

- Adherence to National Safety requirements
- Pipes to be smoothly lowered to the ground
- Pipes should not be dragged against the ground to avoid the damages to the Coupler/pipes.
- 900mm and larger diameter pipes are carried with Slings at two points spaced approximately at 3 Meters apart.
- For smaller diameters (450 mm to 900 mm, both exclusive) one lift point shall besufficient& can be handled either manually or mechanically.
- For diameters smaller than or equal to450 mm, manual labour can be used.
- **Do not use a loading Boom or Fork Lift directly on or inside pipe.**

4.6 Pipe Storage at Site

- Stockpiling shall be done temporarily on a Flat Clear Area as per IS 16098 (Part- 2).
- For avoiding collapse of Stacks, use Wooden Posts or Blocks
- Stacking shall not be higher than 2.5 Meters
- While stacking, alternate the socket/coupler ends at each row of stacked pipes.

5.0 Lowering, Laying & jointing of Pipes

The width of a Sewer Trench depends on the soil condition, type of side protection needed and the working space required at the bottom of Trench for smooth installations. The Minimum Trench Width is specified as per Table below:

Indicative Trench Widths**	
Pipe Diameter (mm)	Trench Width (M)
75-200	0.6
250	0.7
300	0.8
400	0.9
600	1.2
800	1.3
1000	1.8

The pipe segment between two manholes shall be laid approximately in straight line without any vertical undulations (at prescribed Gradient) only in case of curve if found necessary. The piping system shall rest on the carefully prepared bedding portion of the Backfill Envelope as per IS-16098 (Part- 2) (Annexure – A) and at appropriate jointing locations the trenches shall be excavated deeper to accommodate the bulges of coupler-spigot joints. However, special care shall be ensured as mentioned below:-

- Excavation of trenches shall be carried out in accordance with the approved drawing & specifications and as directed by the engineer-in-charge as well.
- The piping system shall be laid and jointed in true to gradient with the help of sight rails and boning rods as detailed in Manual on Sewerage and sewerage treatment CPHEEO, MoUD, GoI, New Delhi. The levels need be checked with calibrated modern Levelling Instrument. Specific care shall be taken to prevent entry of sand / mud /slush/ any other foreign material etc into the system during the installation operation.

A minimum cover of 600 mm should be maintained or as directed by the Engineer-in-Charge.

The bedding area (ref. Annexure A) is an essential portion of Back fill Envelope and shall be constructed with proper bedding material as computed in accordance with appropriate national code of practice for structural bedding design mentioned in the list of normative references under IS 16098-2.The bedding shall be laid to specified thickness and gradient with proper manual compaction of the aggregate.Indicative installation details with suggestive 'Backfill Envelop' have been shown in Annexure Aas per IS-16098 (Part- 2).

The moulded on-line coupler (or separate coupler integrated to the pipe in case of lower sizes) will have a suitable internal surface to push-fit the said end over the spigot end of the next pipe. On first valley of the corrugation of said spigot end (destined to receive the pushed coupler), the sealing rubber ring of standard quality shall be placed so that the coupler end of the pipe smoothly but tightly slides over the sealing ring for making an absolute watertight joint. Similar system is also used for fabricated accessories or moulded fittings requiredReducer end caps for the purpose of installation of the system related to drainage/sewerage.

For quality connections following steps are to be ensured, failing which the performance aspects are to be severely compromised:-

- The non-coupler (socket) end needs to be thoroughly cleared and shall be free from any foreign material
- Clean and lubricate the coupler end of the pipe, if required.
- Lubricate the exposed Gasket in the same manner, if required.
- Keep the non-coupler end free from dirt, backfill material, and foreign matter so that the joint integrity is not compromised.
- Push the coupler onto the non-coupler end and align properly. Always push coupler end onto non-coupler end.

