

**GUJARAT WATERSUPPLY & SEWERAGE BOARD**

**GANDHINAGAR**

(A WHOLLY OWNED GOVERNMENT OF GUJARAT UNDERTAKING)



**Name of Work:** Comprehensive Operation & Maintenance of Civil & Electromechanical assets such as Open Wells, Intake wells/structures or offtake structures, Elevated Service Reservoirs (E.S.R), HGLR, Sump, Water Treatment plant, Chemical House, Staff quarters, Pump house, all Bulk Transmission and Distribution pipelines, valves, pumping machinery & electrical equipment etc for the Ahwa water supply scheme, including supply of **6.46 MLD** potable water to all the, 69/villages, 01/Town for 06 months period. Taluka: Ahwa District: Dang based on Check Dam and Open Wells, Including PAC Solution/Alum but excluding supply of, Bleaching Powder, Water and Energy Charges.

**Estimated Cost: Rs. 73,65,320.00**

**VOLUME – I**

**TECHNICAL BID**

Chief Engineer

Gujarat Water Supply & Sewerage Board

**Zone– 06**



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## **VOLUME I**

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## **Section I: Instructions to Bidders**

## 1. NOTICE INVITING TENDER



### GUJARAT WATER SUPPLY & SEWERAGE BOARD

#### GANDHINAGAR

(Govt. of Gujarat Undertaking)

#### TENDER NOTICE NO.

#### TENDER NOTICE OF Rs.

Executive Engineer, Public Health Works Division, Ahwa, Phone No.9638653436, Invites Tender for below mentioned work by E-Tendering System.

1.	Name of work	:	Comprehensive Operation & Maintenance of Civil & Electromechanical assets such wells, Intake wells/structures or offtake structures, Elevated Service Reservoirs (E.S.R), HGLR, Sump, Water Treatment plant, Chemical House, