

STANDARD BIDDING DOCUMENT

PROCUREMENT OF

CIVIL WORKS

COMPLETE BIDDING DOCUMENT

**Name of work : Carry out Dam body grouting in Non overflow
Section of Dantiwada Dam.**



GOVERNMENT OF GUJARAT
Water Resources Department

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**INVITATION FOR BID
(IFB)**

NATIONAL COMPETITIVE BIDDING

1. The Executive Engineer, Deesa Irrigation Division, Deesa invites bids for the construction / Supply of works detailed in the table.
The bidders may submit bids for any or all of the following works.

1. TABLE

Package No.	Name of work	Approximate value of works (Rs.)	Bid security (Rs.)	Cost of document	Period of completion	#Class of Registration / Category of contractor if required
1	2	3	4	5	6	7
1.	Carry out Dam body grouting in Non overflow Section of Dantiwada Dam.	34317304.00	344000	6000	6 months	A and above

2. Prospective / Interested bidder may download the Bid Documents from website <https://www.nprocure.com> free of cost till the Time and Date as mentioned on online NIT at website <https://www.nprocure.com>.

#

3. However, Bidder who is submitting the Bid Online will have to pay the Bid Document Fee / Tender Fee through Demand Draft only of any Schedule Bank payable at Deesa and in favour of 'Executive Engineer, Deesa Irrigation Division, Deesa'. Once the Bid is received online, Bid Document / Tender Fee will not be refundable. As Per GoG R&B Department's Circular No. PARACH / 102 / 000 / IB / 221 / (59) / C Dated. 24/01/2007

The Demand Draft for Bid Document / Tender fee and FDR / Bank Guarantee against Bid Security / EMD shall be submitted in electronic format through online (by scanning) while uploading the bid, this submission shall mean that bid document / tender fee and Bid Security / EMD has been received. Accordingly, the offer of only those shall be opened whose Bid Document / Tender Fee and Bid Security / EMD have been received electronically. However, for the purpose of realization of Demand Draft, and FDR / Bank Guarantee bidder shall send the same in original through R.P.A.D. so as to reach to #Executive Engineer, Deesa Irrigation Division, Deesa within 7 Days from the last day of bid submission.

Penaltative action for not submitting Demand Draft / FDR / Bank Guarantee in original to Executive Engineer / Tender Inviting Authority by bidder shall be initiated.

WRD GR No. PRC-102014-1-MICell-K.1 Dated: 29/10/2014

4. Bids received online, will be opened on the time, date and place as specified in the online NIT at website <https://www.nprocure.com> in the presence of the bidders or their authorized representatives, who wish to remain present.
If the office happens to be closed on the day of opening of the bids as specified, the bids will be opened on the next working day at the same time and venue.
5. A pre bid meeting will be held onathrs.
at the office of Superintending Engineer, Sujlam Suflam Circle-2, Mehsana to clarify the issues and to answer questions on any matter that may be raised at that stage as stated in clause 9.2 of 'instructions to Bidders' of the bidding documents.
6. #Bid Security (EMD) is equal to 1% of Estimated Amount put to bid / tender and should be rounded off to the next thousand rupees.
7. Other Information is as under:
 - A. Agencies can prepare and edit their offers a number of times before the end of the tender submission date and time. After the tender submission date and time, the bidder cannot modify / edit / withdraw their submitted offer in any case. No written or online request in this regard shall be granted.
 - B. Offers in physical form will not be accepted in any case.
 - C. Demand Draft purchased by the other then bidder and issued after the last date of submission of Bids, will not be considered or accepted.
 - D. The cost incurred by the contractor for this offer for clarification or attending discussion, conferences or site visits will not be reimbursed by the Employer or Engineer-in-Charge.
 - E. Conditional tender shall not be accepted.
 - F. Any changes, addition, alternation made in the prescribed form attached with tender are liable to be rejected.
 - G. Any change in format or conditional Bank Guarantee will not be accepted and the bidder will be considered non-responsive.
 - H. All the bidders are instructed to fill in information strictly in accordance with the format given in the checklist /qualification document / tender document.
 - I. It is mandatory for the bidders to supply each and every information as asked strictly in electronic format at appropriate places only.
 - J. Blank / insufficient information shall be treated as nil information and shall result in disqualification.
 - K. Even if the bidder has been qualified in a similar or larger size of project in the past, it shall not be deemed to be a ground / reason for not giving required information for this work / bid.
 - L. Information supplied for earlier projects shall not be considered while evaluation of this bid. The Government will not ask for any other information, unless it is found absolutely necessary by the competent authority.
 - M. If found necessary, the contractor will be intimated for negotiation,

N. The contractors, who are registered in appropriate category of C.P.W.D. M.E.S. and Railway and other Indian State government can also bid provided the bidder produce such registration certificate at the time of bidding and obtain registration in required class and category from the Gujarat state WRD / R&B before opening of price bid. Bidder will solely responsible for obtaining the required registration.

- # **For the works costing up to Rs. 7.5 crore (WRD Works), Rs. 7.0 crore (ROAD/ BRIDGE/ BUILDING WORKS), Rs. 0.5 Crore (Electrical Works) kindly refer to GoG NWRWS & K Department's Circular No. Paracha/1097/1397(11)/pa.fa./ MICELL(k-1) dated 18/01/2018 and Dated 30/09/2022**

For the works costing under Rs.7.5 crore for Construction work of Water Resources Department, Rs. 7.0 crore for Roads, Bridges and Building and Rs. 050 crore for Electrical work following documents shall be submitted in electronic format only through online by scanning and the (i) Bid Document Fee / Tender Fee (ii) Bid Security / EMD should be sent in original to the Tender opening authority through RPAD, so as to reach the Executive Engineer within 7 days from last day of submission of Bid.

- (i) Bid Document Fee / Tender Fee
- (ii) Bid Security / EMD or Valid EMD Exemption Certificate of Appropriate Class of Registration of Approved Contractors
- (iii) Registration Certificate of Appropriate Class **A and above**
- ~~(iv) Registration Certificate of special category – Road/Building and Category I/II/III, if required~~
- (v) GST Number Registration
- (vi) Work Experience, if necessary
- (vii) Current Bank Solvency Certificate issued after 01/01/2026 (20 percent value of estimated cost put to tender) shall be as per the registration category of the bidder as per clause 6 or as per bank rule whichever is earlier
- (viii) Other Necessary documents as specified in section-10.

SECTION - 1
INSTRUCTIONS TO BIDDERS
(ITB)

Section 1: Instructions to Bidders

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A. GENERAL

1. Scope of Bid

- 1.1 The Employer (Named in Appendix to ITB) invites bids for the Construction of works (as defined in these documents and referred to as 'the works') detailed in the table given in IFB. The bidders may submit bids for any or all of the works detailed in the table given in IFB.
- 1.2 The successful bidder will be expected to complete the works by the intended completion date specified in the Contract data.
- 1.3 Throughout these bidding documents, the terms 'bid' and 'tender' and their derivatives (bidder/ tenderer, bid / tender, bidding/ tendering, etc.) are synonymous.

2. Source of Funds

- 2.1 The expenditure on this project will be met from the budget of Govt. of Gujarat / Govt. of India for centrally sponsored projects.

3. Eligible Bidders

- 3.1 This Invitation for Bids is open to all eligible bidders.
- 3.2 All bidders shall provide in Section 2, Forms of Bid and Qualification Information, a statement that the Bidder is neither associated, nor has been associated, directly or indirectly, with the consultant or any other entity that has prepared the design, specifications, and other documents for the Project or being proposed as Project Manager for the Contract. A firm that has been engaged by the Employer to provide consulting services for the preparation or supervision of the works, and any of its affiliates, shall not be eligible to bid.

4. Qualification of the Bidder

- 4.1 All bidders shall provide in Section 2, Forms of Bid and Qualification Information, a preliminary description of the proposed work method and schedule, including drawings and charts, as necessary. The proposed methodology should include a program of construction backed with equipment planning and deployment duly supported with broad calculations and quality assurance procedures proposed to be adopted justifying their capability of execution and completion of work as per technical specifications, within stipulated period of completion.
- 4.2 Deleted
- 4.3 Deleted
- 4.4 Deleted

~~#4.5 QUALIFICATION CRITERIA:~~

~~(Applicable for the works which require Pre Qualification) As Per GoG NWRWS & K Department's Circular No. Paracha/1097/1397(11)/pa.fa./MICELL(k-1) Dated 18/01/2018~~

- ~~4.5.1~~** Qualification will be based on Applicant's meeting all the following minimum pass/ fail criteria regarding the Applicant's general and particular experience, personnel and equipment capabilities and financial positions, as demonstrated by the applicant's responses in the forms attached to the letter of application (specified requirement for joint ventures are given under para 4.6 below) Subcontractors experience and resources shall not be taken in to account in determining the applicants compliance with the qualifying criteria

~~To qualify for more than one contract, the applicant must demonstrate having experience and resources sufficient to meet the aggregate of the qualification criteria for each contract given in paragraphs 4.5.4, 4.5.5 and 4.5.9 below~~

4.5.2 Base year and Escalation

The base year shall be taken as Current financial year

Following enhancement factors will be used for the costs of works executed and the financial figure to a common base value for works completed in India.

<u>Year</u>	<u>Financial Year</u>	<u>Multiplying factor</u>
Base year of inviting tender	2025-2026	1.00
-1	2024-2025	1.10
-2	2023-2024	1.21
-3	2022-2023	1.33
-4	2021-2022	1.46
-5	2020-2021	1.61

Applicant should indicate actual figures of costs and amount for the works executed by them without accounting for the above-mentioned factors.

In case the financial figures and value of completed works are in foreign currency the above enhanced multiplying factors will not be applied. Instead, the current market exchange rate (State Bank of India BC Selling rate as on the last date of submission of the bid) will be applied for the purpose of conversion of the amount in foreign currency into India rupees.

4.5.3. General Experience.

The Applicant shall meet with the following minimum criteria:

- ~~(a) Achieved a minimum annual financial turnover of Rs..... for works in progress and completed in all classes of civil engineering construction works in any one year, over the last five financial years.~~
- (b) Experience in successfully completing or substantially completing at least one contract of similar work **(Drilling of exploratory bore holes through Masonary/Concrete Dam for Collecting 150 mm Dia & 54 mm Dia Cores/ Borehole samples and grouting, Videography/ Required Testing.)** of at least 40 percent of the value of proposed contract **(Rs.137.27 Lakh)** within the last five financial years.

The works may have been executed by the applicant as prime contractor or as a member of a joint venture or as a nominated sub-contractor. As subcontractor, he should have acquired the experience of execution of all major items of works under the proposed contract. In case a project has been executed by a joint venture, weight towards experience of the project would be given to each joint venture in proportion to their financial participation in the joint venture if work executed jointly otherwise as per the scope of work define in Joint Venture agreement.

Substantially completed works means those works which are at least 90 % completed as on the date of submission (i.e. gross value of work done up to the last date of submission is 90 % or more of the original contract price) and continuing satisfactorily.

For these, a certificate from the employers shall be submitted along with the application incorporating clearly the name of the work, contract value, billing amount, date of commencement of works, satisfactory performance of the contractor and any other relevant information.

(the experience certificate should be signed by the officer not below the rank of EE)

4.5.4. Personnel Capabilities.

Availability for his work of personnel with adequate experience as required; as per **Appendix.**

4.5.5. Equipment Capabilities

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

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

4.5.6. Financial Position

The Applicant should give undertaking that he has access to, or has available, liquid assets (aggregate of working capital, cash in hand and uncommitted bank guarantees) and / or credit facilities up to 25 percent of the value of the contract / contracts applied.

- 4.5.7.** The audited balance sheets for the last five years should be submitted, which must demonstrate the soundness of the applicant's financial position, showing long – term profitability including an estimated financial projection for the next two years If necessary, the employer will make inquiries with the applicant's bankers.

4.5.8. Litigation History

The Applicant should provide accurate information on any litigation or arbitration resulting from contracts completed or under execution by him over the last five financial years. A consistent history of awards against the Applicant or any partner of a joint venture may result in failure of the applicant.

4.5.9. Disqualification

Even though the applicants meet the above criteria, they are subject to be disqualified if they have:

Made misleading or false representation in the forms, statements submitted, and / or Record of poor performance such as abandoning the work, rescinding of contract for which the reasons are attributable to the non – performance of the contractor; consistent history of litigation awarded against the applicant or financial failure due to bankruptcy. The rescinding of contract of a joint venture on account of reasons other than non – performance, such as Most Experienced partner of joint venture pulling out, court directions leading to breaking up of a joint venture before the start of work, which are not attributable to the poor performance of the contractor will, however, not affect the qualification of the individual partners.

- 4.5.10.** The bidder who have applied for corporate Debt Restructuring (CDR) / facing recovery proceedings from financial institutions / facing winding up processing / those under BIFR in the last 5 financial year shall be considered for bid qualification. However if the bank / financial institution has accepted the proposal of debt restructuring on or before the last date of online submission, the same shall be considered for further evaluation. An affidavit by bidder along with certificate from bank must be produced in such cases. In case of Joint Venture agreement, this provision shall be applicable for both lead partner and JV partner.

**#4.6 — ~~JOINT VENTURE: (Maximum 3 Members i.e. 1 Lead & 2 Others)~~
(Applicable only for estimated project cost of 50 Crore and above)**

4.6.1. — ~~Joint ventures must comply with the following requirement:~~

~~(a) — Following are the minimum qualification requirements:~~

~~(i) — The lead partner shall meet not less than 50 percent of all criteria given in para 4.5.3 & 4.5.6 above. The joint venture must collectively satisfy the criteria of para 4.5.3 & 4.5.6 above. The experience of the other joint venture partners shall be considered if it is not less than 30 percent of the qualifying criteria in para 4.5.3 & 4.5.6 above.~~

~~(ii) — Individually each member must satisfy the requirements of para 4.5.7 & 4.5.8 above.~~

~~(b) — Bid shall be signed so as to legally bind all partners, jointly and severally, and shall be submitted with a copy of the joint venture agreement providing the joint and several liabilities with respect to the contract.~~

4.6.2. — ~~Qualification of a joint venture does not necessarily qualify any of its partners individually or as a partner in any other joint venture. In case dissolution of a joint venture, each one of the constituent firms may qualify if they meet all the qualification requirements, subject to the written approval of the Employer.~~

4.7. — Bid Capacity.

~~Applicants who meet the minimum qualification criteria will be qualified only if their available bid capacity at the expected time of bidding is more than the total estimated cost of the works. The available bid capacity will be calculated as under:~~

Assessed Available Bid Capacity = (A*N*2-B), where

~~A = Maximum value of work executed in any one year during the last five years (updated to the price level of the year indicated in appendix) taking into account the completed as well as works in Progress.~~

~~B = Value at current price level of the existing commitments and ongoing works to be completed during the next (period of completion of work for which bids are invited); and~~

~~N = Number of years prescribed for completion of the works for which the bids are invited.~~

Note :- ~~In Case of joint venture, the available bid capacity will be applied for each partner to the extent of his proposed participation in the execution of the work.~~

4.8 Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have:

- Made misleading or false representation in the forms, statements and Attachments the submitted in proof the qualification requirements; and / or

- Record of poor performance such as abandoning the works, not properly completing the contract, inordinate delay in completion, litigation history, or financial failures etc.; and/ or
- Participated in the previous bidding for the same work and had quoted unreasonably high bid prices and could not furnish rational justification to the employer.

5. One bid per bidder

- 5.1. Each bidder shall submit only one bid for one package. A bidder who submits or participates in more than one bid (other than as a subcontractor or in cases of alternatives that have been permitted or requested) will cause all the proposals with the bidder's participation to be disqualified.

6. Cost of Bidding

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

7. Site Visit

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

The costs of visiting the site shall be at the Bidder's own expense.

B. BIDDING DOCUMENTS

8. Content of Bidding Documents

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

Section	Particulars	Volume No.
-	Invitation for Bids	I
1	Instructions to Bidders	
2	Qualification Information, and other forms	
3	Conditions of Contract	
4	Contract Data	
5	Technical Specifications	II
6	Form of Bid	III
7	Bill of Quantities	
8	Securities and other forms	
9	Drawings	IV
10	Documents to be furnished by bidder	V

- 8.2. Volumes I, II, III and IV are available online and documents to be furnished by the bidder in compliance to section 2 will be prepared by him and furnished as Volume-V in two parts (refer clause 12).
- 8.3. The bidder is expected to examine carefully all instructions, conditions of contract, contract data, forms, terms, technical specifications, bill of quantities, forms, Annexes and drawings in the Bid Document. Failure to comply with the requirements of Bid Documents shall be at the bidder's own risk. **Pursuant to clause 26 hereof**, bids which are not substantially responsive to the requirements of the Bid Documents shall be rejected.

9. Clarification Bidding Documents

- 9.1 A prospective bidder requiring any clarification of the bidding documents may notify the Employer in writing or through E-mail at the Employer's address indicated in the invitation to bid. The Employer will respond to any request for clarification which he received earlier than 15 days prior to the deadline for submission of bids. Employer's response will be published on website including a description of the enquiry but without identifying its source.

~~9.2. Pre-bid meeting~~

- ~~9.2.1. The bidder or his official representative is invited to attend a pre-bid meeting which will take place at the address, venue, time and date as indicated in the appendix.~~

- ~~9.2.2. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.~~
- ~~9.2.3. The bidder shall be required to submit any questions in writing or e-mail to reach the Employer not later than 03 days before the meeting.~~
- ~~9.2.4. Minutes of the meeting, including the question raised (Without identifying the source of enquiry) and the responses given will be published without delay on the tender website i.e. www.tender.nprocure.com. Any modification of the bidding documents listed in sub-Clause 8.1 which may become necessary as a result of the pre-bid meeting shall be made by the Employer exclusively through the issue of an Addendum pursuant to Clause 10 and not through the minutes of the pre-bid meeting.~~
- ~~9.2.5. Non-attendance at the pre-bid meeting will not be a cause for disqualification of a bidder.~~

10. Amendment of Bidding Documents

- 10.1 Before the deadline for submission of bids, the Employer may modify the bidding documents by issuing addenda.
- 10.2 Any addendum thus issued shall be part of the bidding documents. The Employer will assume no responsibility for the same.
- 10.3 To give prospective bidders reasonable time in which to take an addendum into account in preparing their bids, the Employer may, at his discretion, extend as necessary the deadline for submission of bids, in accordance with Sub-Clause 20.2 below.

C. PREPARATION OF BIDS

11. Language of the Bid

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

12. Documents Comprising the Bid

12.1. The bid be submitted by the bidder as Volume V of the bid document (refer Clause 8.1) shall be in two separate parts:

Part I shall be named “Technical Bid” and shall comprise

- (i) Bid Security in the form specified in Section 8
- (ii) Qualification Information and supporting documents as specified in Section 2
- (iii) Certificates, undertakings, affidavits as specified in Section 2
- (iv) Any other information pursuant to Clause 4.5 of these instructions
- (v) Undertaking that the bid shall remain valid for the period specified in Clause 15.1

Part II shall be named “Financial Bid” and shall comprise

- (i) Form of Bid as specified in Section 6
- (ii) Priced Bill of Quantities for items specified in Section 7

12.2. The Bidder shall submit the details / information pertaining to each part i.e. technical as well as financial and must be submitted online only.

12.3. Following documents will be deemed to be part of the bid.

Section	Particulars	Volume No.
	Invitation for Bids (IFB)	
1	Instruction to Bidders	Volume I
3	Conditions of Contract	
4	Contract Data	
5	Specifications	Volume II
9	Drawings	Volume IV

13. Bid Prices

13.1 The Contract shall be for the whole works as described in Sub-Clause 1.1, based on the priced Bill of Quantities submitted by the Bidder.

13.2 The bidder shall fill in rates and prices and line item total (both in figures and words) for all items of the Works described in the Bill of Quantities along with total bid price

(Both in figures and words). Items for which no rate or price is entered by the bidder will not be paid for by the Bill of Quantities.

- 13.3 All duties, taxes, and other levies except GST payable by the contractor under the contract, or for any other cause shall be included in the rates, prices and total Bid Price submitted by the Bidder. (GST will be paid extra as per prevailing Rate)

- 13.4 Deleted

- 13.5 The rates and prices quoted by the bidder are subject to adjustment during the performance of the Contract in accordance with the provisions of Clause 47 of the Condition of Contract **(Irrespective of the time limit and Bid Amount)**

14. Currencies of Bid and Payment

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

15. Bid Validity

- 15.1 Bids shall remain valid for a period of not less than **120 days** after the deadline date for bid submission specified in Clause 20.

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

#16. Bid Security

- 16.1. The Bidder shall furnish, as part of his Bid, a Bid security in the amount as shown in column 4 of the table of IFB for this particular work. This Bid security shall be in favor of Employer as named in Appendix and may be in one of the following forms;

- a. Bank Guarantee from any scheduled Indian bank, in the format given in Volume III. **(Bank Guarantee is applicable only for Bid Estimated Amount of 01 Crore and above)** and Bank Guarantee of Schedule and Private Banks shall be considered as per GoG Finance Department's Circular No. FD/MSM/e-file/4/2023/0057/D.M.O. Date 21/04/2023 or as per their latest amendment.

- b. Fixed Deposit Receipt issued by any Scheduled Indian Bank or a foreign Bank approved by the Reserve Bank of India.

OR

A Valid Bid Security / EMD Exemption Certificate issued by (1) Road & Building Department or (2) Narmada Water Resources, Water Supply and Kalpsar Department of Govt of Gujarat. **Exemption Certificate is applicable only when Registration Certificate of Appropriate Class and Category of Approved Contractors is required as eligible criteria of bidder.**

- 16.2. Bank guarantees (and other instruments having fixed validity) issued as surety for the bid shall be valid for 45 days beyond the validity of the bid i.e. total validity of 120+45 = 165 Days
- 16.3. Any bid not accompanied by an acceptable Bid Security and not secured as indicated in Sub-Clauses 16.1 and 16.2 above shall be rejected by the Employer as non-responsive.
- 16.4. The Bid Security of unsuccessful bidders will be returned within 28 days of the end of the bid validity period specified in Sub-Clause 15.1
- 16.5 The Bid Security of the successful bidder will be discharged when the bidder has signed the Agreement and furnished the required Performance Security.
- 16.6. The bid Security may be forfeited
- (a) If the Bidder withdraws the bid after Bid opening during the period of Bid validity.
 - (b) If the Bidder does not accept the correction of the Bid Price, if any or
 - (c) In the case of a successful Bidders, if the Bidder fails the specified time limit to
 - (i) Sign the Agreement; or
 - (ii) Furnish the requirement Performance Security.
 - (d) #If found necessary, the bidder will be intimated for negotiation, He will be intimated maximum three times within the validity period for negotiation, If contractor does not respond in time, his Bid Security (EMD) will be forfeited and his tender will be rejected. Punitive action will be taken on such contractors. (As per GoG R&B Dept's Gr. No. S/22/2017/639/D, Dt.08/06/2018)

17. Alternative Proposals by Bidders.

- 17.1. Bidders shall submit offers that fully comply with the requirements of the bidding documents, including the conditions of contract (including mobilization advance or time for completion), basic technical design as indicated in the drawing and specifications. Conditional offers or alternative offers will not be considered further in the process of tender evaluation.

18. Format and Signing of Bid

- 18.1. The Bidder shall prepare documents comprising the bid as described in Clause 12 of these Instructions to bidder as the "Technical Bid "and "Financial Bid" in separate parts to be uploaded.

D. SUBMISSION OF BIDS

19. Deleted

20. Deadline for Submission of the Bids

- 20.1. Complete Bids must be received online by the Employer at the tender website specified above not later than the date indicated in appendix.
- 20.2. The Employer may extend the deadline for submission of bids by issuing an amendment in accordance with Clause 10, in which case all right and obligation of the Employer and the bidders previously subject to the original deadline will then be subject to the new deadline.

21. Deleted

22. Modification and Withdrawal of Bids

- 22.1. Bidders may modify or withdraw their bids online before the deadline prescribed in Clause 20 or pursuant to Clause 23.
- 22.2. Deleted
- 22.3. No bid shall be modified or withdrawn after the deadline for submission of Bid.
- 22.4. Withdrawal or modification of a bid between the deadline for submission of bids and the expiration of the original period of bid validity specified in Clause 15.1 above or as extended pursuant to Clause 15.2 may result in the forfeiture of the Bid security pursuant to Clause 16.

E. BID OPENING AND EVALUATION

23. Bid Opening

- 23.1 The Employer will open all the Bids received including modifications made pursuant to Clause 22, in the presence of the Bidders or their representatives who choose to attend at time, date and the place specified in Appendix in the manner specified in Clauses 20 and 23.3, In the event of the specified date of Bid opening being declared a holiday for the Employer, the Bids will be opened at the appointed time and location on the next working day.
- 23.2. Deleted.
- 23.3. The “Technical Bid” shall be opened. The amount, form and validity of the bid security furnished with each bid will be announced. If the bid security furnished does not conform to the amount and validity period as specified in the invitation for bid (ref. Column 4 and paragraph 3), and has not been furnished in the form specified in Clause 16, the technical bid will not be opened.
- 23.4. (i) Subject to confirmation of the bid security by the issuing Bank, the bids accompanied with valid bid security will be taken up for evaluation with respect to the Qualification information and other information furnished in part I of the bid pursuant to Clause 12.1.
- (ii) If required, the bidder will be asked in writing to clarify his Qualification Documents with respect to any required clarification.
- (iii) The bidders will respond in not more than 7 days of issue of the clarification letter.
- (iv) Immediately (usually within 3 or 4 days), on receipt of these clarification the Evaluation Committee will finalize the list of responsive bidders whose financial bids are eligible for consideration.
- 23.5. Deleted
- 23.6 At the time of opening of “Financial Bid”, the names of the bidders were found responsive in accordance with Clause 23.4(iv) will be announced. The bids of only these bidders will be opened. The responsive Bidders’ names, the Bid prices, the total amount of each bid, any discount and such other details as the Employer may consider appropriate, will be announced by the Employer at the opening.
- 23.7 the time of opening of “Financial Bid”, the names of the bidders were found responsive in accordance with Clause 23.4(iv) will be announced. The bids of only these bidders will be opened. The responsive Bidders’ names, the Bid prices, the total amount of each bid, any discount, and such other details as the Employer may consider appropriate, will be announced by the Employer at the opening.
- 23.8 In case bids are invited for more than one package, the order for opening of the “Financial Bid” shall be in order of Estimated amount of Bids from highest to lowest.
- 23.9 The Employer shall prepare minutes of the Bid opening, including the information disclosed to those present in accordance with Sub-Clause 23.6.

24 Process to be Confidential

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

25. Clarification of Financial Bids

- 25.1. To assist in the examination, evaluation, and comparison of Bids, the Employer may, at his discretion, ask any Bidder for clarification of his Bid, including breakdowns of unit rates. The request for clarification and the response shall be in writing or by e-mail, but no change in the price or substances of the Bid shall be sought, offered, or permitted except as required to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the Bids.
- 25.2 Subject to sub-clause 25.1, no Bidder shall contact the Employer on any matter relating to his Bid opening to the contract is awarded. If the Bidder wishes to bring additional information to the notice of the Employer, it should do so in writing.
- 25.3. Any effort by the Bidder to influence the Employer in the Employer's bid evaluation, bid comparison or contract award decision may result in the rejection of the Bidders' bid.

26. Examinations of Bids and Determination of Responsiveness

- 26.1 During the detail evaluation of "Technical Bid", the Employer will determine whether each Bid (a) meets the eligibility criteria defined in Clause 3 and 4; (b) has been properly signed; (c) is accompanied by the required securities and; (d) is substantially responsive to the requirements of the Bidding document. During the detailed evaluation of the "Financial Bid", the responsiveness of the bids will be further determined with respect to the remaining bid conditions, i.e., priced bill of quantities, technical specifications, and drawings.
- 26.2 A substantially responsive "Financial Bid" is one which confirms all the terms, conditions and specifications of bidding documents, without material deviation or reservation. A material deviation or reservation is one (a) which affects in any substantial way the scope, quality, or performance of the Works; (b) which limits in any substantial way, inconsistent with the Bidding documents, the Employer's rights or the Bidder's obligations under the Contract; or (c) whose rectification would affect unfairly the competitive position of other Bidders presenting substantially responsive Bids.
- 26.3 If a "Financial Bid" is not substantially responsive, it will be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the non-conforming deviation or reservation.

27. Deleted

28. Deleted

29. Evaluation and Comparison of Financial Bids

- 29.1. The Employer will evaluate and compare only the Bids determined to be substantially responsive in accordance with Sub-Clause 26.2.
- 29.2. Deleted.
- 29.3. The Employer reserves the right to accept or reject any variation or deviation. Variation and deviations and other factors, which are in excess of the requirements of the Bidding documents or otherwise result in unsolicited benefits for the Employer, shall not be taken in to account in Bid evaluation.
- 29.4. The estimated effect of the price adjustment conditions under Clause 47 of the Conditions of Contract, during the period of implementation of the Contract, will not be taken in to account in Bid evaluation.
- 29.5. If the Bid of the successful Bidder is seriously unbalanced in relation to the Engineer's estimate of the cost of work to be performed under the contract the Employer may require the Bidder to produce detailed consistency of those prices with the construction methods and schedule proposed. After evaluation of the price analyses, the Employer may require that the amount of the performance security set forth in Clause 34 be increased at the expense of the successful /bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful Bidder under the Contract.
- 29.6. A bid which contains several items in the bill of Quantities which are unrealistically priced low and which cannot be substantiated satisfactorily by the bidder may be rejected as non-responsive.

30. Deleted

F. AWARD OF CONTRACT

31. Award Criteria

- 31.1. Subject to Clause 32, the Employer will award the contract to the Bidder whose Bid has been determined.
- (i) to be substantially responsive to the Bidding documents and who has offered the lowest evaluated Bid Price; and
 - (ii) to be within the available bid capacity adjusted to account for his bid price which is the lowest evaluation in any of the packages opened earlier than the one consideration.
- In no case, the contract shall be awarded to any bidder whose available bid capacity is less than the evaluated bid price, even if the said bid is the lowest evaluated bid. The contract will in such cases be awarded to the next lowest bidder at his evaluation bid price.

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

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

33. Notification of Award and Signing of Agreement

- 33.1. The Bidder whose Bid has been accepted will be notified of the award by the Employer prior to expiration of the Bid validity period by cable, telex or facsimile confirmed by registered letter. This letter (hereinafter and in the condition of contract called the "Letter of Acceptance") will state the sum that the Employer will pay the Contractor in consideration of the execution, completion, and maintenance of the Works by the Contractor as prescribed by the Contract (hereinafter and in the Contract called the "Contract Price").
- 33.2. The notification of award will constitute the formation of the contract, subject only to the furnishing of a performance security in accordance with the provisions of Clause.
- 33.3. The Agreement will incorporate all agreements between the Employer and the successful Bidder. It will be signed by the Employer and to the successful Bidder, within 28 days following the notification of award along with the Letter of Acceptance. Within 21 days of receipt, the successful Bidder will sign the Agreement and deliver it to the Employer.
- 33.4. Upon the furnishing by the successful Bidder of the Performance Security, the Employer will promptly notify the other Bidders that their Bids have been unsuccessful.

34. Performance Security

- 34.1. (A) Within 10 (Ten) days of receipt of Letter of Acceptance, the successful Bidder shall furnish to the Employer an irrevocable and unconditional guarantee from a Bank in the form set forth in Section 8 (the "Performance Security") for an amount equal to 5% (five percent) of its Contract Price. In case of bids mentioned below, the successful Bidder, along with the Performance Security,

shall also furnish to the Authority an irrevocable and unconditional guarantee from a Bank in the same form given at Section 8 towards an Additional Performance Security (The “Additional Performance Security”) for an amount calculated as under:

- (a) If the Contract Price offered by the Selected Bidder is lower than 10% but upto 20% of the Estimated Project Cost, then the Additional Performance Security shall be calculated @ 20% of the difference in the (i) Estimated Project Cost (as mentioned in Bid Document) - Minus 10% of the Estimated Project Cost and (ii) Contract Price offered by the selected Bidder.
 - (b) If the Contract Price offered by the Selected Bidder is lower than 20% of the Estimated Project Cost, then the Additional Performance Security shall be calculated @ 30% of the difference in the (i) Estimated Project Cost (as mentioned in Bid Document) - Minus 10% of the Estimated Project Cost and (ii) Contract Price offered by the selected Bidder.
 - (c) This Additional Performance Security shall be treated as part of the Performance Security.
- (B) The Performance Security shall be valid beyond 60(sixty) days of the Defects Liability Period and the Additional Performance Security shall be valid beyond 28 (twenty-eight) days of Project Completion Date.
- 34.2. If the performance security is provided by the successful Bidder in the form of a Bank Guarantee, it shall be issued either (a) at the Bidder’s option, by a Nationalized/Scheduled Indian bank or (b) by a foreign bank located in India and acceptable to the Employer. As per GoG Finance Department’s Circular No. FD/MSM/e-file/4/2023/0057/D.M.O. Date 21/04/2023 or as per their latest amendment.
- 34.3. Failure of the successful Bidder to comply with the requirement of Sub-Clause 34.1 shall constitute sufficient grounds for cancellation of the award and forfeiture of the Bid Security.

~~35 — Advance Payment and Security~~

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

36. Deleted

37. Corrupt of Fraudulent Practices

- 37.1 The Employer will reject a proposal if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in completing for the contract in question and will declare the firm ineligible, either indefinitely or for a stated period of time, to be awarded a contract with National Highways Authority of India/ State PWD and any other agencies, if it at any time determines that the firm has engaged in corrupt or fraudulent practices in completing for the contractor, or in execution.
- 37.2 Furthermore, Bidders shall be aware of the provision stated in Sub- Clause 59.2 of the Conditions of Contract.

APPENDIX TO ITB
Clause Reference With
respect to Section -I

1.	The Name of the Employer is Executive Engineer, Deesa Irrigation Division, Deesa	[Cl.1.1]
2.	The last five financial years.	
	2024 - 2025	
	2023 - 2024	
	2022 - 2023	
	2021 - 2022	
	2020 - 2021	
3.	This Annual Financial Turnover Amount is Rs.	[Cl.4.5.3 (a)]
4.	Value of Work is Rs. 34317304.00	
5.	Deleted	
6.	The cost of electric work is Rs. Nil	
7.	The cost of water supply / sanitary works is Rs. NIL	
8.	Liquid assets and / or availability of credit facilities is Rs. (25% of value of work)	[Cl.4.5.6]
9.	Price level of the financial year 2025-26	[Cl. 4.5.2]
10.	The pre-bid meeting will take place at Sujalam Sufalam Circle-2, Narmada Vasahat, Lakhvad Road, Mehsana	[Cl. 9.2.1]
11.	The technical Bid will be opened at the office of the Executive Engineer on dt / /2026 at 11:00 AM/PM	As per NIT
12.	Address of the Employer: Executive Engineer, Deesa Irrigation Division, Deesa, Dantiwada Canal Colony, Opp.Anand Hotel, Havai Pillar Service Road, Deesa-385535, B.K., Gujarat.	
13.	Deleted	
14.	The bid should be submitted latest by As stated on online NIT	[Cl. 20.1 & 20.2]
15.	The bid will be opened at Executive Engineer, Deesa Irrigation Division, Deesa As stated on online NIT	[Cl. 23.1]
16.	The Bank Draft in favor of Executive Engineer, Deesa Irrigation Division, Deesa	
17.	Deleted	

18. Escalation factors (for the cost of works executed and financial figure to a common base value) for works completed [Cl.4.5.2]

<u>Year</u>	<u>Financial Year</u>	<u>Multiplying factor</u>
Base year of inviting tender	<u>2025-2026</u>	1.00
-1	<u>2024-2025</u>	1.10
-2	<u>2023-2024</u>	1.21
-3	<u>2022-2023</u>	1.33
-4	<u>2021-2022</u>	1.46
-5	<u>2020-2021</u>	1.61

#LIST OF KEY PLANT & EQUIPMENT TO BE DEPLOYED ON CONTRACT WORK

[Reference CL. 4.5.5]

The contractors shall also give a list of machineries in his possession and which they propose to use on the work.

Sr. No.	Plant or Machinery	Location	Age of Machinery (maximum 15 years)	Make	Capacity	Approximate Value	Remark
1	2(a)	2(b)	3	4	5	6	7

List of Key Personnel to be deployed on Contract Work

(Reference Cl. 4.5.4)

Employment of a qualified site Engineer by the Contractor.

The Contractor shall employ full-time technically qualified staff during the execution of this work as under: -

1. Two graduate Civil Engineers and three diploma Civil Engineers when cost of the work to be executed is more than Rs.50 lakhs.
2. One graduate & two Diploma, Civil Engineers when the cost of the work to be executed is more than Rs.15 lakhs but less than Rs.50 lakhs.
3. Minimum Two Diploma Civil Engineer when the cost of work is less than Rs.15 lakhs but more than Rs.5 lakhs.
4. Minimum One Diploma Civil Engineers for the work when the cost of work to be executed is less than Rs. 5 lakhs. The Engineer so employed for the Government work must have sufficient experience to handle the work independently. Such an Engineer shall have to stay at the site of work and he shall not be entrusted with other duty except this work.

In case the contractor or partner of the contractor firm is a Civil Graduate Engineer, Employment of a separate Engineer will not be necessary provided that the Engineer partner himself attends the execution of the work on the site.

Within 15 days of issue of work-order the Contractor will have to furnish to the Deputy Executive Engineer-in-charge of the work the Name, Qualifications, copy of marksheet, Color Photograph and the appointment order issued such engineers engaged for this contract work. If 15 days after issue of work order such designated Site Engineers do not resume or do not remain present on site of work, the recovery at the rate of Rs.15,000.00 per month per Engineer will be made from the bills/deposit/dues of the contractor. Such recovery shall be non-refundable.

SECTION - 2

QUALIFICATION INFORMATION

QUALIFICATION INFORMATION

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

1. For Individual Bidders

1.1 Constitution or legal status of Bidder (Attach Copy)

Place of registration _____

Principal place of business _____

Power of attorney of signatory of Bid

(Attach)

1.2 Total value of Civil engineering constructions 2024-25
Work performed in the last five years 2023-24
in Rs. Lakhs) 2022-23
2021-22
2020-21

15.2.1 Work performed as prime contractor, work performed in the past as a nominated sub-contractor will also be considered the sub-contract involved execution of all main items of work described in the bid documents, provided further that all other qualification criteria are satisfied (in the same name) on works of a similar nature over the last five years** and in current year before the submission of the bid.

Project Name	Name of the Employer	Description of work	Contract No.	Value of contract (Rs. Crore)	Date of issue of work order	Stipulated period of completion	Actual date of completion*	Remark explaining reasons for delay & work Completed

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

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

#1.3.2 Quantities of work executed as prime contractor, work performed, in the past as a nominated sub-contractor, will also be considered provided the sub-contract involved execution of all main items of work described in the bid document, provided, further that all other qualification criteria are called (in the same name and style) in the last five years** and in current year before the submission of the bid.

*To be modified as per the nature and scope of work

Year	Name of the work	Name of The Employer	Quantity of work performed (Cum/MT)				Remarks* (indicate contract Ref)
			Cement Concrete	Masonry	Earth	Bituminous	
2024-25							
2023-24							
2022-23							
2021-22							
2020-21							

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

(A) Existing commitments and on-going works:

Description of works	Place & State	Contract No.	Name & Address of Employer	Value Contract (Rs. Cr)	Stipulated Period of Completion	Value of Works* remaining to be completed (Rs. Cr)	Anticipated of completion
1	2	3	4	5	6	7	8

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

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

1.5 Availability of key items of Contractors Equipment for carrying out the works (Ref. Clause 4.5.5). The Bidder should list all the information requested below.

Item of Equipment	Requirement		Availability Proposals			Remarks (from whom to be purchased)
	NO	Capacity	Owned/ Leased to be procured	Nos/. Capacity	Age/ Conditions	

Item of Equipment	Requirement		Availability Proposals			Remarks (from whom to be purchased)
	NO	Capacity	Owned/ Leased to be procured	Nos/. Capacity	Age/ Conditions	

- 1.6 Qualifications and experience of key personnel required for administration and execution of the contract. Attach biographical data. Refer also to Sub Clause 9.1 of the Conditions of Contract.

Position	Name	Qualification	Year of Experience (General)	Year of experience in the proposed

- 1.7 Proposed sub-contract and firms involved

Sections of the works	Value of Sub-Contractor	Sub-Contractor (Name & Address)	Experience in similar work

Attach copies of certificates on possession of valid license for executing water supply/ sanitary work/ building electrification works.

- 1.8 Financial reports for the last five years: balance sheets, profit and loss statements, auditors' reports (in case of companies/corporations), etc. List them below and attach copies.
- 1.9 Evidence of access to financial resources to meet the qualification requirements: cash in hand, lines of credit, etc. List them below and attach copied documents.
- 1.10 Name, address, and telephone, telex, and fax numbers of the Bidders bankers who may provide references if contacted by the Employer.
- 1.11 Information on Litigation history in which the Bidder is involved.

Other Party (ies)	Employer	Cause of Dispute	Amount Involved	Remarks showing Present Status

- 1.12. Statement of compliance under the requirements of Sub Clause 3.2 of the instruction to Bidders. (Name of Consultant engaged for project preparations is *)

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

- 1.14 Programme

2. Deleted

3. Additional Requirements

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

- (i) Affidavit
- (ii) Undertaking

* Fill the name of Consultant

**SAMPLE FORMAT FOR EVIDENCE OF ACCESS TO OR
AVAILABILITY OF CREDIT FACILITIES**

(CLAUSE 4.5.6 OF ITB)

BANK CERTIFICATE

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

If the contract for the work, namely _____ is awarded to the above firm, we shall be able to provide overdraft/credit facilities to the extent of Rs. _____ to meet their working capital requirements for executing the above during the contract period.

(Signature)

Name of Bank

Senior Bank Manager

Address of the Bank

AFFIDAVIT

1. I, the undersigned, do hereby certify that all the statements made in the required attachments are true and correct.
2. The undersigned also hereby certifies that neither our firm M/s. _____
_____ have not abandoned any work of Government of Gujarat/Government of India/any Board or Corporation under Government of Gujarat/Government of India nor any contract awarded to us for such works have been rescinded, during last five years prior to the date of this bid.
3. The undersigned hereby authorize(s) and request (s) any bank, person, firm or corporation to furnish pertinent information deemed necessary and requested by the Department to verify this statement or regarding any (our) competence and general reputation.
4. The Undersigned understands and agrees that further qualifying information may be requested, and agrees to furnish any such information at the request of the Department/ Project implementing agency.

(Signed by an Authorized Officer of the Firm)

Title of Officer

Name of Firm

Date

UNDERTAKING

I, the undersigned do hereby undertake that our firm
M/s.....would invest a minimum cash
up to 25% of the value of the work during implementation of the contract.

(Signed by an Authorized officer of the firm)

Title of officer

Name of firm

DATE

SECTION - 3
CONDITIONS OF CONTRACT

Conditions of Contract

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CONDITIONS OF CONTRACT

A. GENERAL.

1. Definitions

- 1.1 Terms which are defined in the Contract Data are not also defined in the Conditions of Contract but keep their defined meaning.

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

Compensation Events are those defined in Clause 44 hereunder

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

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

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

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

The **Contractor's Bid** is the completed Bidding document submitted by the Contractor to the Employer and includes Technical and Financial Bids.

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

Days are calendar days: **months** are calendar months.

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

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

The Engineer is the person named in the Contract Data (or any other competent person appointed and notified to the contractor to act in replacement of the Engineer) who is responsible for supervising the Contractor, administering the Contract, certifying payments due to the Contractor, issuing and valuing Variations to the Contract, awarding extensions of time, and valuing the Compensations Events.

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

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

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

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

Plant is any integral part of the work which is to have mechanical, electrical, electronic or chemical or biological functions.

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

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

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

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

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

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

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

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

2. **Interpretation**

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

2.2 If sectional completion is specified in the Contract Data, references in the Conditions of Contract to the Works, the Completion date, and Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion date for the whole works)

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

- (1) Agreement
- (2) Letter of Acceptance, notice to proceed with works
- (3) Contractor's Bid

- (4) Contract Data
- (5) Conditions of Contract including Conditions of Contract
- (6) Specifications
- (7) Drawings
- (8) Bills of quantities and
- (9) Any other document listed in the Contract Data as forming part of the Contract.

3. Language and Law

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

4. Engineers Decisions

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

5. Delegation

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

6. Communications

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

7. Sub-Contracting

- 7.1 The Contractor may subcontract any portion of work, up to a limit specified in contract data, with the approval of the engineer but may not assign the Contract without the approval of the Employer in writing. Subcontracting shall not alter the Contractor's obligations. **Sub-contracting of supply or specific items of work is not allowed.**
- 7.2 The sub-contractor must be registered in appropriate class and category for the part of work to be subcontracted.

8. Other Contractors

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

9. Personnel

- 9.1 The Contractor shall employ the key personnel named in the Schedule of Key Personnel as referred to in the Contract Data to carry out the functions stated in the Schedule or other personnel approved by the Engineer. The Engineer will approve any proposed replacement of key personnel only if their qualifications, abilities, and relevant experience are substantially equal to or better than those of the personnel listed in the Schedule.
- 9.2 If the engineer asks the Contractor to remove a person who is a member of the Contractor Staff or his work force stating the reasons the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the work in the Contract.

10. Employer's and Contractors Risks

- 10.1 The Employer carries the risk which these Contract states are Employer's risks, and the Contractor carries the risks which these Contracts states are Contractors risk.

11. Employer's Risks

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

12. Contractor's Risks

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

13. Insurance

- 13.1 The Contractor shall provide, in the joint names of the Employer and the Contractor, insurance cover from the Start date to the end of the Defects Liability Period, in the amounts and deductibles stated in the Contract data for the following events which are due to the Contractor's risks:
- (a) Loss of or damage to the works, Plant and materials,
 - (b) Loss of or damage to Equipment
 - (c) Loss of or damages of property (except the Works, Plant, Materials and Equipment) in connection with the Contract; and
 - (d) Personal injury or death.
- 13.2 Policies and certificates for insurance shall be delivered by the Contractor to the Engineer for the Engineer's approval before the Start Date. All such insurance shall provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred.

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

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

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

14. Site Investigation Report

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

15. Queries about the Contract data

15.1 The engineer will clarify queries on the Contract Data

16. Contractor to Construct the Works

16.1 The Contractor shall construct and install the works in accordance with the specification and Drawings.

17. The Works to be completed by the Intended Completion Date

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

18. Approval by the Engineer

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

18.2 The Contractor shall be responsible for design of temporary works.

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

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

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

19. Safety

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

20. Discoveries

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

21. Possession of the Site

- 21.1 The Employer shall give possession of all parts of the site to the Contractor. If possession of a part is not given by the date stated in the Contract Data the Employer is deemed to have delayed the start of the relevant activities and this will be a Compensation Event.
- 21.2 If within 25% of the time limit of the project, 80% of possession of the site is not handed over to the Contractor, then contractor/ Employer may fore-close the contract. Contractor/Employer has to foreclose the work within 30 days after lapse of 25%-time limit and after 30 days foreclosure option will be closed.

22. Access to the Site

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

23. Instructions

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

24. Disputes

- 24.1 If the Contractor is of the view that a decision taken by the Engineer was either outside the authority given to the Engineer by the Contract or that the decision was wrongly taken, the decision shall be referred to **#Superintending Engineer (Sujalam Sufalam Circle-2, Mehsana)** within 14 days of the notification of the Engineer's decision. If the issue is not resolved, any party can refer the matter for conciliation within 15 days from the decision given by the **#Superintending Engineer (Sujalam Sufalam Circle-2, Mehsana)**.
- 24.2
- (a) For the work up to Rs.100 Cr., if any of the parties is not satisfied with the decision of the **#Superintending Engineer (Sujalam Sufalam Circle-2, Mehsana)**, both the parties have to refer to the Chief Engineer concern for the conciliation process.
 - (b) For the work more than Rs.100 Cr., if any of the parties is not satisfied with the decision of the **#Superintending Engineer (Sujalam Sufalam Circle-2, Mehsana)**, both the parties have to refer to the **#Secretary, Water Resources Department, Government of Gujarat** for the conciliation process.

If the dispute is not resolved through the conciliation process, he may refer the dispute to Gujarat Public Works Contract Dispute Arbitration Tribunal. If the Contractor fails to refer a claim / dispute to the Higher Authority within 14 days of the notification of the Engineer's decision, the Contractor shall not be entitled to any additional payment/claim if he doesn't follow the above sequence in stipulated time and he should not stop the work.

25. Procedure for Disputers

- 25.1 The arbitration shall be conducted in accordance with the arbitration procedure stated in the Special Conditions of Contract.

26. Deleted

B. TIME CONTROL

27. Programme

- 27.1 Within the time stated in the Contract Data the Contractor shall submit to the Engineer for approval a Programme showing the general methods, arrangements orders, and timing for all the activities in the works along with monthly cash flow forecast.
- 27.2 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 work including any changes to the sequence of the activities.
- 27.3 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 after the date on which the overdue programme has been submitted.
- 27.4 The Engineer's approval of the programme shall not alter the Contractor's obligations. The Contractor may revise the programme and submit it to the Engineer again at any time. A revised programme is to show the effect of Variations and Compensations events.

28. Extension of the Intended Completion Date

- 28.1 The Engineer shall extend the Intended Completion Date if a compensation Event occurs or a Variation is issued which makes it impossible for completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work and which would cause the Contractor to incur additional cost.
- 28.2 The Engineer shall decide whether and by how much to extend the Intended Completion Date within 35 days of the Contractor asking the Engineer for a decision upon the effect of a compensation event or Variation and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.
- 28.3 The Engineer shall within 14 days of receiving full justification from the contractor for extension of Intended Completion Date refer to the Employer his decision. The employer shall in not more than 21 days communicate to the engineer the acceptance or otherwise of the Engineer's decision. If the employer fails to give his acceptance, the Engineer shall not grant the extension and the contractor may refer the matter under Clause 24.1

29. Deleted

30. Delays Ordered by the Engineer

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

31. Management Meetings

- 31.1 Either the Engineer or the Contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.
- 31.2 The Engineer shall record the business of management meetings and is to provide copies of his record to those attending the meeting and to the Employer. The responsibility of the parties for actions to be taken is to be decided by the Engineer either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.

32. Early Warning

- 32.1 The Contractor is to warn the Engineer at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, increase the Contract price or delay the execution of works. The Engineer may require the contractor to provide an estimate of the expected effect of the future event or circumstance on the contract price and completion date. The estimate is to be provided by the Contractor as soon as reasonably possible.
- 32.2 The Contractor shall cooperate with the Engineer in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Engineer.

C. QUALITY CONTROL

33. Identifying Defects/ Defect liability period

33.1 : Defect liability period: The contractor shall be responsible to make good and remedy at his own expense any defect which may develop or may be noticed before the period mentioned hereunder from the certified date of completion. The Engineer in charge shall give the contractor a notice in writing about the defects and the contractor shall make good the same within 15 days of receipt of the notice. In the case of failure on the part of the contractor, the Engineer-in-charge may rectify or remove or re-execute the work at the risk & cost of the contractor. The Engineer-in-charge shall be entitled to appropriate the whole or any part of the amount of security deposit towards the expenses, if any, Incurred by him in rectification, removal or re-execution. The Defects Liability period shall be as under....

A. For works of WRD Except Building

- (a) (1) For all works costing up to Rs. 50,000 (amount put to tender), the period shall be 3 Months from the certified date of completion.
- (b) (1) For WRD works likes Check Dam/ Canal / Drainage / Road Structure tender amount from RS. 50,000 to 10,00,000, the defect liability period shall be 12 months from the certified date of completion.
(2) For WRD work except likes Check Dam/ Canal / Drainage / Road Structure tender amount from RS. 50,000 to 10,00,000, the defect liability period shall be 6 months from the certified date of completion.
- (c) (1) For WRD works likes Check Dam/ Canal / Drainage / Road Structure tender amount more than RS. 10,00,000, the defect liability period shall be 3 Years from the certified date of completion.
(2) For WRD work except likes Check Dam/ Canal / Drainage / Road Structure tender amount from RS. 10,00,000 to 1 Crore, the defect liability period shall be 12 months from the certified date of completion.
- (d) (1) For all WRD works of tender amount more than RS. 1 Crore, the defect liability period shall be 3 Years from the certified date of completion

B. For Building works of WRD:-

For Building works of WRD, Follow the R&B Circular dated.03/12/2009

For original building works the defect liability period will be 4 years or elapse of 4 monsoon period following date of possession of building taken over by user agency following the certified date of completion, whichever is later.

For the purpose of deciding the monsoon period, the 30th September shall be treated as the last date.

WRD Circular No. Matas/102013/MICELL(K-1) Dated 13/12/2013

33.2 For Road works :

Free maintenance guarantee period for works of **Road/Bridge construction**

- (a) For resurfacing work of road free maintenance guarantee period one year from the date of completion.
- (b) In case of widening of the road/strengthening of the road/bridge, the contractor shall have to give four years free maintenance guarantee from the certified date of completion. During this period the contractor shall visit the site every six months along with the concerned Section Officer / Deputy Executive Engineer and will examine the work already carried out in this contract like road work, jungle cutting, side shoulders, side gutter, road furniture, patta etc. and will prepare Km. wise inspection report duly signed by all concerned and any defect observed shall be done within 15 days by the contractor at his risk and cost as per the direction of Engineer in charge. The contractor needs to do videography of these visits and require to submit at the time of release of FMG. If B.T. the surface during

the maintenance period of 4 years is worn out then agency shall have to provide renewal coating as per tender item as directed by the Engineer-in-charge. The amount equivalent to 5% of each running bill shall be withheld and will be released after the free maintenance guarantee period (i.e. 4 years) is over.

However, this amount shall be released against fixed deposit or bank guarantee pledged in the name of Executive Engineer after completion certificate of work is issued.

(1) The flakiness and elongation index (combined) for coarse aggregates under no circumstances shall exceed the allowable limit set forth in the relevant clause for the material in question.

(2) 2% of the amount eligible for the payment of bituminous items shall be withheld till the miscellaneous items like earthwork in embankment / cutting for side shoulders, side gutters, kilometer / indicator / guard stones, sign boards etc. are completed in all respect by the contractor. After completion of the miscellaneous items, the above said 2% withheld amount shall be released.

(Govt. of Gujarat's G.R. No.: TNC-10-2013-3(Part-3)/C, Dtd. 13/12/2013).

(3) Videography for the surface under Maintenance Guarantee is to be done as per Govt. letter No.: SSR/10/2015-16/26/C, Dtd. 26/11/15 for the work costing more than Rs. 5.00 Crore.

(4) Setting up of adequate laboratory & deployment of quality engineers.

The contractor shall have to set up the laboratory with adequate equipment. Till the setting up of adequate laboratory is completed & reported of this to the engineer (subject to due verification by engineer's representative) by contractor in writing, Rs.2,00,000/- shall be withheld. The qualified quality Engineer shall be deployed exclusively for this contract by the contractors. If quality Engineer is not deployed by contractor within one month after the date of work order, the amount equivalent to Rs.20,000 per month shall be recovered till the actual deployment of quality engineer. The amount so recovered towards the deployment of quality engineers shall not be refunded.

(5) Asphalt work will have to be cross checked as per G.R. No.: RGN/60/2006/35/C, dtd.31/05/07 before final bill is paid.

(6) Maintenance during Construction Period

During the Construction Period, the Contractor shall maintain, at his own risk and cost, the existing lane(s) of the road so that the traffic worthiness and safety thereof are at no time materially inferior as compared to their condition 10 (ten) days prior to the date of the Agreement, and shall undertake the necessary repair and maintenance works for this purpose; provided that the Contractor may, at his cost, interrupt and divert the flow

of traffic if such interruption and diversion is necessary for the efficient progress of works and conforms to Good Industry Practice; provided further that such interruption and diversion shall be undertaken by the Contractor only with the prior written approval of the Executive Engineer which approval shall not be unreasonably withheld. For the avoidance of doubt, it is agreed that the Contractor shall at all times be responsible for ensuring safe operation of the road.

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

34. Tests

- 34.1 If the engineer instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no defect the test shall be a Compensation Event.
- 34.2 #1% of the amount of work done for works upto Rs. 10 crore of estimate cost should be deducted from R.A. Bill of the contractor for testing the quality of material workmanship. Whereas for estimated cost of works more than 10 crore, the charges for testing of quality of material workmanship shall be deducted from R.A. bill of contractor as per actual charges.
- 34.3 Agency has to establish testing laboratory on site for the various test to be carried out in the work for this purpose agency shall construct a pukka laboratory building with all facility on site at location specified by the engineer in charge.

35. Correction of defects

- 35.1 The engineer shall give notice to the Contractor of any defects before the end of the defects Liability Period, which begins at Completion and is defined in the contract data. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.
- 35.2 Every time notice of a Defect is given, the Contractor shall correct the notified defect within the length of time specified by the Engineer's notice.

36. Uncorrected Defects

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

D. COST CONTROL

37. Bill of Quantities

- 37.1 The bill of Quantities shall contain items for the constructions, installation, testing and commissioning work to be done by the Contractor.
- 37.2 The bill of Quantities is used to calculate the Contract price. The Contractor is paid for the quantity of the work done at the rate in the Bill of Quantities for each item.

38. Change in the Quantities

- 38.1 The Engineer shall have power to make any alterations in or addition to the original specifications , drawings, designs and instructions that may appear to him to be necessary or advisable during the progress of the work and the contractor shall be bound to carry out the work in accordance with any instruction in this connection which may be given to him in writing signed by the Engineer and such alteration shall not invalidate the contract and any additional work which the contractor may be directed to do in the manner above specified as part of the work shall be carried out by the contractor on the same conditions in all respects on which he agreed to do the main work and at the same rate as are specified in the tender for the main work.

Except that when the quantity of any item exceeds the quantity as in the tender by more than 130%, the contractor will be paid for the quantity in excess of 130%, at the rate entered in the SOR of the year during which the excess in quantity is first executed.

39. Variations

- 39.1 All Variations shall be included in updated programmes produced by the Contractor.

40. Payments for Variations

- 40.1 If the additional or altered work includes any class of work for which no rate is specified in this contract, then such class of work shall be carried out as under.
- (i) At the rate derived from the item within the contract which is comparable to the one involving additional or altered class of work; where there are more than one comparable items, the item of the contract which is nearest in comparison with regard to class or classes of the work involved shall be selected and the decision of the Superintending Engineer as to the nearest comparable item shall be final and binding on the contractor.
 - (ii) If the rate cannot be derived in accordance with (i) above, such class of works shall be carried out at the rate entered in the Schedule of Rates of the division

for the year in which the tender was received, increased or decreased by the percentage by which the tender amount is more or less as compared to the amount arrived at the rates in the “Schedule of Rates” of the Division in the year in which the tender was received. If the Schedule of rates of the Division does not contain all the items, the percentage increase or decrease of the tender shall be calculated considering such items which were included in the “Scheduled Rates” of the division for the year and for materials consumed on such item the rate to be charged would be the basic rate taken into account for fixing the rate in S.O.R. referred to above.

- (iii) If it is not possible to arrive at the rate from (i) and (ii) above, such class of work shall be carried out at the rate decided by the competent authorities on the basis of detailed rate analysis after hearing the contractor before a Committee of two Superintending Engineers stationed at the same place or the nearest place.
- 40.2 If the additional or altered work, for which no rate is entered in the “Schedule of Rates” of the Division is ordered to be carried out before the rate is agreed upon, then the contractor shall within seven days of the date of receipt by him of the order to carry out the work, inform the Engineer-in-charge of the rate, which it is his intention to charge for such class of work and if the Engineer in charge does not agree to this rates, he shall by notice in writing be at liberty to cancel his order to carry out such class of work and arrange to carry it out in such manner as he may consider it advisable, provided always that if the contractor shall commence work or incur any expenditure in regard thereof before the rates shall have been determined as lastly herein before mentioned, then in such cases he shall only be entitled to be paid in respect of the work carried out or expenditure incurred by him prior to the date of the determination of the rate as aforesaid according to such rate or rates as shall be fixed by the Engineer-in-charge. In the event of the dispute, the decision of the Superintending Engineer of the Circle shall be final.

Where, however, the work is to be executed according to the designs, drawings and specifications recommended by the contractor and accepted by the competent authority, the alternation above referred to shall be within the scope of such designs, drawings and specifications appended to the tenders.

The time limit for the completion of the work shall be extended in the proportion that the increase in the cost occasioned by alterations bears to the cost of the original work and the certificate of the Engineer-in-charge as to such proportion shall be final and conclusive.

41. Cash Flow Forecasts

- 41.1 When the programme is updated, the contractor is to provide the engineer with an updated cash flow forecast.

42. Payment certificates.

- 42.1 The Contractor shall submit to the Engineer monthly statements of the estimated value of the work completed less the cumulative amount certified previously.
- 42.2 The Engineer shall check the Contractor's monthly statement within 14 days and certify the amount to be paid to the Contractor after taking in to account any credit or debit for the month in question in respect of materials for the works in the relevant amounts and under conditions set forth in sub-clause 32.3 of the Contract Data (secured Advance).
- 42.3 The value of work executed shall be determined by the Engineer.
- 42.4 The value of work executed shall comprise the value of the quantities of the items in the Bill of Quantities completed.
- 42.5 The value of work executed shall include the valuation of variations and compensation events.
- 42.6 The Engineer may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information

43. Payments

- 43.1 Payments shall be adjusted for deductions for advance payments, retention, other recoveries in terms of the contract and taxes at source, as applicable under the law. The Employer shall pay the Contractor the amounts certified by the Engineer within 28 days of the date of each certificate.
- 43.2 Payment of GST (prevailing rates) on the amount payable under the contract to the Contractor will be made by the Employer. Hence, it is the responsibility of the contractor to pay the GST to the concerned Authority.
- 43.3 Items of the works for which no rate or price has been entered in will not be paid by the Employer and shall be deemed covered by other rates and prices in the Contract.

44. Compensation events

- 44.1 The following are compensation Events unless they are caused by the Contractor:
 - (a) The Employer does not give access to a part of the Site by the site Possession date stated in Contract data to the Contractor
- 44.2 In case of compensation event occurs and it prevents the work being completed beyond the Intended Completion Date then Authority will approve EOT with eligible contractual price escalation.

45. Tax

- 45.1 The rates quoted by the Contractor must be inclusive of all taxes prevailing on due date of bid submission except GST. However, any subsequent changes in the tax structure by Government after due date of bid submission will be compensated (+/-) on availability or submission of actual documentation. Contractor will have to intimate Engineer regarding changes occurred in the tax structure after bid submission. If the contractor fails to provide such information and if any financial obligation may arise due to change in tax structure, same will be recovered from the contractor.
- 45.2 GST will be paid separately on the bills. Hence, it is the responsibility of the contractor to pay the GST to the concerned Authority.

46. Currencies.

- 46.1 All payment shall be made in Indian Rupees.

47. Price Adjustment

- 47.1 Contract price shall be adjusted for increase or decrease in rates and price of labour, materials, fuels and lubricants in accordance with the following principles and procedures and as per formula given in the contract data:
- (a) The price adjustment shall apply for the work done from the start date given in the contract data up to end of the initial intended completion date or extensions granted by the Engineer and shall not apply to the work carried out beyond the stipulated time for reasons attributable to the contractor.
 - (b) The price adjustment shall be determined during each month from the formula given in the contract data.
 - (c) Following expressions and meanings during to the work done during each month
R = Total value of work done during the month. It would include the amount of secured advance granted, if any, during the month less the amount of secured advance recovered, if any during the month. It will exclude value for works executed under variations for which price adjustment will be worked separately based on the terms mutually agreed.
- 47.2 To the extent that full compensation for any rise or fall in costs to the contractor is not covered by the provisions of this or other clause in the contract, the unit rates and prices included in the contract shall be deemed to include amounts to cover the contingency of such other rise or fall in costs.

48. Retention

- 48.1 The Employer shall retain from each payment due to Contractor the proportion stated in the Contract Data until Completion of the whole of the Works.

- 48.2 On Completion of the whole of the Works half the total amount retained is repaid to the Contractor and half when the Defects Liability Period has passed and the Engineer has certified that all Defects notified by the Engineer to the Contractor before the end of this period have been corrected.
- 48.3 On completion of the whole works, the contractor may substitute retention money with an “on demand” Bank guarantee.

In case, Contractor requests for refund of the Retention Money deducted by the Employer under the provision of this clause, Employer shall consider the said request of the Contractor provided that the refund hereunder shall be made in tranches of not less than 1% (One Percent) of the Contract Price and Contractor furnishes an irrevocable and unconditional Bank guarantee for an equal amount substantially in the format of Bank Guarantee for Performance Guarantee enclosed with SBD and valid up to 60 day beyond the scheduled / extended Defects Liability Period. On completion of the whole works, the contractor has however an option to submit a fresh irrevocable and unconditional Bank Guarantee for an amount equal to 5% of the total value of work executed substantially in the format of Bank Guarantee for Performance Guarantee enclosed with SBD and valid up to 60 days beyond the Defect Liability Period and yet refund the Retention Money Bank Guarantee submitted for refund of Retention Money.

49. Liquidated Damages

- 49.1 The Contractor shall pay liquidated damages to the Employer at the rate per day stated in the Contract Data for each day that the Completion Date is later than the Intended Completion Date (for the whole works or the milestone as stated in the contract data). The total amount of liquidated damages shall not exceed the amount defined in the Contract Data. The Employer may deduct liquidated damages from payment due to the Contractor. Payment of liquidated damages does not affect the Contractor’s liabilities.
- 49.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Engineer shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate. The Contractor shall not be entitled for any interest on the over payment calculated from the date of payment to the date of repayment.
- 49.3 If the contractor fails to comply with the time for completion as stipulated in the tender, then the contractor shall pay to the employer the relevant sum stated in the Contract Data as Liquidated damages for such default and not as penalty for everyday or part of day which shall elapse between relevant time for completion and the date stated in the taking over certificate of the whole of the works on the relevant section, subject to the limit stated in the contract data.

The employer may, without prejudice to any other method of recovery deduct the amount of such damages from any monies due or to become due to the contractor. The payment or deduction of such damages shall not relieve

the contractor from his obligation to complete the works on from any other of his obligations and liabilities under the contract.

- 49.4 If, before the Time for Completion of the whole of the Works or, if applicable any Section, a Taking Over Certificate has been issued for any part of the Works or of a Section, the liquidated damages for delay in completion of the remainder of the Works or of that Section shall, for any period of delay after the date stated in such Taking-Over-Certificate, and in the absence of alternative provisions in the Contract, be reduced in the proportion which the value of the part so certified bears to the value of the whole of the Works or Section, as applicable. The provisions of this Sub-clause shall only apply to the rate of liquidated damages and shall not affect the limit thereof.

50—Bonus

- ~~50.1 If the contractor achieves completion of the whole of the works prior to the intended Completion Date prescribed in Contract Data the Employer shall pay to the contractor a sum stated in Contract Data as bonus for every completed month but subjected to maximum amount as stated in Contract Data; which shall elapse between the date of completion of all items of works as stipulated in the contract, including variations ordered by the Engineer and the time prescribed in Clause 17.~~

- ~~50.2 Bonus shall be paid only to works amounting to above INR 5 crore with time limit of the works is equal or more than 6 months. The bonus would be paid as under~~

% of Time Saved	% of Initial Contract Price entitled for Bonus
50 %	5%
40 %	4%
30 %	3%
20 %	2%
10 %	1%
Less than 10%	0%

51.—Advance Payment.

- ~~51.1 The Employer shall make advance payment (not to be paid less than two installments except in special circumstances for which the reason to be Recorded in writing) to the Contractor of the amounts stated in the Contract Date by the date stated in the Contract Date, against provision by the Contactor of an Unconditional Bank Guarantee in a form and by a bank acceptable to the Employer in amounts and currencies equal to be at least 110% of 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. The Mobilization advance would be deemed as interest bearing advance at an interest rate of 10 % to be compounded, quarterly.~~

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

~~51.3 The advance payment shall be repaid by deduction proportionate amount from payments otherwise due to the Contractor, following the schedule of completed percentages of the Works on a payment basis. No account shall be taken of the advance payment or its repayment in assessing valuations of work done, variations, price adjustments, Compensation Events, or Liquidated damages.~~

~~51.4 Deleted~~

52. Securities

52.1 The performance Security (including additional security for unbalanced bids) shall be provided to the Employer no later than the date specified in the Letter of Acceptance and shall be issued in an amount and form and by a bank or surety acceptable to the Employer, and denominated in Indian Rupees. The performance Security shall be valid until a date 60 days from the date of expiry of Defects Liability Period and the additional security for unbalanced bids shall be valid until a date 28 days from the date of issue of the certificate of completion.

53. Deleted

54. Cost of Repairs.

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

E. FINISHING THE CONTRACT

55. Completion

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

56. Taking Over

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

57. Final Account

- 57.1 The Contractor shall supply to the Engineer a detailed final account of the total amount that the Contractor considers payable as full and final settlement of all claims under the Contract for items before the end of the Defects Liability Period. The Engineer shall issue a Defect Liability Certificate and certify any final payment that is due to the Contractor within 56 days of receiving the Contractor's account if it is correct and complete. If it is not, the Engineer shall issue within 56 days a schedule that states the scope of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Engineer shall decide on the amount payable to the Contractor and issue a payment certificate, within 56 days of receiving the Contractor's revised account.
- 57.2 If reversal in characteristic of tender (L1 becoming L2) on account of excesses and savings in final account is observed, the Engineer/Employer shall be at liberty to restrict the final payment of BOQ items to the lowest amount evaluated of the bids considering the final quantities and the rates quoted including the rebates if any. Payment of variation items shall however be made at the rates approved by the Employer, within 90 days from the physical completion of work.

58. Operating and Maintenance Manuals

- 58.1 If "as built" drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the Contract data.
- 58.2 If the Contractor does not supply the Drawings and/or manuals by the dates stated in the Contract data, or they do not receive the Engineer's approval, the Engineer shall withhold the amount stated in the Contract Data from payments due to the Contractor.

59. Termination

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

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

1. The contractor stops work for 28 days when no stoppage of work is shown on the current programme and the stoppage has not been authorized by the Engineer
2. The Engineer instructs the Contractor to delay the progress of the Works and the instructions is not withdrawn within 28 days;
3. The Employer or the Contractor is made bankrupt or goes into liquidation other than for a reconstructions or amalgamation
4. A payment certified by the Engineer is not paid by the Employer to the Contractor within 56 days of the date of the Engineer's certificate
5. The Engineer gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Engineer;
6. The Contractor does not maintain a security which is required;
7. The Contractor has delayed the completion of works by the number of days for which the maximum amount of liquidated damages can be paid as defined in the Contract data; and
8. If the Contractor, in the judgment of the Employer has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.

For the purpose of this paragraph: "corrupt practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution. "Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the borrower, and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Borrower of the benefits of free and open competition.

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

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

60. Payment upon Termination

60.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Engineer shall issue a Certificate for the value of the work done less advance payments received up to the date of the issue of the

certificate, less other recoveries due in terms of the contract, less taxes due to deducted at source as per applicable law and less the percentage to apply to the work not completed as indicated in the Contract data. Additional Liquidated Damages shall not apply. If the total amount due to the Employer exceeds any payment due to the Contractor the difference shall be a debt payable to the Employer.

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

61. Property

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

62. Release from Performance

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

F. SPECIAL CONDITIONS OF CONTRACT

63. LABOUR

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

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

64. COMPLIANCE WITH LABOUR REGULATIONS

During continuance of the contract, the Contractor and his sub-contractor shall abide at all times by all existing labour enactments and rules made thereunder, regulations, notification 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 notifications 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 the construction industry are given below. The Contractor shall keep the Employer indemnified in case any action is taken against the Employer by the competent authority on account of contravention of any of the provisions of any Act or rules made thereunder, regulations or notifications including amendments. If the Employer is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for observance of the provisions stipulated in the notifications/bye laws/Acts/Rules/regulations including amendments, if any, on the part of the Contractor, the Engineer/employer shall have the right to deduct any money due to the Contractor including his amount of performance security. The Employer/Engineer shall also have the 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 to time.

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

- A) **Workmen Compensation Act 1923** :- The Act provides for compensation in case of injury by accident arising out of and during the course of employment.
- B) **Payment of Gratuity Act. 1972** :- Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed 5 years service or more on death, the rate of 15 days wages for every completed year of service. The Act is applicable to all establishments employing 10 or more employees.
- C) **Employees P.F. and Miscellaneous Provision Act 1952:-** The Act Provides for monthly contributions by the employer plus workers @ 10% or 8.33% The benefits payable under the Act are :
1. Pension or family pension on retirement or death, as the case may be.
 2. Deposit linked insurance on the death in harness of the worker.
 3. Payment of P.F. accumulation on retirement/death etc.
- D) **Maternity Benefit Act 1951** :- The Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.
- E) **Contract Labour (Regulation & Abolition) Act 1970** : The Act provides for certain welfare measures to be provided by the Contractor to contract labour and in case the Contractor fails to provide, the same are required to be provided, by the Principal Employer by Law. The principal Employer is required to take Certificate of Registration and the Contractor is required to take license from the designated Officer. The Act is applicable to the establishments or Contractor of Principal Employer, if they employ 20 or more contract labour.
- F) **Minimum Wages Act 1948 :-** The Employer is supposed to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the Act, if the employment is a scheduled employment. Construction of Building, Roads, Runways are scheduled employment.
- G) **Payments 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 remunerations 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 matter of transfer, training and promotions etc.
- I) **Payments of Bonus Act 1965** :- The Act is applicable to all establishments employing 20 or more employees. The Act provides for payments of annual bonus subject to a minimum of 8.33% of wages and maximum of 20 % of wages to employees drawing Rs. 3500/- per month or less. The bonus to be paid to employees getting Rs. 2500/- per month or above Rs. 3500/- per month shall be worked out by taking wages as Rs. 2500/- per month only. The Act does not

apply to certain establishments. The newly set-up establishments are exempted for five years in certain circumstances. Some of the State Governments have reduced the employment size from 20 to 10 for the purpose of applicability of this Act.

- J) **Industrial Disputes Act 1947 :-** The Act lays down the machinery and procedure for resolutions of Industrial disputes, in what situations a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.
- K) **Industrial employment (standing Orders) Act 1946 :-** It is applicable to all establishments employing 100 or more workmen (employment size reduced by some of the State and Central Government to 50). The Act provides for laying down rules governing the conditions of employment by the Employer on matters provided in the Act and get the same certified by the designated Authority.
- L) **Trade Unions Act 1926:-** The Act lays the procedure for registration of trade unions of workmen and employers. The Trade Unions registered under the Act have 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 process and provides for regulation of employment of children in all other occupations and processes. Employment of Child labour is prohibited in Building and Construction Industry.
- N) **Inter - State Migrant workmen's (Regulation of Employment & Conditions of service) Act 1979:-** The Act is applicable to an establishment which employs
5 or more inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another state). The inter-state migrant workmen, is an establishment to which this Act becomes applicable, are required to be provided certain facilities such as housing, medical aid, traveling expenses from home upto the establishment and back, etc.
- O) **The Building and Other Construction workers (Regulation of employment and Conditions of Service) Act 1996 and the Cess Act of 1996:-** All the establishments who carry on any building or other constructions work and employ 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 workplace etc. The Employer to whom the Act applies has to obtain a registration certificate from the Registering Officers 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 10 persons or more with aid of power or 20 or more persons without the aid of power engaged in the manufacturing process.
- Q) **Royalty charges-**The contractor shall pay the royalty to the competent authority as per rule. The **royalty** charges paid shall be borne by the contractor and shall not be reimbursed by the Employer.
- R) **Following Pollution control Acts and amendments made thereof from time to time shall be applicable.**
1. Water (Preservation and control of Pollution) Act, 1974
 2. Air (Prevention and Control of Pollution Act 1981
 3. Environmental (Protection) Act 1986

The contractor must commit to adopting Environmental management plan for best energy use, waste management, the reduction of pollution as in EMS (Environmental Management system)ISO-14001-2015

65. ARBITRATION (GCC Clause 24)

The procedure for arbitration will be as follows: -

- 24.1 If the Contractor is of the view that a decision taken by the Engineer was either outside the authority given to the Engineer by the Contract or that the decision was wrongly taken, the decision shall be referred to **#Superintending Engineer** (Higher Authority) (..... Circle) within 14 days of the notification of the Engineer's decision. If the issue is not resolved, any party can refer the matter for conciliation within 15 days from the decision given by the **#Superintending Engineer**.
- 24.2
- (a) For the work up to Rs.100 Cr., if any of the parties is not satisfied with the decision of the **#Superintending Engineer** (..... Circle), both the parties have to refer to the **#Chief Engineer** concerned for the conciliation process.
 - (b) For the work more than Rs.100 Cr., if any of the parties is not satisfied with the decision of the **Superintending Engineer**, both parties have to refer to the **#Secretary, Water Resources Department, Government of Gujarat** for the conciliation process.

If the dispute is not resolved through the conciliation process, contractor may refer the dispute to Gujarat Public Works Contract Dispute Arbitration Tribunal. If the Contractor fails to refer a claim / dispute to the Higher Authority within 14 days of the notification of the Engineer's decision, the Contractor shall not be entitled to any additional payment/claim if he doesn't follow the above sequence in stipulated time. However, during such period, he would not stop the work in any case.

SECTION - 4
CONTRACT DATA

#CONTRACT DATA

Clause Reference With
respect To section 3

Item marked “N/A” do not apply to this Contract.

1.	The Employers is	[CL.1.1]
	Name: Executive Engineer, Deesa Irrigation Division, Deesa	
	Address: Dantiwada Canal Colony, Opp.Anand Hotel, Havai pillar Service Road, Deesa, 385535, B.K., Gujarat.	
	Name of authorized Representative (will be intimated later)	
2.	The Engineer is Deputy Executive Engineer	
	Name of Authorized Representative: Assistant Engineer	
3.	The Defects Liability Period is 3 year from the date of completion.	[CL.1.1&33]
4.	The Start Date shall be 1 st days for the date of issue of the Notice to proceed with the work.	[CL.1.1]
5.	The Intended Completion Date for the whole of the works is 6 months after start of work with the following milestones:	[CL.1.1,17&2]
	Milestone dates: <u>Physical works to be completed Period from the start date</u> Milestone 1 i.e. 25 % 45 days. Milestone 2 i.e. 50% 90 days. Milestone 3 i.e. 75% 135 days. Milestone 4 i.e. 100% 180 days.	[CL.2.2& 49.1]
6.	The Site is located at near Dantiwada, Ta.Dantiwada, Dist.Banaskantha	[CL.1.1]
7.	The name and identification number of the Contract is:	[CL.1.1]
8.	The works consist of “ Carry out Dam body grouting in Non overflow Section of Dantiwada Dam. ” with items as per B.O.Q. The works shall, inter alia, include the following, as Specified or as directed:	[CL.1.1]
	<p>(A) WRD Works</p> <p>Site clearance; setting – out and layout; Construction and Maintenance of all types of dams and its component, earthen dam; spillway; installation of gate; excavation and earth work, approach road, Inspection Bungalows, checkdams, bandhara, T.R., weir, barrages, Flood Protection & Anti Sea Erosion work, canal lining and structures, , CD Works, structure repairing, Jungale cutting, Desilting, etc. other WRD works.</p> <p>(B) Road Works :</p> <p>Site clearance; setting out and layout widening of existing carriageway and strengthening including camber corrections; construction of new road/ Parallel service road; bituminous pavements remodeling/construction of Junctions, intersections, bus bays, lay-bays; supplying and placing of drainage Channels, flumes, guard posts and guard other related items; construction/extension of cross drainage works, bridge, approaches and other related stones; protective works for roads/bridge; all aspects of quality assurance of various components of the works; rectification of The defects in the completed works during the Defects Liability Period; submission of “As- built” drawings and any other related documents; and other item of work as may be required to be carried out for completing the work in accordance with the drawings and the provisions of the contract and to ensure safety.</p>	

(C) Bridge Works

provision of foundations, piers abutments and bearing; prestressed/reinforced cement concrete superstructure; wearing coat, hand railings, expansion joints, approach slabs, drainages spouts/ down take pipes, arrangements for fixing light posts, water mains, utilities etc; provision of suitably designed protective works; providing wing/return walls; provision of road markings, road signs etc.; all aspects of quality assurance; clearing the site and handing over the works on completion; rectification of the defects during the Defects Liability Period and submission of “As-built” drawings and other related documents; and other items of work as may be required to be carried out for completing the works in accordance with the drawings and the provisions of the contract and to Insure safety

(D) Other Items

[CL.1.1]

Any Other Items as required to fulfill all contractual obligations as per the Bid documents.

10. The following documents also form part of the Contract:
_____As per clause 2-3_____ [CL.2.3(9)]
11. The law which applies to the Contract is the law of Union of India [CL.3.1]
12. The language of the Contract documents is English [CL.3.1]
13. Limit of subcontracting 25% of the Initial Contract Price [CL.7.1]
14. The Schedule of Other Contractors [CL.8]
15. The Schedule of Key Personnel As per Annex – II to Section I [CL.9]
16. The minimum insurance cover for physical property, injury and death is Rs. 5 lakhs per occurrence with the number of occurrences limited to four. After each occurrence, the contractor will pay an additional premium necessary to make insurance valid for four occurrences always. [CL.13]
17. Site Investigation report [CL.14]
18. The Site Possession dates shall be from the date of workorder [CL.21]
19. The period for submission of programme for approval of the engineer shall be 21 days from the issue of Letter of Acceptance. [CL. 27.1]
20. The period between program updates will be days. [CL.27.3]
21. The amount to be withheld for late submission of an updated programme shall be Rslakhs [CL. 27.3]
22. The following events shall also be Compensation Events [CL. 44]
Substantially adverse ground conditions encountered during the course of execution of work not provided for in the bidding document.
 - (i) Removal of underground utilities detected subsequently
 - (ii) Significant changes in classification of soil requiring additional mobilization by the contractor, e.g. ordinary soil to rock excavation,
 - (iii) Removal of unsuitable material like marsh, debris dumps, etc. not caused by the contractor.

- (iv) Artesian conditions
 - (v) Seepage, erosion landslide
 - (vi) River training requiring protection of permanent work
 - (vii) Presence of historical, archeological or religious structures, monuments interfering with the works
 - (viii) Restriction of access to ground imposed by civil, judicial, or military authority
23. The currency of the Contract is Indian Rupees [CL. 46]
24. **The formula (e) for adjustment of prices are as under:** [CL.47]
- ✓ If any of the commodities like Cement, Steel or Bitumen are not found applicable in a work, the weight component of that commodities {i.e. 'Cement' (Pc), 'Steel' (Ps) or 'Bitumen' (Pb) as indicated in SBD for the purpose of Price Adjustment} shall be clubbed with the weight component of 'Other Material' (Pm), such that the gross % weight of the components shall remain as 100% .
- R = value of work as defined in Clause 47.1 of Conditions of Contract

Adjustment for labour component

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

$$V_L = 0.85 \times (P_1/100) \times R \times (L_i - L_0)/L_0$$

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

L_0 = The consumer price index for industrial workers for the State on 28 days preceding the scheduled date of opening of technical Bids as published by Labour Bureau, Ministry of Labour, Government of India

L_i = The consumer price index for industrial workers for the State for the month under consideration as published by the Labour Bureau, Ministry of Labour, Government of India.

P_1 = Percentage of labor component of the work.

Adjustment for cement component.

- (ii) Prices adjustment for increase or decrease in the cost of cement procured by the contractor

$$V_c = 0.85 \times (P_c/100) \times R \times (C_i - C_0)/C_0$$

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

C_0 = The all India wholesale price index for Ordinary Portland Cement on 28 days preceding the scheduled date of opening of technical bid as published by the **Office of the Economic Adviser, Department for Promotion of Industry and Internal Trade, Ministry of Commerce & Industry.**

C_i = The all India average wholesale price index for Ordinary Portland Cement for the month under consideration as published by **Office of the Economic Adviser, Department for Promotion of Industry and Internal Trade, Ministry of Commerce & Industry.**

P_c = Percentage of cement component of the work

Adjustment for steel component

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

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

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

S_0 = The all India wholesale price index for steel (**Mild Steel - Long Products Rebars**) on 28 days preceding the date of opening of Bids as published by the **Office of the Economic Adviser, Department for Promotion of Industry and Internal Trade, Ministry of Commerce & Industry.**

S_i = The all India average wholesale price index for steel (**Mild Steel - Long Products Rebars**) for the month under consideration as published by **Office of the Economic Adviser, Department for Promotion of Industry and Internal Trade, Ministry of Commerce & Industry.**

P_s = Percentage of steel component of the work

Note : For the application of this clause, the index of **Mild Steel- Long products Rebars** has been chosen to represent the steel group.

Adjustments of bitumen component

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

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

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

B_0 = The official retail price of bitumen at the IOC depot at the nearest centre on the day 28 days prior to the scheduled date of opening of technical bid.

B_i = The official retail price of bitumen of IOC depot at the nearest centre for the 15th day of the month under consideration.

P_b = Percentage of bitumen component of the work

Adjustment of POL (fuel and lubricant) component

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

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

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

F_0 = The official retail price of High Speed Diesel (HSD) at the existing consumer pumps of IOC at the nearest centre on the day 28 prior to the date of opening of Bids.

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

P_f = Percentage of fuel and lubricants component of the work

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

Adjustment for Construction Machinery

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

$$V_p = 0.85 \times (P_p/100) \times R \times (P_i - P_0)/P_0$$

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

P_0 = The all India wholesale price index for **manufacturer of machinery for mining, quarrying and Construction** for the month under consideration as published **Office of the Economic Adviser, Department for Promotion of Industry and Internal Trade, Ministry of Commerce & Industry.**

P_i = The all India average wholesale price index for **manufacturer of machinery for mining, quarrying and Construction** for the month under consideration as published **Office of the Economic Adviser, Department for Promotion of Industry and Internal Trade, Ministry of Commerce & Industry.**

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

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

Adjustment of other materials Component

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

$$V_m = 0.85 \times (P_m/100) \times R \times (M_i - M_0)/M_0$$

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

M_0 = The All India wholesale price index (all commodities) on 28 days preceding the scheduled date of opening of technical Bids, as published by the **Office of the Economic Adviser, Department for Promotion of Industry and Internal Trade, Ministry of Commerce & Industry.**

M_i = The All India wholesale price index (all commodities) for the month under consideration as published by the **Office of the Economic Adviser, Department for Promotion of Industry and Internal Trade, Ministry of Commerce & Industry.**

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

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

1. Labour -Pl =	36.04 %
2. Cement - Pc =	5.84 %
3. Steel - Ps =	0.00%
4. Bitumen- Pb %
5. POL - Pf =	0.00 %
6. Plant & Machinery Spares Pp	41.79 %
7. Other Materials - Pm=	16.33 %

Total	100 %

25. The proportion of payments retained (retention money) shall be 6% {CL. 48} from each bill subject to a maximum of 5% of final contract price.
26. Amount of Liquidated damages for delay in completion of works For Whole of work {CL.49} (1/2000)th of the Initial contract price, rounded off to the nearest Thousand, per day. For sectional Completion (wherever specified In item 6 of Contract data) (1/2000)th of initial contract price for #5 km Section, rounded off to the nearest thousand per day.

27.	Maximum limit of liquidated damages For delay in completion work	10 percent of the Initial {CL. 49} Contract Price rounded off to the nearest thousand
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28.	Amount of Bonus for early completion	Amount of bonus for early completion of work shall be given as per CL.50 of Section-3
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29.	Maximum limit of bonus for early Completion of work	5 percent of the Contract {CL. 50} Price
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30.	The amount of the advance payment are: {CL. 51 & 52}
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#	Nature of Advances	Amount (Rs.)	Conditions to Be fulfilled
i	Mobilization	10% of the contract Price	On submission of unconditional Bank Guarantee. (to be drawn before the end of 20% of the contract period). The contractor may furnish four bank guarantees of 2.5 % of each valid for the full period.
ii	Equipment	90% for new and 50% of depreciated value for old equipment. Total amount will be subject to a maximum of 5% of the Contract Price	After equipment is brought to site (provided the Engineer is satisfied That the equipment is required for performance of the contract) and on submission of unconditional Bank Guarantee for amount of advance
iii	Secured	Deleted	
	Advance for		
	Non-persish		
	able material		
	Brought to site		

~~(The advance payment will be paid to the Contractor no later than 28 days after fulfillment of the above conditions).~~

~~31. Repayment of advance payment for mobilization and equipment {CL. 51.3}~~

~~The advance loan shall be repaid with percentage deduction from the interim payments certified by the Engineer under the Contract. Deduction shall commence in the next Interim Payment Certificate following that in which the~~

~~total of all such payments to the Contractor has reached not less than 20 percent of the Contract Price or 6 (six) months from the date of payment of first installment of advance, whichever period concludes earlier, and shall be made at the rate of 20 percent **(collectively for both Mobilization Advance and Equipment Advance)** of the amounts of all Interim Payment Certificate until such time as the loan has been repaid, always provided that the loan shall be completely repaid prior to the expiry of the original time for completion pursuant to Clause 17 and 28.~~

32. Deleted

33. The securities shall be for the following minimum amounts equivalent {CL. 52}

As a percentage of the Contract Price:

Performance Security for 5 percent of contract price plus Rs. (to be decided after evaluation of the bid) as additional security in terms of ITB Clause 29.5

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

34. The Schedule of Operating and maintenance Manuals.....N/A. {CL. 58}

35. The date by which “as- built” drawings (in scale as directed) in 2 sets {CL. 58} are required within 28 days of the issue of certificate of completion of the whole or section of the work, as the case may be.

36. The amount to be withheld for failing to supply “as built” drawings {CL. 58} by the Date required is Rs Lakhs.

37. The following events shall also be fundamentals breach of contract: {CL.59.2}
“The Contractor has contravened Sub- clause 7.1 and Clause 9 of GCC”

38. The percentage to apply the value of the work not completed representing {Cl 60} the Employer’s additional cost for completing the Works shall be 20 per cent.

SECTION - 5
TECHNICAL SPECIFICATION

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SECTION :1

GENERAL CONDITIONS

1.0 DEFINITION OF TERMS :-

In constructing these general conditions and contract documents, the following expressions shall have the meaning herein assigned to them unless there is something in the subject or context inconsistent with such constructions.

- (i) The “ Government “ shall mean the Governor of Gujarat and shall unless excluded by or repugnant to the context, include his successors in offices and accepted assigns.
- (ii) The “ Contractor “ shall mean the tenderer whose tender has been accepted by the Government and shall include tender’s legal personal representative, successors and assigns. The “ Sub-contractor “ shall mean the person named in the contract for any part of the work or any person to whom any part of the contract has been sublet with the consent in writing of the Engineer and the legal representatives, successors and assigns of such person.
- (iii) The “ Engineer “ or “ Engineer-in-charge “ or the “ Executive Engineer “ shall mean the Executive Engineer, Deesa Irrigation Division, Deesa, for the time being or such other officer as may be duly authorised and appointed in writing by the Government to act as the Engineer for the purpose of the contract.

The Engineer who is named as final authority for decision shall mean the Superintending Engineer, in charge of the work to whom the Contractor shall have a right of appeal when the contractor is not satisfied with the decision of the Executive Engineer.

- (iv) The “ Chief Engineer “ shall mean the Chief Engineer (CG) & Additional Secretary, Narmada, Water Resources, Water Supply & Kalpasar Department, Gujarat State, Gandhinagar.
- (v) The “ Contract “ shall mean and include the documents specifying invitation for tenders, work and site conditions, General Conditions,

Special Conditions Printed S.B.D. Booklet with all its appendices, and technical specifications, the contract between the contractor and the Government.

- (vi) The “ Specifications “ shall mean the specifications included laid down or implied in the contract documents.
- (vii) The “ Site “ shall mean the lands and the other places, on under in or through which works are to be executed or carried out or any lands or places provided by the Govt. for the purpose of the contract and includes such other are as approved by the Superintending Engineer.
- (viii) “ Construction Plant “ shall mean all appliances, machineries, equipment like stock or things of whatsoever nature together with necessary supplies or upkeep and maintenance required in or about the proper execution, completion or maintenance of the works or temporary works, but does not include materials or other things intended to form or forming part of the permanent works.
- (ix) “ Temporary work “ shall mean all temporary works of every kind requiring in or about the proper execution, completion or maintenance of the work.
- (x) “ Month “ shall mean the calendar month.
- (xi) “ Writing “ shall include any manuscript, type written or printed statement under or over signature and / or a seal as the case may be.
- (xii) “Tendered rates” shall mean the estimated rates entered in work in Bill of Quantity of the tender reduced or increased by the percentage entered by the contractor in tender for works and accepted by the Government.
- (xiii) Tender for works and accepted by the Government.

Dated signature of Contractor

**Executive Engineer
Deesa Irrigation Division,
Deesa**

SECTION : 2

WORK & SITE CONDITION

1.0 WORK TO BE EXECUTED UNDER THIS TENDER:

The present tender cover the work of Carry out Dam body grouting in Non overflow Section of Dantiwada Dam. The above information is only a general out line and dose not in any way limit the scope of work under this tender. No claim shall be entertained if any of the items or individual works are deleted or minor charge in location after tender is accepted.

- 1.2 No extra rate over tender rate shall be payable out side the terms of tender agreement for variation of quantities on any account. Tendered rate shall be inclusive of all the expense to complete the work as per Schedule 'B'

2.0 LOCATION :

- 2.1 The location of work is shown in Index plan included in the tender drawing. The site of work under this tender is situated Nr. **Village Dantiwada, Ta.Dantiwada Dist.B.K.**

3.0 COMMUNICATION :

- 3.1 The nearest town is Palanpur, with a population of about 150000 and work site is situated near the Village Dantiwada, Ta. Dantiwada, Dist.Banaskantha.
- 3.2 The nearest railway station is Palanpur and is on Palanpur-Gandhidham railway line.
- 3.3 The nearest post office and telephone office at Dantiwada which is situated at a distance of about 5 km. from site. There is also a branch of state Bank at Dantiwada.

4.0 LABOUR, HOUSING ,WATER SUPPLY AND DRAINAGE

- 4.1 Some unskilled labour may be available locally but skilled labour will hardly be available in required numbers at work site for this type of work. The contractor shall however make his own inquiries and arrangement for skill and unskilled labour.

- 4.2 No local housing is likely to be available. The contractor should plan for suitable housing for his staff and labour within the area as may be available to him on rental basis.
- 4.3 The contractor will have to make his own arrangement of water supply for his work and camp. The contractor shall have to make his own arrangement for pumping, purification, installing pipeline etc. as necessary at his own cost.
- 4.4 Suitable and adequate arrangements shall be made by the contractor for drainage of domestic and rain water around his camp and the work spots.
- 4.5 The contractor shall be responsible for maintaining law and order in his camp and on his work by keeping, Watchmen and other person as required “Unauthorized or Undesirable persons” shall be excluded from the camp and from the works., if in the opinion (which shall not be questioned) of the Engineer any employee or agent of the contractor misbehaves and/or causes obstruction in the proper execution of work or otherwise make himself undesirable the contractor shall on receipt of the instruction to do so.

5.0 MEDICAL AID :

- 5.1 The nearby Govt. dispensary is at [Dantiwada](#) moreover there are private dispensaries also at village [Dantiwada](#) etc. which are nearer to the site of work.
- 5.2 The contractor shall also provide at his own cost first aid arrangement at the various work spots in accordance with the labour rules and regulations and as may be directed by the Engineer in charge.

6.0 POST, TELEGRAM AND TELEPHONES:

- 6.1 There is a general post office at [Dantiwada](#) is **5 km** away from this work. There is telephone exchange at [Dantiwada](#) is **5 km** away from this work.

7.0 CLIMATIC CONDITION:

- 7.1 The work area is situated in relatively medium rainfall zone. The rainy season commence normally from the middle of June and last up to end of September. It has been observed that works are required to be totally closed in monsoon

but in the part of it, can be continued with precautions in dry spells during monsoon.

8.0 SUPPLY OF PATROL AND DIESEL:

- 8.1 The contractor is advised to make his own arrangement for his requirements of patrol and diesel. The nearest consumers pump is available at **nearby 10 km.**

9.0 MATERIALS:

- 9.1 Cement shall be provided by the contractor as per actual requirement on site of work or as per provision of Schedule “A” shall be followed. The cement is to be purchased from the manufacturer who manufactures the cement as per I.S. Specification. Necessary test results should be produced before utilization in the work. The purchase bill will have to be produced to the department with each R.A.Bill.
- 9.2 Sand is available in River Banas near site with average lead of 20 km at Deesa. However, screening will be necessary to obtain required gradation for all work.
- 9.3 The above information is given for general guidance to the tenderer and it does not in any way limit the performance of work under this tender, The tenderer shall have to make his own arrangement of the quality and the quantity of the construction materials as also requiring the accessibility to the structures, locations nature of work etc. Department does not bind itself to any conclusion or towards any conclusion that may be made by the tenderer in this respect from this information and no claims on this account shall be entertained.

10.0 LOCATION OF SUB-DIVISION/DIVISION OFFICE.

- 10.1 The office of the Executive Engineer, Deesa Irrigation Division, DEESA, is located at : Dantiwada Canal Colony, Palanpur-Deesa Highway, Deesa and can be contacted on Office Phone No.(02744) 220071, Deesa. The sub-division office in charge of the work Namely DEPUTY EXECUTIVE ENGINEER, DANTIWADA DAM WORKS SUB DN.NO.1, DEESA

Dated signature of the Contractor

**Executive Engineer
Deesa Irrigation Division,
Deesa**

SECTION : 3

SPECIAL CONDITION

1. Back ground:

Dantiwada dam is constructed across river Banas near village Dantiwada of Dantiwada Taluka of Banaskantha District, way back in 1965. The gross storage capacity, Live storage capacity and dead storage capacity was 464.381 MCM, 444.701 MCM and 19.68 MCM. respectively, The project benifits the 44517 Ha. command of Banaskantha & Patan District. The silt study was carried out in June 1991 and after the silt study the reservoir capacity is 408.429 MCM, 398.98 MCM and 9.911 MCM, Gross, Live & dead storage respectively.

The masonry spillway was with 11 Nos. radial gates is constructed in river gorge portion and earthen flanks on either banks. As the Dam is constructed near Semi arid region of Kutchh and South Rajasthan, where water is scare, the rainfall is in sufficient and irregular hence the reservoir does not fully impounded every year. In fact the reservoir filled up to FRL only Seven time since its existance of 37 years, The main purpose of the project is irrigation and partial flood control.

Scope & Objective:

The objective is to collecting 150 mm dia and 54 mm dia core samples by drilling with storing of sample in core boxes and also carry out packer permeability test in Dantiwada dam for evaluation of in situ properties of masonry and foundation rock for conducting stability analysis of Dantiwada dam. Borehole videography shall also be conducted to understand the cracks and fissures of the masonry dam. The scope of the said work is limited to sample collection and colgrouting the bores after the collection of said samples.

2. Scope of Services, Tasks (Components) and Expected Deliverables:

- (a) Mobilisation of all necessary equipment and personnel to site of work and demobilisation of the same.
- (b) Carrying out Drilling Nx size hole with hydraulic feed core drilling machine in UCR Masonry/Concrete and foundation rock of dam portable type for grouting on non overflow section including redrilling with all tools, plants, machinery etc with suitable type of equipment method including mobilisation of machineries and by suitable means as per site condition etc. complete. (a) upto 50 mts of Depth
- (c) Carrying out Cement grouting with ultrafine flyash, silica fume and non shrink admixture at nominal pressure upto 3 kg/sq.cm as required in stages of maximum 3 mts or as per site condition including cost of all labour, plants, mobilisation of machineries and consumables..
- (d) Providing, supplying and applying Solvent-free, low-viscosity, polyurethane-based duromer resin for rigid sealing and filling of cracks, joints and cavities in structural and civil engineering under dry, water-bearing and high-pressure water-bearing conditions as per direction of Engineer-in-charge including carting of material to Dharoi dam, labour charges, taxes as per prevailing norms of government etc complete.
- (e) Carrying out Packer Permeability test for water intake analysis with inflatable packers at required pressure and conducting tracer dye test as per the directions of Engineer in charge with all consumables , materials , etc complete
- (f) Providing and supplying corebox of GI made suitable for storage of cores having dia of 75 mm, four nos of compartment and total length of core box should be 1.00 mt for easy handling as directed by engineer-in-charge

including carting to Dharoi dam, labour charges taxes as per prevalent norms of government etc. complete.

- (g) Carrying out videography of the predrilled boreholes of 75mm dia from the dam top with digital all weather camera with LED, Recorders, Cables , Extension rods , clamps , brackets etc including providing the result in soft copy in CD or Pendrives 3 Sets Videography shall record all internal cracks and visible fissures, deformities with live recording complete.

2. Reporting Requirements and Time Schedule for Deliverables

- (a) Reports, drawings, charts, raw data, Details of work etc. shall be submitted as directed by Engineer-In-Charge. The report will contain a description of the methodology, recorded data, data processing details and final results
- (b) The reports shall be submitted in hard copies (3 no's) as well as in CDs after completing the study
- (c) Date of submission of results shall be within one month of the completion of field data acquisition
- (d) The results shall be submitted to the SE/Chief Engineer (Civil).

Total time period for the proposed works: 6 months

3. Client's Input and Counterpart Personnel

- (a) Services, facilities and property to be made available to the Consultant by the Client:
 - (i) Available drawings and other input data
 - (ii) Assistance by the site officials to the extent possible
 - (iii) Professional and support counterpart personnel to be assigned by the Client to the Consultant's team:

Executive Engineer in charge of the dam and his team for supervision of site inspection and tests.

4. Eligibility & Qualification Criteria

- (a) Similar work experience: The firm should have completed at least One Similar work involving Drilling of exploratory bore holes through Masonary/Concrete Dam for Collecting 150 mm Dia & 54 mm Dia Cores/ Borehole samples and grouting, Videography/ Required Testing in Dam body in last Five years starting from 1st April 2021. The firm should submit the details with work order and completion certificates.
- (b) **Key Personnel:** Team Composition & Qualification Requirements for the Key Experts (and any other requirements which will be used for evaluating the eligibility).

Item No.	Position/specialization	Relevant academic qualification	Minimum years of relevant work experience
1	Contractor's Representative / Project Manager-1 (One)	M.Sc. (Geologist) or M.Tech. (Geotechnical Engineer)	15-year Exp. (10 years on Hydraulic Core Drilling work)
2	Site Engineer-1 (one)	BE (Civil)	5-yearExp. (3 years on Hydraulic Core Drilling work)
4	Driller operator (one)	Diploma in Civil	2 years on Hydraulic Core Drilling work
5	Quality Control Engineer (one)	BE (Civil)	2 years on Hydraulic Core Drilling work

Note: (Academic Qualification certificates are to be attached to detailed resumes showing the relevant experience of the technical staffs in domain of expertise or Affidavit regarding deployment of key personnel having requisite academic qualification and relavant work experience.

(c) Equipment:

No.	Equipment Type and Characteristics	Minimum Number required
1	Full set of Hydraulically operated rotary diamond core drilling Equipment	2
2	Generator	2
3	Colgrout mixer	1
4	High Pressure Water Pump	1
5	Full Set of Permeability Test Equipment	2

Note: It is mandatory to provide documents of Ownership/Lease agreement of above mentioned equipments. "Form for Equipment" must be prepared for each equipment. Affidavit in place of Agreement regarding availability of equipment i.e. rented/ leased/ specially manufactured is acceptable.

(a) Specific Construction & Contract Management Experience:

The Contractor shall have executed minimum 63mt of Drilling of exploratory bore holes through Masonary/Concrete Dam for Collecting 150 mm Dia & 54 mm Dia Core using Diamond Drilling (Rotary Non Vibrational Drilling).

9. Definition of Similar nature of work:

A minimum number of contract that has been successfully completed of Work involving Drilling of exploratory bore holes through Masonary/Concrete Dam for Collecting 150 mm Dia & 54 mm Dia Cores/ Borehole samples and grouting, Videography/ Required Testing in Dam body for at least last Five years starting 1st April 2021.

10. Mode of Measurement

Measurement shall be carried out as per Schedule-B

11. Payment Condition

Running payment should be paid after completion of field work, all testing & Sample collection work as specified by project authority.

Final bill should be paid after submission of all reports and all specified work in Tender.

Dated signature of Contractor

**Executive Engineer
Deesa Irrigation Division,
Deesa**

SECTION: 4

List of I. S. Code and other publication

1.0 Applicable Publications.

Generally Bureau of Indian standard codes (latest version of I. S. code) shall be followed for all items of works, Wherever such code does not exist, the reference shall be taken from other technical publications as directed by Engineer- In- Charge.

1.1 Indian Standards and Other Publications : (for Earthwork)

1	IS: 1498 -1970	Classification and identification of soils for general engineering purposes (first revision) (Amendment Nos.1 and 2)
2	IS: 2809 -1972	Glossary of terms and symbols relating to soil engineering (first revision).
3	IS: 3764 -1966	Safety code for excavation work (Amendment No. 1)
4	IS: 7293 -1974	Safety code for working with construction machinery.
5	IS: 4701 -1982	Code of practice for earthwork on canals (first revision)
6	IS: 1720 -1978 (Part I to xx)	Methods for testing of soils
7	IS: 2720 -1983 (Part - I to X & Part 14)	Methods of test for soils
8	IS: 1888 -1982	Methods of load test on soil(second revision)
9	IS: 2131 -1981	Method of standard penetration test for soils (first revision)
10	IS: 5529 -1985 (Part-I)	Test in overburden (first revision)
11	IS: 7894 -1975	Code of practice for stability analysis of earth dams (Amendment-No.1)

12	IS: 8237 -1985	Code of practice for protection of slopes for reservoir embankments (first revision)
0 -1	U.S.B.R. (United State Bureau of Reclamation)	Earth manual (Second edition 1974, reprinted 1985)
0 - 2	Central Water commission	Safety manual

1.4 Indian Standards and Other Publications: (for other work)

1	IS:458	Specification for Concrete pipes (with and with out reinforcement (third revision)
2	IS:783	Code of practice for laying of concrete pipes (first revision)
3	IS:3597	Methods of test for concrete pipes (first revision)
4	IS:1239	Mild steel tubes, tubular and other wrought steel fittings; Part-I mild steel tubes (fourth revision)
5	IS: 3114	Code of practice for laying of cast iron pipes (first revision)
6	IS:1592	Specification for asbestos cement pressure pipe (third revision)
7	IS:1630	Code of practice for laying of asbestos cement pressure pipes.
8	IS:8794	Cast Iron detachable joints for use with Asbestos cement pressure pipe (first revision)
9	IS:6163	Centrifugally cast (spume) iron low-pressure pipes for water, gas and sewage (first revision)
10	IS:1838	Preformed filler for expansion rest in concrete pavement and structures (on extruding and resilient type)
11	IS:5382	Rubber sealing rings for gas mains, water mains and sewers (first revision)

12	IS:1542-1977	Specification for sand for plaster (first revision)
13	IS:2116-1980	Specification for sand for masonry mortar (first revision)
14	IS: 2250-1981	Code of practice for preparation and use of masonry mortar (first revision)
15	IS:1597-1967	Code of practice for construction of stone masonry
16	IS:1597-1967 (Part-I)	Rubble stone masonry
17	IS: 4101-1967 (Part-I)	Stone facing
18	IS: 7779-1975 (Part-I/Sec.2)	Gujarat state, section 2 Engineering properties of building stones
19	IS: 8381-1977	Recommended practice for quarrying stones for construction purposes
20	IS:1127-1970	Recommendation for dimensions and workmanship of natural building stones for masonry work (first revision)
21	IS:1129-1972	Recommendation of dressing of natural building stone (first revision)
22	IS:1123-1975	Methods of identification of natural building stone (first revision)
23	IS: 4121-1967	Methods of test for determination of water transmission rate by capillary action through natural building stones
24	IS: 4122-1967	Methods of test for surface softening of natural building stones by exposure to acidic atmosphere
25	IS: 5218-1969	Method of test for toughness of natural building stones

26	IS:1706-1972	Methods of test for determination of resistance to wear by abrasion of natural building stones (first revision)
27	IS: 4348-1973	Methods of test for determination of permeability of natural building stones (first revision)
28	IS:1121-1974 (Part 1 to 4)	Methods of test for determination of strength properties of natural building stones (first revision)
29	IS:1122-1974	Methods of test for determination of true specific gravity of natural building stone (first revision)
30	IS:1124-1974	Methods of test for determination of water absorption, apparent specific gravity and porosity of natural building stones (first revision)
31	IS:1125-1974	Methods of test for determination of weathering of natural building stones (first revision)
32	IS:1126-1974	Methods of test for determination of durability of natural building stones (first revision) (Amendment No.1)

Dated signature of Contractor

**Executive Engineer
Deesa Irrigation Division,
Deesa**

SECTION: 5
MATERIAL SPECIFICATION

M - 1 CEMENT :-

- 1.1 Only Ordinary Portland Cement of grade 43 or 53 shall be used conforming to I.S. 8112 - 1989 and I.S. 12269 - 1987 respectively (or it's latest version) for the entire work under the tender in all respects and shall be procured in bulk / bag. the contractor shall have to make his own arrangement to procure the cement (bearing I.S.I. mark & which Cement brand / Company should be approved by department) directly from the manufacturer / authorized Dealer of Cement Company.

The contractor shall arrange a suitable & adequate infrastructure for procuring, conveying with loading & unloading and proper storing the same to the site of work at his own cost with sufficient quantity for advance planning of work to be done in next fifteen days as approved by the Engineer-in-charge of the work, so that Deptt. shall be conduct minimum required test to ascertain its quality. For verification of such purchase, the contractor shall have to produce all the bills of manufacturer / authorized dealer's along with testing details (i.e. manufacturer's test result conducted in the it's Q.C. laboratory for each batch of cement which is brought to the work site) to the Engineer-in-charge of the work, so that works can be allowed if manufacturer's lab. result are found OK till the receiving of test results from approved lab. of NWRD.

- 1.2 All cement shall be stored in dry, water tight stored shade, facilities to protect cement from dampness & properly ventilated structure. In case of storage of cement bag, the floor on which cement is to be stored shall be raised at least 30cm. above ground level & the bags shall not be piled more than 10 bags height and shall be arranged in headers & stretches fashion as close as possible. The Contractor shall be responsible for proper storage of cement and if any damage or deterioration there in, shall be responsible for the change or removed at his own cost.

Cement should be used in the work, in order of receipt to the store/site, for this purpose, such consignment it arrives should be stacked separately and play card bearing the date of arrival should be pinned to the pile. The arrangement of storage and utilization shall be such that to ensure the utilization of the cement in order of its arrival at the storage and the contractor shall maintain updated record which would at any time show the date of receipt and proposed utilization of cement laying in the store at the site.

The contractor shall provide a double locking arrangement for the store and the key of one lock will remain with the Engineer-in-charge of the work or his authorized. The Engineer-in-charge shall any time have an easy access to the store and the site of the work for checking. The Engineer-in-charge or his authorized shall have authority to check and examine the method of storage, records, accounting and security provided by the contractor. The Contractor shall produce the proof by way of record, books, return, Performa etc. maintain by his staff on site, on demand from Engineer-in-charge of the work or his authorized and the contractor shall at all time keep this records update to enable to Engineer-in-charge of the work or his authorized to apply the check may desire to impose.

- 1.3 The cement brought by the contractor at the site, department shall be done sampling as per I.S. 3535 (or latest version of I.S.) & sending it in approved lab. of Depptt. for testing as per I.S. 4031, 4032 (or latest version of I.S.). The contractor shall be arrangement for sampling work & it's submitted to the Government Laboratory or Govt. approved laboratory at his own cost. **All testing charges shall be borne by the contractor.** The testing shall be done for each consignment received at the site. The cement consignment shall be more than 50tons or part thereof; each consignment shall be stacked separately.
- 1.4 The cement not satisfying the criteria as per I.S. 8112 for grade 43 and I.S. 12269 for grade 53 shall be rejected and such stack of cement shall be removed immediately from the site of work. No extra cost either for testing

or for rejected cement shall not paid to the contractor. No cement shall be used for the work without being tested and such work shall not be paid by the Engineer-in-charge and shall be removed at contractor's own cost. The results of the cement should be submitted by the contractor as and when required by the Engineer-in-charge or his authorized.

- 1.5 The samples of cement older than 90days shall be tested by the Quality control Unit of GERI at Gandhinagar or Baroda at the contractor's cost. If the test results are in accordance with I. S. specification then and only then the Engineer-in-charge will permit to use such cement. The cement older than 180 days shall not be permitted to be used for the work.
- 1.6 A regular day to day account of cement received and consumed / used in the work, together with the particulars tender item & quantity of each of the work shall be maintained in ink by the responsible representative of the department and shall be signed both i.e. by the departmental representative as well as the contractor, after proper verification at the end of the day's work. The accounting shall be shown to the inspecting officer when asked for. The Engineer-in-charge of the work or his authorized shall have the authority to verify the stock and check on the consumption in any manner he thinks proper. The volume of one bag cement weight 50kg. shall be considered as 0.0342cum. for mixing in concrete / mortar.
- 1.7 **Frequency for Cement testing** (physical properties) is as under, as per IS:3535- 1986.

Weight of lot in tonne	No. of Sample to be taken	Remarks
Up to 50	1	(1) For sample (15kg. of cement) taken from 2% bag out of total bag of consignment.
51 to 100	2	
101 to 200	3	
201 to 300	4	
301 to 500	5	

501 to 1000	6	
1000 to 1300	7	

1.8 The following Test with required results are required for Physical properties of Cement.

Requirements of Test		Requirements for Test Results	
		43 Grade Cement (IS-8112)	53 Grade Cement (IS12269)
A. Physical Test (as per I.S. 4031 – 1988)			
Specific Surface area (in m ² /Kg)	Fineness	Min.225	Min.225
Standard Consistency (in %)		Above 30	Above 30
Setting Time (in minutes)	Initial	Not less than 30	Not less than 30
	Final	Not more than 600	Not more than 600
Soundness	(a)By Le-Chateller (in mm)	Not more than 10	Not more than 10
	(b)By autoclave (in %)	Not more than 0.8%	Not more than 0.8%
Compressive strength (in N/mm ²)	03 days	Not less than 23	Not less than 27
	07 days	Not less than 33	Not less than 37
	28 days	Not less than 43	Not less than 53

Rejection :- Cement shall be rejected if it does not comply with any of requirement of above specification.

M – 2 FINE AGGREGATES : (Sand)

All the fine aggregates shall conform to IS: 383-1970 or its latest version and as directed by the Engineer-in-Charge. Sand to be used shall be natural as obtained from the river bed and the maximum size shall be limited to 4.75mm. The Sand shall be obtained from Banas river bed or from any other suitable sources as approved by Engineer -in -charge.

- 2.1 The sand shall consists of hard, dense, durable, uncoated siliceous gritty materials. It shall be free from injurious materials of dust, lumps, soft and flaky particles, shale, alkali-organic matter, loam, mica, earth, clay and other deleterious substances. The maximum size of sand particle shall be limited to 4.75mm. The F.M of the sand to be used in concrete / masonry shall be ranging between 2.20 to 3.0.