For smaller diameter pipes simple manual insertion shall be sufficient. It should be ensured that the coupler end is adequately 'homed' on non-coupler end to ensure installation and tight joining seal. Therefore prior to insertion always place a 'Homing Mark' on appropriate corrugation of the 'Non-Coupler End'.

6.0 Construction of backfill envelope and final backfilling of the trenches

DWC Piping System with well compacted Backfill Envelope along with the bottom and sides of trench (native soil) work together to support soil overburden and superimposed (traffic) loads. The carefully constructed Backfill Envelop has three distinct but non-isolated stages (ref. Annexure A of IS-16098 Part- 2).The construction need to be done stage by stage as per the sequence stated below:

- Bedding portion
- Up to Haunch level

- Remaining portion

The material for backfill envelop shall be in accordance with the structural design of flexible buried conduit as per relevant National code in meticulous consultation with ISO 21138-1 &3 :2007 and all other referred International Codes such as BS EN 1295-1 that forms an integral part of the said ISO Specifications. It can be the same material that were removed in the course of excavation or it can be fine sand/course sand/gravel / moorum /other form of course / fine aggregates depending on the effected Design Load [Overburden + Superimposed (Live) load]. However, in no circumstances, the flexible pipe should be embedded in cement concrete (un- reinforced or reinforced) which invariably induces undesired rigidity in the system.The Manufacturer may also be consulted to provide for the necessary module for the Structural Design of the 'Backfill Envelope'.

- The remaining portion of backfilling which do not contribute to the structural integrity of the system may be the materials that were removed in the course of excavation or any other foreign material as may be required to suit the particular site condition. These materials shall consist of at least clean earth and shall be free from large clod or stone above 75 mm, ashes, refuse and other injurious materials.
- After completion of bedding portion of the Backfill envelop and subsequent lying of pipes, etc, first the haunch portion & then upper portion of Backfill Envelope shall be constructed as per design around the pipe. Voids must be eliminated by knifing under and around pipe or by some other indigenous tools.
- The compaction, by hand rammers or compactors with necessary watering to a possible maximum level of proctor density shall be ensured.
- Remaining portion of the Construction of 'Backfill Envelope' (above the Bedding Portion) & subsequent final Backfilling of the Trench shall start only after ensuring the water tightness test of joints for the concerned sewer segments. However, partial filling may be done keeping the joints open.
- Precautions shall be taken against floatation (if at all necessary) as per the specified methodology and the minimum required cover.

7.0 Continuity Test /Hydraulic Testing

Since the entire application pertains to Non-pressure (gravity flow) domain, on-field pressure testing of the installed system is not necessary. As per the relevant IS Code, each of the supplied pipe assembly need to be pressure tested at manufacturer's end for ensuring its leakage proof status as per the IS 16098 (Part 2):2013. However, for on-field acceptability, a segment wise continuity test shall be performed by the contractor in the same methodology as depicted in the CPHEEO, MoUD, GoI Manual on Sewerage and Sewage Treatment to the fullest satisfaction of the Employer/Department/PDMC, AMRUT. The contractor shall arrange the water at his own cost for testing and other requirements.

Notwithstanding the satisfactory completion of the continuity test, if there is any discernible leakage of water from any pipe or joint, the Contractor shall, at his own cost, replace/repair the pipe or re-make the joint and repeat the hydraulic test again.

8.0 Flow measuring devices:

Electromagnetic Flow Meter as per ISO 6817-1992 of appropriate size shall be provided along with 8 hour Battery back-up, at inlet and outlet of the Raw water and Clear water pipeline and Feeder pipeline outlet at RCC Sumpwells; to check losses and measure the quantity of water. Reading display of all the Flow meters, alongwith data logging instruments should be made available at single point, wherever decided by the Engineer-in-charge.

All the Electromagnetic Flow meters shall have the same make and salient features as under.

Coil housing of the Electromagnetic flow meters of fully welded SS-316 and Flow-tube lining of PTFE / EPDM / Neoprene.