The maximum percentage of each of the deleterious substances in sand as delivered to the mixer for use in concrete, mortar etc. shall not exceed the following values.

(a) Limits of deleterious materials.

I	Coal & lignite	1% by weight
II	Clay lumps	1% by weight
III	Material finer than 75 micron I.S. sieve	3% by weight
IV	Shale	1% by weight
V	Total percentage of all deleterious material (except Mica)	5% by weight

(b) Sand shall be free from injurious amount of organic impurities. Sand that are producing a colour (obtained by dissolving 9 grams of chemically pure (c.p.) ferric chloride and 1 grams of c.p. cobalt chloride in 100 ml of water to which one-third ml of hydro-chloric acid has been added) darken than the standard in the test (organic test) for organic impurities shall be rejected.

- 2.2 Fine aggregates shall be tested for their gradation, fineness modulus, specific gravity, water absorption, soundness, deleterious constituents, petrographic analysis and alkali aggregate reactivity.

The following testing frequencies shall be maintained for the same source of fine aggregates.

Sr. No.	Name of test	Minimum number of test specified
1	Gradation for Fineness Modulus (F.M.)	If the variation of daily F.M. values is more than 0.1, then frequencies may be increased.
2	Silt Content	Daily one test
3	Moisture Content	Daily one test
4	Sp. gravity, water absorption, Soundness	Once in a concreting working season.

- 2.3 Due allowance shall be made if; the sand is wet at the time of mixing, the exact extent of such allowance or bulkage shall be depend upon the quantity of moisture in sand and it shall be decided by the Engineer-in-Charge.

2.4 **Gradation :-**

- (a) Sand shall be well graded so as to impart good workability and good finishing. Sieve analysis of natural sand shall confirm to the following limits of gradation.

IS Sieve	Cumulative percentage of weight passing through sieve	
	Zone – II	Limited to
10 mm	100	100
4.75 mm	90 – 100	92 -- 100
2.36 mm	75 – 100	75 -- 92

1.18 mm	55 – 90	55 -- 82
600 micron	35 – 59	30 -- 64
300 micron	8 – 30	10 -- 40
150 micron	0 – 10	3 -- 10

(b) Deviations from the prescribed limits of cumulative percentage retained on 10mm, 4.75 mm, 2.36 mm, 1.18 mm, 600 micron, 300micron and 150 micron IS sieves shall be permitted provided total of such deviations do not exceed 5%. (c) No deviation from the prescribed limit shall be permitted for cumulative percentage passing through 600 micron IS Sieve.

Fineness Modules:-

(a) The sand shall have a fineness modules ranging between 2.20 to 3.0 subject to the gradation specified in the preceding paragraph or as per mix design etc..

(b) The modules shall be computed by adding cumulative percentage of the sand retained on the standard screen from 4.75 mm, 2.36mm, 1.18 mm, 600micron, 300 micron, 150 micron IS sieves (as M.T. standard screen from 3/16” and no. 480, 120, 60, 30, 15 sieve) and dividing the sum by 100. Gradation of sand shall be so controlled that the FM of at least 9 out of 10 consecutive test samples of finished and shall not vary more than 0.10 from the average 10 tests samples.

(c) Any deviation from the specified range of gradation and fineness modules shall not be permitted to be used in work, without the written permission of the Engineer-in-charge. Any deviation from the specified range of the fineness modules will not be tested for clay, organic impurities and other deleterious substances as laid down in I.S. 383.

(d) Details regarding Fineness Modulus for sand available at different locations in river bed can be seen the same by the office of the Executive Engineer, Sujlam Suflam Division No.-1, Deesa. It may be pointed out in

particular that the large quantity of sand is available in river Sabarmati. The Contractor shall procure approved quality of sand from any other source if required at their own cost. The contractor shall procure approved quality of aggregates from any other sources for which no extra claim shall be entertained.

2.5 Frequency of test shall be as per table of para 2.2 / at change of source of fine aggregate / one test for each 250 cumt. of sand or part there of.

2.6 **Storage:-** All sand shall be stored on the site of work in such a manner as to prevent intrusion of foreign matter.

M-3 Ultrafine Fly Ash :

Ultrafine Fly Ash (UFFA) is a highly pozzolanic, refined material with average particle sizes ranging between 3 to 5 microns, significantly finer than cement and conventional fly ash, often compliant with IS 19058:2024 or ASTM C618 standards. It features high amorphous SiO₂ content (>33%), glassy spherical particles, and a high surface area that improves particle packing, increasing long-term strength and durability in concrete while acting as a partial cement replacement.

1. Physical Properties

Particle Size (Mean): 3-5 μm (some grades have $d_{90} < 4.6 \mu\text{m}$).

Physical Structure: Glassy, spherical particles, acting as a "solid-particulate" plasticizer.

Specific Gravity: Typically 2.50-2.65.

Surface Area: Very high compared to OPC (Ordinary Portland Cement), promoting superior pozzolanic reactivity.

Color: Light to dark grey.

2. Chemical Composition

Ultrafine fly ash usually contains high levels of silica, alumina, and iron oxide, with low lime content (typically Class F, though some Class C exists).

Silica (SiO_2): $\sim 30\% - 40\%$.

Alumina (Al_2O_3): Generally $15\% - 25\%$.

Calcium Oxide (CaO): Varies, but usually lower than $10 - 15\%$ in Class F.

Loss on Ignition (LOI): Usually $< 6\%$, often much lower ($< 3\%$) to meet stricter, high-quality standards. E ScienceDirect.com +4

3. Key Standards

India: IS 19058:2024 (Specifies requirements for ultra-fine fly ash).

International: ASTM C618 Class F / Class C and BS EN 450-S.

4. Advantages & Applications

High Replacement Levels: Can replace $10\% - 30\%$ of cement

4. Advantages & Applications

High Replacement Levels: Can replace $10\% - 30\%$ of cement, with high-performance mixes exceeding 40% in specialized applications.

Performance Enhancement: Dramatically reduces porosity, improves water tightness, increases ultimate strength, and improves workability due to the filler effect.

Applications: Used in high-strength concrete, self-compacting concrete, high-performance mortar, and as a durable coating in mining.

5. Common Product Specifications (e.g., Suppepozz P500)

Particle Size: Mean diameter 3.9 to 5 microns.

Packing: Bimodal distribution for better void filling.

Performance: Provides high early and late-stage pozzolanic activity.

M4 Silica fume :

Silica fume and non-shrink admixtures are high-performance construction materials used to enhance concrete strength and stability. Silica fume (ASTM C1240) is an ultrafine pozzolanic powder ($> 85\% \text{SiO}_2$) that increases strength/density, while non-shrink admixtures (ASTM C1107) are expansive agents that compensate for drying shrinkage, crucial for grout, repair mortar, and structural applications.

1. Silica Fume Material Specification

Silica fume (also known as microsilica) is a byproduct of producing silicon metal or ferrosilicon alloys. It acts as a filler and highly reactive pozzolan.

Standard Specification: ASTM C1240 (Standard Specification for Silica Fume Used in Cementitious Mixtures).

Chemical Composition: Must contain a minimum of 85% amorphous silicon dioxide (SiO₂).

Physical Properties:

Particle Size: Very fine, with an average diameter of 0.1-0.15 μm (approx. 100 times smaller than cement).

Surface Area: Typically 15-30 m²/g.

Bulk Density: As-produced (130-430 kg/m³); Densified (200-600 kg/m³).

Physical State: Light to dark grey powder (dry) or slurry.

Usage: Usually 5-15% by weight of cementitious material.

M5. Non-Shrink Admixture Material Specification

Non-shrink admixtures or grouts are designed to compensate for the reduction in volume (shrinkage) that occurs during the drying and hardening of cementitious mixtures.

Standard Specification: ASTM C1107 (Standard Specification for Packaged Dry. Hydraulic-Cement Grout (Nonshrink)).

Mechanism: Contains expansive agents (often calcium sulfoaluminate or metallic

Physical Properties:

Mechanism: Contains expansive agents (often calcium sulfoaluminate or metallic iron) that cause a slight expansion to counteract shrinkage.

Performance Criteria:

Expansion: Must demonstrate positive expansion in the hardened state, often 0.05% to 0.3% at early ages.

Consistency: Available in fluid, flowable, or plastic forms.

Strength: High early strength and high ultimate compressive strength.

Key Properties:

No bleeding or segregation.

Excellent bond strength to steel and concrete.

Corrosion resistance (if non-metallic).

Key Differences and Combined Usage

Silica Fume improves durability and reduces permeability by filling voids and reacting with calcium hydroxide. It can actually increase drying shrinkage if not

Dated signature of Contractor

**Executive Engineer
Deesa Irrigation Division,
Deesa**

SECTION: 6
ITEM WISE TECHNICAL SPECIFICATIONS

Item No.1 Drilling Nx size hole with hydraulic feed core drilling machine in UCR Masonry/Concrete and foundation rock of dam portable type for grouting on non overflow section including redrilling with all tools, plants, machinery etc with suitable type of equipment method including mobilisation of machineries and by suitable means as per site condition etc. complete. (a) upto 50 mts of Depth

1. This item includes the work of drilling Nx size or specified diameter holes up to a required depth and at particular point as specified in drawings or as stated by the Engineer-in-charge for exploration work. The core shall be carefully taken out and it shall be packed with marking and preserved in non-teak wooden boxes of standard size as per requirement. The item activity includes high degree accurate work as it is an exploration work.
2. This item also includes the work of re-drilling of Nx size diameter or specified diameter holes up to a required depth and at particular point as specified in drawings or as stated by the Engineer-in-charge for exploration work.
3. The drilling shall be permitted by diamond core drills hydraulic feeder machine as per instruction of the Engineer-in-charge with utmost care so not to damage any structure care so as not to damage any structures adjoining or adjacent to drilling.
4. The depth as stated in the drawings/measurement sheets of the estimates shall have to be drilled, but if required, the extra depths shall have to be drilled by the contractor as per site conditions as per instructions of the Engineer-in-charge.

5. Holes shall be vertical or inclined to any direction or horizontal as required and as specified in the drawings. During drilling operation or thereafter, any part or hole caves-in, suitable re-drilling have to be carried out without claiming for any extra cost or payment thereof.
6. The rate quoted for this item shall be deemed to be inclusive of drilling in all formations providing necessary pipe connections required for carrying out such works and allied activities whenever necessary.
7. The drilling work shall be measured in running meters as per actual depths of drilling done after breaking the surface for platform upto depths specified in the drawings. No payment shall be made for extra or unauthorized drilling carried out other than specified place or depths.
8. The rate shall be for a unit of one running meter, includes all above mentioned tasks and operations including plants, machinery, tools and manpower required for the work including its transportation, insurance, taxes, etc. Hence, completed and measured work shall be paid and no extra payment for any task or portion shall be entertained.
9. **Mode of Measurement and Payment:**

Measurement of all works consist of drilling in RM .

Item No.2. Cement grouting with ultrafine flyash, silica fume and non shrink admixture at nominal pressure upto 3 kg/sq.cm as required in stages of maximum 3 mts or as per site condition including cost of all labour, plants, mobilisation of machineries and consumables.

Cement:

Ordinary Portland cement/pozzolona Portland cement 53 grade confirming to IS 8112 or any other suitable grade shall be used as per decided by the engineer-in-charge.

Fly Ash :

pozzocrete or equivalent class F Fly ash conforming to relevant standards applicable for masonry grouting and as approved by Engineer in Charge . Respective Quantity flyash during grouting is to be supplied by Contractor; Rate per MT of grouting is inclusive of quantity of silica fume used. No extra payment should be claimed.

Silica Fume

The material should be composed of silicon dioxide (SiO₂), collected from silicon metal and ferrosilicon. It will react with the Calcium Hydroxide from the cement, which will form more of the Calcium Silicate hydrate, increasing the strength of the concrete/grout mix. Using it will also increase the durability of the concrete/grout mix. Respective Quantity of Silica fume during grouting is to be supplied by Contractor; Rate per MT of grouting is inclusive of quantity of silica fume used. No extra payment should be claimed.

The material should be in compliance with IS 9103 (1999).

The material should conform to relevant standards and shall be as approved by Engineer in charge.

Admixture:

The material should be an admixture for cementations grouts and concrete where a reduced water/cement ratio and positive expansion is required. Applications include bed grouting, duct grouting, non-shrink infilling and jointing. Specification

Performance specification:

All grouting (specify details and areas of application) must be carried out with a cement based grout incorporating a plasticised, expanding powder admixture. The admixture must be iron-free and chloride-free and shall be added to the grout in the proportions 225 g of admixture per 50 kg of cement. The admixture shall provide an expansion of up to 4% in the plastic grout, by means of a gaseous system. The admixture must be stored, handled and mixed strictly in accordance with the manufacturer's instructions.

Respective Quantity of admixture required during grouting is to be supplied by Contractor; Rate per MT of grouting is inclusive of quantity of admixture used. No extra payment should be claimed.

Grout Mix :

The recommended ratio of Grout Mix is Cement : Fly Ash : Silica Fume = 80 : 18 : 12. However the ratio can be changed as per the directions of engineer in charge.

Quality control:

Field laboratory tests shall be conducted regularly on the grout density, viscosity decantation etc.

All records pertaining to drilling water test grouting shall be maintained and submitted periodically in agreed formats. All field observations like return water colour, loss or gain of water drop in rod etc. While drilling and sudden build or drop in pressure inter connection, leakage from surface etc. while grouting shall be recorded regularly and submitted to the concern office.

Stage depth:

Stage depth shall be of 5 mt. in case of either water gain or water loss while drilling a particular stage the drilling shall be suspended at that stage and shall be taken up for colgrouting. All drilling and colgrouting shall be done by descending stage method. A hole shall be drilled for a stage depth of 5mt. and shall be taken up for colgrouting.

The drilled hole shall be washed with clean water through a rigid pipe lowered up to the bottom of the drilled stage depth and continued until return water is fairly clean. In case of water gain washing may not be essential.

Single packer with mechanically expanded rubber rings shall be fixed at the collar of the hole. The minimum diameter of the grout intake pipe shall be 40mm. an assembly with grout intake, bleeder valve pressure gauge with gauge saver, non return valve shall be fixed on the packer for colgrouting.

The hole shall be taken up for colgrouting and shall be colgrouted to refusal at required pressure as detailed under Para grouting. After colgrouting is completed the packer shall be left in position with valve closed on top of the packer to stop the

back pressure and out flow of grout. Packer shall be released only after ensuring that there is no back flow of grout. The hole shall be taken up for subsequent stage drilling and colgrouting only after a minimum of 12 hours of grouting. While drilling or redrilling if any loss or gain of water is observed the drilling shall be suspended and the hole shall be taken for colgrouting. The sequence of drilling/colgrouting/redrilling/drilling/grouting shall be continued till the entire length of the hole is grouted.

Pressure:

The grouting pressure shall be approximately at the rate 0.025 Mpa (0.25 kg/cm²) per meter depth of hole and maximum pressure shall not exceed 2 kg/cm² at any given stage measured at the collar of the hole for initial top 2/3 stages a nominal pressure of 1 kg/cm² shall be applied.

The holes on the outer row(towards upstream face) may be grouted at a slightly lower pressure to restrict the grout travel. The inner rows shall be grouted with pressures as stated above.

Grouting:

All grouting shall be done in descending stage method in stages of 5m.

Grout formulation:

In general neat cement sand grout with fluidifier admixtures for quick setting etc. shall be used for colgrouting.

The grouting shall be started with a neat cement grout consistency of 3:1 water cement ratio switching over to colgrout on ascertain of free flow of grout grouting shall be switched over to colgrouting. Colgrouting shall be started with a colgrout consistency of 1:0.5:0.58 (cement:sand:water) and gradually increased to 1:1:0.58 to 1:1.5:0.58 depending up on the grout intake colgrouting shall be continued till refusal.

Grout preparation:

The required consistency of grout is prepared before commencement of grouting in a high speed colloidal mixer. Measured quantity of water is taken in to the mixer and proportionate quantity of cement by weight is added in to the mixer and allowed

to mix for 2 minutes. The required dosage of admixtures for fluidifying/quick setting shall be added to the grout in to the mixer. The mixed grout is taken to the second mixing drum where required quantity of sand is mixed and the colgrout is taken to the colgrout pump's tank where the grout will be kept agitating. The grout is drawn from the tank by pump and is pumped to the required hole.

Colgrouting procedure:

Colgrouting shall be started with an initial pressure of 0.025 mpa per m depth of hole and shall be increased gradually to the required pressure. Taking in to consideration that the grouting has been carried out in a masonry dam the maximum grout pressure shall not exceed 2kg/cm² at any given stage measured at the collar of the hole. For initial top 2/3 stages a nominal pressure shall be raised gradually as the grout intake rate reduces at a given pressure.

Grouting shall be considered as grouted to refusal when the rate of intake falls down to less than 2liters/minute at the pressure of the particular stage observed over a period of 5 minutes.

Inter connections:

While grouting if any inter connections is observed through any other drilled hole or through the existing porous block pipes or drainage hole or leakage either from upstream or downstream face the same shall be sealed with packer, caulking or any other means and grouting shall be continued till refusal. In case leakages cannot be controlled the grouting shall be suspended and recommenced after 4 to 6 hours. After completion of grouting, the connected hole shall be pressurized till refusal. If the grout has set the connected hole shall be re-drilled for that particular stage and grouted.

Mode of Measurement:

The payment will be paid per MT of grout quantity which includes cement, fly ash, silica fume and admixture.

Item No.3 Providing, supplying and applying Solvent-free, low-viscosity, polyurethane-based duromer resin for rigid sealing and filling of cracks, joints and cavities in structural and civil engineering under

dry, water-bearing and high-pressure water-bearing conditions as per direction of Engineer-in-charge including carting of material to Dantiwada dam, labour charges, taxes as per prevailing norms of government etc complete.

This specification covers the supply and application of a solvent-free, low-viscosity, two-component polyurethane-based duromer resin for high-pressure injection to seal dry, wet, or actively leaking cracks, joints, and cavities in structural concrete at Dharoi Dam. The material must offer high-strength rigid sealing, excellent adhesion to damp surfaces, and durability, applied using specialized high-pressure injection equipment.

1. Material Specifications

Type: Solvent-free, 2-component, polyurethane-based duromer resin.

Viscosity: Very low viscosity (< 200 to 300 cP at 23 degree celcius.) to ensure deep penetration into fine cracks.

Characteristics: Rigid to semi-rigid, non-shrinking, high-strength formulation for permanent structural sealing.

Compatibility: Must adhere strongly to dry, moist, and water-bearing concrete surfaces.

Water Management: Capable of sealing cracks under high hydrostatic pressure.

2. Application Methodology

Surface Preparation: Clean cracks of dust, debris, and loose material using compressed air or water jetting.

Packer Installation: Install mechanical injection packers (non-return) at calculated intervals (150-300 mm center-to-center) along the crack, angled toward the crack plane.

Injection Process:

Active Leaks: If high water flow exists, perform a pre-injection with a quick-foaming polyurethane.

Permanent Sealing: Inject the polyurethane duromer resin using a high-pressure, positive displacement pump.

Procedure: Inject starting from the lowest packer upwards until the resin fills the crack and appears at the next packer.