Recommended make:Krohne-Marshall / Yokogawa / Emerson- Rosemount.

9.0 Technical Qualifications of Manufacturer of DWC pipes:

9.1 The Pipe manufacturer should have an annual installed production capacity of quantity equal to this TENDER. The manufacturer should have manufactured and suppliedpipesto any state/central Govt. department /board having minimum DN/ID 150mm or above, a minimum length of 500 Km.; out of which atleast 10% length (50Km.) should be of minimum DN/ID 250mm or above.

9.2 The manufacture should have valid BIS License as per IS 16098:2013 Part-2 / IS 14333:1996 and accreditation of ISO 9001: 2008/2015 for Manufacture and supply of DWC / Structured wall PE Pipe and fittings.

9.3 The manufacturer should be able to demonstrate the conformity of the product to the requirement by controlling the manufacturing process and by carrying out the various tests as specified in IS wherever possible, statistical sampling techniques should be used to control the process so that the product is produced within the specified limit. The successful bidder is required to submit the **Quality Assurance Program (QAP) of the manufacturer along with the documentary evidence of the production capacity, Valid BIS & ISO Certification as mentioned above for obtaining the approval of Employer & Engineer-in-charge before production of pipes.**

10.0 DWC Pipe Manufacturer In-House Facility for Testing:

10.1 The manufacturer should have required Plant, machinery and equipment for size DN/ID 150mm or above for the following vital test:

- Ring Flexibility Test,
- Ring Stiffness Test,
- Creep Ratio Test,
- Water Tightness Test,
- Tensile Strength Test,
- Melt Flow Index Test,
- Impact Test,
- Environmental Stress Cracking Resistance Test,
- Oxidation Induction Time Test Etc.

10.2If the manufacturer does not have required Plant, machinery and equipment for size DN/ID 150mm or above for the above vital test, the required tests to be carried out in any National Test House or NABL accredited Test Laboratory. The cost of such tests shall be borne by the manufacturer.

10.3 Each pipe or Fittings shall be marked with the standard mark, Lot/ Batch No., Period of Manufacturing and as per the employer/purchasers requirement.

11.0 Supply, Laying, Jointing, Installation, Testing and Commissioning of pipes

a. Supplying, laying, jointing, testing and commissioning of pipes shall conform to relevant IS codes, as applicable.

b. The alignment of pipelines shown in drawings of the TENDER documents is only indicative and the exact alignment will be as per approved drawings and/or as directed by the Engineer-in-charge or his representative.

c. The HDPE/DWC/DI/RCC Pipes shall be laid in accordance with the latest BIS/EN/ISO specifications.

12.0 Field Hydraulic Test

a. The Sectional Hydraulic Test shall be carried out after the pipeline section to be tested has been laid jointed and backfilled to a depth sufficient to prevent floatation

b. Each length of the pipeline to be tested shall be capped or blanked off at each end and securely strutted or restrained to withstand the forces which will be exerted when the test pressure is applied.

c. The proper method of filling the pipeline with water shall be used. The length under test shall be filled making certain that all air is displaced through an air valve or any other appropriate mechanism. The test length shall then remain under constant moderate pressure as per testing method given in the IS 7634.

d. As per IS code water required to built-up allowable drop in pressure during test will be treated as a make-up water.

e. The maximum allowable test pressure shall be as per CPHEEO manual and or IS codes specified.

f. Notwithstanding the satisfactory completion of the hydraulic test, if there is any discernible leakage of water from any pipe or joint, the Contractor shall, at his own cost, replace the pipe, repair the pipe or re-make the joint and repeat the hydraulic test at his risk and cost including the cost of water.

g. Test pressures are to be measured in kg/cm^2 at the centre of the blank flange situated at the lowest end of the pipeline under test. Unless otherwise specified the test pressure shall be as stated in Clause 12(f).