Finishing: Remove packers after the resin cures (usually hours) and seal holes with high-strength cementitious mortar.

3. Workmanship and Site Conditions

Equipment: The contractor shall use approved high-pressure, single-component positive displacement pumps suitable for rigid PU injection.

Safety: Workers must wear safety goggles, gloves, and protective clothing. Ensure adequate ventilation in confined spaces.

Temperature: Apply within the manufacturer-recommended range (typically +5 degree Celsius to +35 degree Celsius)

5. Quality Assurance

The material must be delivered in original, unopened factory-sealed containers.

The work must be executed as per the directions of the Engineer-in-charge.

Final inspection for leakage under hydrostatic conditions shall be conducted.

Measurement and payment : Kg basis.

Item No.4 Carrying out Packer Permeability test for water intake analysis with inflatable packers at required pressure and conducting tracer dye test as per the directions of Engineer in charge with all consumables , materials , etc complete

1.14 GENERAL:

1.15 Carrying out Packer Permeability test of Masonary/ Concrete/ Foundation Rock at every 3.00 m (10ft) interval as per specification and directions inclusive arranging necessary equipments on site of work etc. complete.

1.16 The water intake or percolation test will be carried out by method known as packer test.

1.17 Rubblr packers of suitable size having required elasticity shall be used.

1.18 The test shall be carried out after drilling the total depth required and conducting the tests from bottom to top. If any other procedure is to be followed the

same should be got approved will in advance from the Executive Engineer-in-charge of the work in writing.

1.19 The entire test shall be carried out only in presence of Engineer-in-charge or his authorized representative.

1.20 Before starting the test, the final of bore hole shall got finally approved from the Engineer-incharge of work. Before starting the test, bore hole shall be filled with water for initial saturation for 2 to 4 hrs. and bore hole will be surged. The contractor shall not claim anything extra for this work.

1.21 After each test, pipe is to be lifted by 3 meters interval and test is repeated until entire hard strata is tested. The item also includes carrying out test in inter trapping layers if met with.

1.22 The test shall be carried out step by step with pressure of 0.25 H, 0.75H & 1.0 H (Where is the difference between the F.R.L. and the mean level of the test section or the ground water level which ever is less of water head. Pressure being increased in the order mentioned or at such other pressure it may be directed by the Engineer-in-charge or his representative.

1.23 The intake will be observed keeping pressure constant for a period not less than 10 minutes.

1.24 If desired by the Engineer-in-charge, tests cycle will be carried for the pressure of 1.0H, 0.75, 0.25H (pressure being reduced in the order mentioned)

1.25 Item also included necessary retuning etc. without any extra cost.

1.26 The entire apparatus and the whole assembly shall be entirely leak proof of and even if a slight leakage observed the apparatus shall be liable for rejection and no claims shall be entertained.

1.27 Completed item Rate shall be inclusive of transport of machinery to site, erection, adjustment, dismantling and shifting to other place of test etc. Water required for operation of intake test completely is to be arranged by the contractor without any extra charge.

Mode of measurement: -

A set of observation for tested section, a pocket of 3.00 mtrs. will be tested, as one test and will be measured accordingly. Unit of payment is per number.

Item No.5 Providing and supplying corebox of GI made suitable for storage of cores having dia of 75 mm, four nos of compartment and total length of core box should be 1.00 mt for easy handling as directed by engineer-in-charge including carting to Dantiwada dam, labour charges taxes as per prevalent norms of government etc. complete.

Contractor has to provide GI core boxes as specified to store and handling of core samples received during core drilling.

Mode of Measurement and Payment:

Measurement for payment is based on Nos. of core boxes supplied.

Item No.6 Carrying out videography of the predrilled boreholes of 75mm dia from the dam top with digital all weather camera with LED, Recorders, Cables , Extension rods , clamps , brackets etc including providing the result in soft copy in CD or Pendrives 3 Sets Videography shall record all internal cracks and visible fissures, deformities with live recording complete

1.0 General:

The work shall be carried out as Carrying out Videography of the predrilled boreholes of 75mm to 150mm dia and upto a depth of 30m from the dam top with Digital All Weather Camera with LED, Recorders, cables, extention rods, clamps, brackets etc. or as directed by Engineer-In-Charge.

The videography shall be in multicolour as per requirement.

The videography shall clearly indicate depth in meters or feets or in both and shall be from top (zero) to bottom.

In case of water filled bore holes, the water shall be made clear by alum or equivalent water clearing chemicals.

Videography shall only be excluded in case of flowing water or gushing water locations in borehole to avoid damages to camera.

The movement of camera in borehole shall be continuous and at specific speed desired and shall be automatically controlled. Manual movement may not be allowed unless required. Videography shall be continuous and along the periphery of borehole.

Entire surface area of borehole throughout its length shall be covered in videography.

The areas of doubt in borehole shall be magnified to maximum extent for a detail study of such locations. Still photos/ Snaps shall also be picked up at required places as indicated.

The report shall contain depthwise configuration including cavities, crevices and unusual formations in borehole with their sizes if possible.

Orientation of videography with respect to dam axis.

1.1 Deliverables and Report Submission

Submission of Draft Reports and Result in soft and hard copies (3 sets)

Videography shall record all internal cracks and visible fissures, deformities with live recording complete.

Report shall consist of all still photographs of critical cracks/cavities/spallings of the Internal surface of the bore hole with interpretation of results shall be classified in Minor, Moderate and Major categories.

2.0 Mode of measurement: -

The rate shall be for a unit of Running meter basis of complete work as directed by Engineer-In-Charge.

**Executive Engineer
Deesa Irrigation Division
Deesa**

SECTION - 6
FORM OF BID

FORM OF BID

Description of the Works:

BID

To :

Address :

1. We offer to execute the Works described above and remedy any defects therein in conformity with the conditions of Contract, specification, drawings, Bill of Quantities and Addenda for the sum (s) of

(-----)

2. We undertake, if our Bid is accepted, to commence the Works as soon as is reasonably possible after the receipt of the Engineer's notice to commence, and to complete the whole of the Works in the Contract within the time stated in the document.
3. We agree to abide by this Bid for the period of 120 Days from the date fixed for receiving the same, and it shall remain binding upon it and may be accepted at any time before the expiration of that period.
4. Unless and until a formal Agreement is prepared and executed this Bid, together with your written acceptance thereof, shall constitute a binding contract between us.
5. We understand that you are not bound to accept the lowest or any tender you may receive.

Dated this ----- day of -----20

Signature ----- in the capacity of -----

----- duly authorized to sign bids for and on behalf of -----

(in block capitals or typed)

Address

Witness

Address

Occupation

SECTION - 7
BILL OF QUANTITIES

BILL OF QUANTITIES

Preamble

1. The bill of Quantities shall be read in conjunction with the Instructions to Bidder, Conditions of Contract, Technical Specifications and Drawings.
2. The quantities given in the Bill of Quantities are estimated and provisional, and are given to provide a common basis for bidding. The basis of payment will be the actual quantities of work ordered and carried out, as measured by the Contractor and verified by the Engineer and valued at the rates and prices tendered in the priced Bill of Quantities, where applicable, and otherwise at such rates and prices as the Engineer may fix within the terms of the Contract.
3. The rates and prices tendered in the priced Bill of Quantities shall, except in so far as it is otherwise provided under the Contract, include all constructional plant, layout, supervision, materials, erection, maintenance, insurance, profit, taxes and duties, together with all general risks, liabilities and obligations set out or implied in the Contract.
4. The rates and prices shall be quoted entirely in Indian Currency.
5. A rate or prices shall be entered against each item in the Bill Quantities, whether quantities are stated or not. The cost of Items against which Contractor has failed to enter a rate or price shall be deemed to be covered by other rates and prices entered in the Bill of Quantities (in case of Item rate contract).
6. The whole cost of complying with the provisions of the Contract shall be included in the items provided in the priced Bill of Quantities, and where no Items are provided the cost shall be deemed to be distributed among the rates and prices entered for the related items of Work.
7. General direction and descriptions of work and materials are not necessarily repeated or summarized in the Bill of Quantities. References to the relevant sections of the contract documentation shall be made before entering rates or prices against each item in the Bill of Quantities.
8. The method of completed work of payment shall be in accordance with the specification for Road and Bridge works. For building works specifications for building are to be followed.
9. Errors will be corrected by the Employer for any arithmetic errors pursuant to **Clause 29** of the Instructions to Bidder.
10. Rock is defined as all materials which, in the opinion of the Engineer, required blasting, or the use of metal wedges and sledgehammers, or the use of compressed air drilling for its removal, and which cannot be extracted by ripping with a tractor of at least 150 kw with a single rear mounted heavy duty ripper.

BILL OF QUANTITIES**(A) Percentage Rate Tender (Up to INR 50 Cr.)****Carry out Dam body grouting in Non overflow Section of Dantiwada Dam.**

It. No.	Description of Item (with brief specification and reference to book of specifications)	Quantity	Unit	Rate in Rs.	Amount in Rs.
1	Drilling Nx size hole with hydraulic feed core drilling machine in UCR Masonry/Concrete and foundation rock of dam portable type for grouting on non overflow section including redrilling with all tools, plants, machinery etc with suitable type of equipment method including mobilisation of machineries and by suitable means as per site condition etc. complete. (a) upto 50 mts of Depth	1646.00	RM	11890.00	19570940.00
2	Cement grouting with ultrafine fly ash, silica fume and non shrink admixture at nominal pressure upto 3 kg/sq.cm as required in stages of maximum 3 mts or as per site condition including cost of all labour, plants, mobilisation of machineries and consumables.	412.00	MT	23932.00	9859984.00
3	Providing, supplying and applying Solvent-free, low-viscosity, polyurethane-based duromer resin for rigid sealing and filling of cracks, joints and cavities in structural and civil engineering under dry, water-bearing and high-pressure water-bearing conditions as per direction of Engineer-in-charge including carting of material to Dharoi dam, labour charges, taxes as per prevailing norms of government etc complete.	750.00	Kg	4200.00	3150000.00
4	Carrying out Packer Permeability test for water intake analysis with inflatable packers at required pressure and conducting tracer dye test as per the directions of Engineer in charge with all consumables , materials , etc complete	138.00	Nos.	3050.00	420900.00
5	Providing and supplying corebox of GI made suitable for storage of cores having dia of 75 mm, four nos of compartment and total length of core box should be 1.00 mt for easy handling as directed by engineer-in-charge including carting to Dharoi dam, labour charges taxes as per prevalent norms of government etc. complete.	206.00	Nos.	2950.00	607700.00
6	Carrying out videography of the predrilled boreholes of 75mm dia from the dam top with digital all weather camera with LED, Recorders, Cables ,	164.60	Rm	4300.00	707780.00

It. No.	Description of Item (with brief specification and reference to book of specifications)	Quantity	Unit	Rate in Rs.	Amount in Rs.
	Extension rods , clamps , brackets etc including providing the result in soft copy in CD or Pendrives 3 Sets Videography shall record all internal cracks and visible fissures, deformities with live recording complete				
	Total Amount Rs.				34317304.00

I/We am/are willing to carry out the work at.....% above/below percent(Should be written in figures and words) of the estimated rate mentioned above. Amount of my /our tender works out as under.

Estimated amount put to tender

Estimated amount put to tender

Deduct.....% below

Add.....% Above

Net

Net

In words

In words

(B) — For Item Rate Tender (For above INR 50 Cr.):

Item No	Description of Item (with brief specification and reference to book of specifications)	Quantity	Unit	Rate		Amount
				In	In	

(A) Total Tendered Amount

(B) Rebate on above tendered amount (if any) % (in figure)

(in words).....

(C) Net Tendered Amount (A-B) (in figure)

(in words).....

#

1	The Contractor shall exhibit a board with brief details of work as directed by the Engineer-In-Charge for which no extra payment shall be made.
2	The labour cess will be deducted as per prevailing rules i.e. 1% of the work done.
3	GST and Income tax TDS will be deducted at a source while making payments of bills
4	In all R.C.C. Items in Rate Analysis Standard Cement Consumption has been taken as per Govt. G.R. NO.: MIS102010/17/K1 Dated:30/07/2018 as stated in S.O.R. therefore in R.C.C. items where there is a change as per actual mix design the cost of difference of cement consumption have been deducted from the rate of original item at the rate of input rate mentioned in all the tender.

SECTION - 8

SECURITIES AND OTHER FORMS

BID SECURITY (BANK GUARANTEE)

WHEREAS, ----- (name of Bidder) (hereinafter called the "The Bidder") has submitted his bid Dated ----- (Date) for the construction of ----- (Name of Contractor hereinafter called "the Bid")

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

SEALED with the Common Seal of the said Bank this ----- day of -----20

THE CONDITIONS of these obligations are:

(1) If after Bid opening the Bidder withdraws his bid during the period of Bid validity
specified in the Form of Bid;

Or

(2) If the Bidder has been notified of the acceptance of his bid by the Employer
during the period of Bid Validity:

A Fails or refuses to execute the Form of Agreement in accordance with the
Instructions to Bidders, if required; or

B. Fails or refuse to furnish the Performance Security, in accordance with the
Instructions to Bidders; or

C. does not accept the correction of the Bid Price pursuant to Clause 27
(Correction of Errors)

We undertake to pay to the Employer up to the above amount upon
receipt of his first written demand, without the employer having to substantiate
his demand, provided that in his demand the Employer will note that the
amount claimed by him is due to him owing to the occurrence of one or any of
the three conditions, specifying the occurred conditions or conditions.

This Guarantee will remain in force up to and including the date ----- **
days after the deadline for submission of Bids as such the deadline is stated in the
Instructions to Bidders or as it may be extended by the Employer, notice of which
extension (s) to the Bank is hereby waived. Any demand in respect of this guarantee
should reach the Bank not later than the above date

DATE -----

SIGNATURE-----

WITNESS -----

SEAL -----

(Signature, name and address)

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

****45 days** after the **end of the validity period** of the Bid. Date should be
inserted by the Employer before the Bidding documents are issued.

PERFORMANCE SECURITY

TO,

----- (Name of Employer)
----- (Address of Employer)

WHEREAS ----- (name and address of contractor) (hereafter called "the Contractor") has undertaken, in pursuance of Contracts No. ----- dates ----- to execute ----- (name of Contract and brief description of Works) (hereinafter called "The Contract")

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

AND WHEREAS we have agreed to give the Contractors 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 types and proportions of currencies in which the Contract prices 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 is with the demand.

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

This guarantee shall be valid until 60 days from the date of expiring of the Defect Liabilities period.

Signature and Seal of the guarantor -----

Name of Bank -----

Address -----

Date -----

*An amount shall be inserted by the Guarantor, representing the percentage the Contract price specified in the Contract denominated in Indian Rupees.

ADDITIONAL PERFORMANCE SECURITY

[Clause 34.1. (A)]

TO,

----- (Name of Employer)
----- (Address of Employer)

WHEREAS ----- (Name and address of contractor) (hereafter called "The Contractor") has undertaken, in pursuance of Contracts No. ----- dates ----- to execute -----
----- (Name of Contract and brief description of Works) (hereinafter called "The Contract")

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

AND WHEREAS we have agreed to give the Contractors 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 types and proportions of currencies in which the Contract prices 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 is with the demand

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

This guarantee shall be valid until **28 days** from the project completion date.

Signature and Seal of the guarantor -----

Name of Bank -----

Address -----

Date -----

BANK GUARANTEE FOR ADVANCE PAYMENT

TO,

_____ (Name of Employer)

_____ (Address of Employer)

_____ (Name of Contractor)

Gentlemen:

~~In accordance with the provisions of the Conditions of Contract, sub-clause 51.1 ("Advance Payment") of the above mentioned Contract, _____ (name and address of Contractor) (hereinafter called "the Contractor") shall deposit with _____ (name of Employer) a bank guarantee 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 modifications of the terms of the Contractor or Works to be performed thereunder or of any of the Contract documents which may be made between _____ (name of Employer) and the Contractor, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modifications.~~

~~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.~~

YOUR'S TRULY

Signature and Seal _____

Name of Bank/ Financial Institution _____

Address _____

Date _____

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

Letter of Acceptance
(Letter head paper of the Employer)

To, _____ (date)

_____ (Name and address of the Contractor)

Dear Sirs,

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

You are requested to furnish performance security, in the form detailed in para 34.1 of ITB for an amount equivalent to Rs. _____ within **10 days** of the receipt of this letter of acceptance up to beyond **60 days** from the date of expiry of defects Liability period i.e. up to _____ and the Additional Performance Security for an amount equivalent to Rs. _____ shall be valid beyond 28 (twenty-eight) days of Project Completion Date i.e. up to _____ and sign the contract, failing which action as stated in Para 34.3 of ITB will be taken.

Yours Faithfully

Authorized Signature
Name and title of Signatory
Name of Employer

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

Issue of Notice to proceed with the work

(Letterhead of the Employer)

To, _____ (date)

_____ (Name and address of the Contractor)

Dear Sirs,

Pursuant to your furnishing the requisite security in ITB Clause 34.1 and signing of the Contract for the construction of _____

_____ at a bid Price of Rs.

_____.

You are hereby instructed to proceed with the execution of the said works in accordance with the contract documents.

Yours faithfully

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

AGREEMENT FORM

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 WITNESSETH AS FOLLOWS

1. In this Agreement, words and expression shall have the same meanings as are respectively assigned to them in the conditions of contract hereinafter referred to and they shall be deemed to form and be read construed as part of this Agreement.
2. In Consideration of the payment to be made by the Employer to the contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to executive and complete the works and remedy any defects therein in conformity in all aspects with the provisions of the contracts.
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) Notice to proceed with the works:
 - iii) Contractor's Bid

- iv) Conditions of contract: General and Special
- v) Contract Data
- vi) Additional conditions
- vii) Drawings
- viii) Bill of Quantities and
- ix) Any other documents listed in the Contract data as forming part of the Contract.

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

The Common seal of _____
Was hereunto affixed in the presence of :

Signed, sealed and Delivered by the said _____

In the presence of

Binding signature of Employer _____

Binding Signature of Contractor _____

UNDERTAKING
(For Investment)

I, the undersigned do hereby undertake that our firm M/s would invest a minimum cash up to **25%** of the value of the work during implementation of the contract.

(Signed by an Authorized officer of the firm)

Title of officer

Name of firm

DATE

UNDERTAKING
(For Validity)

I, the undersigned do hereby undertake that our firm M/s
..... agree to abide by this bid for a period.....days
for date fixed for receiving the same and it shall be binding on us and may be accepted at
any time before the expiration of that period.

(Signed by an Authorized officer of the firm)

Title of officer

Name of firm

DATE

SECTION - 9
DRAWINGS

SECTION - 10

DOCUMENTS TO BE FURNISHED BY BIDDER

Sr. No.	Name of Documents for qualification
1.	Registration Certificate A and above Class (Registration Certificate Under Renewal will not be accepted)
2.	Valid Solvency Certificate (Current Calander year 2026 (20 percent value of estimated cost put to tender) shall be as per the registration category of the bidder as per clause 6 or as per bank rule whichever is earlier
3.	Pan Card
4.	GST
5.	Tender Fee (DD)
6.	EMD (FDR/Bank Guarantee) (FDR Validity not less than 165 days) (EMD /Exemption Certificate Under Renewal will not be accepted)
7.	Form3A for Similar work Experience as per Pg.No.10 & 82
8.	Attach Details of Key Personal with necessary doc as per Pg.82
9.	Attach Details of Equipment with necessary proof as per Pg.83