13. Supply, Laying & Jointing of RCC Pipes

13.1 The Pipe manufacturer should have an annual installed production capacity of quantity equal to this TENDER. The manufacturer should have manufactured and supplied pipes to any state/central Govt. department /board quantity equal to this TENDER in last 3 years.

13.2 The manufacture should have valid BIS License as per IS 458:2003 and accreditation of ISO 9001: 2008/2015 for Manufacture and supply of RCC Pipes.

13.3 The manufacturer should have manufactured and supplied pipes quantity equal to this TENDER.

13.4 The manufacturer should have required Plant, machinery and equipment for the following vital test:

- Hydraulic Test,
- Three-edge Bearing Test,
- Permeability Test,

13.5If the manufacturer does not have required Plant, machinery and equipment for the above vital test, the required tests to be carried out in any National Test House or NABL accredited Test Laboratory. The cost of such tests shall be borne by the manufacturer.

13.6 Each pipe or Fittings shall be marked with the standard mark, Lot/ Batch No., Period of Manufacturing,Source of Manufacture and as per the employer/purchasers requirement.

14. Precast Concrete Manhole Cover and Frame

14.1 The manufacturer should have an annual installed production capacity of quantity equal to this TENDER. The manufacturer should have manufactured and supplied different grades of to any state/central Govt. department /board quantity equal to this TENDER in last 3 years.

14.2 The manufacture should have valid BIS License as per IS 12592:2002 and accreditation of ISO 9001: 2008/2015 for Manufacture and supply of SFRC, Manhole Frame and Cover.

14.3 All the covers and frames shall be sound and free from cracks and other defects which interferes with the proper placing of the unit. The underside of the cover and protective mild steel sheet of minimum 2 mm thick around the periphery of cover and frame especially 25mm x 3mm mild steel flat used to protect the frame shall be given suitable treatment with anti-corrosive paint or coating. Lifting hooks of dia 12mm mild steel for light and medium duty and 16mm dia. mild steel for heavy and extra heavy duty covers shall be protected from corrosion by hot dip galvanizing or any other suitable means as approved by the Employer. The top surface of the cover shall given a chequered finish.

The manufacturer should have required Plant, machinery and equipment for the following vital test:

- Load Test,

14.4If the manufacturer does not have required Plant, machinery and equipment for the above vital test, the required tests to be carried out in any Government, National Test House or NABL accredited Test Laboratory. The cos of such tests shall be borne by the manufacturer.

14.5 Each cover & frame shall be marked with the standard mark, Lot/ Batch No., Grade Designation LD2.5, MD10, HD20, EHD35, Period of Manufacturing, Source of Manufacture and as per the employer/purchasers requirement.

15 SAFETY FOOT REST

Orange/ Black colour safety foot rest of minimum 6mm thick plastic and capsulated on 12 mm dia. Steel bars having minimum cross-section as 23mm x 25mm and overall minimum length 263mm and width as 165mm with minimum 112mm space between protruded legs having 2mm tread on top surface by ribbing or chequering besides necessary adequate anchoring projection on tail length on 138mm suitable to withstand the bend test and as per specification and manufacturers' permanent identification mark to be visible even after fixing, including fixing in manholes with 30x20x15 cm cement concrete blocks 1:3:6 complete as per the direction of Engineer-in-Charge.

16 THRUST BLOCKS

The thrust blocks shall be of plain/reinforced cement concrete on site as per design and drawings to be given by the Contractor and approved by the Engineer In Charge. The thrust blocks shall be cast directly against the undisturbed soil.

Chapter 7
Specification Road Work

The specification for road work shall be governed by "Specifications for Road and Bridge works, (5th Revision, 2013) Ministry of Road Transport and Highways, Govt. of India".

The Sections- 200,400,500 and 600 of specifications for Road and Bridge works, (5th Revision, 2013) Ministry of Road Transport and Highways, Govt. of India and relevant IRC codes shall also apply.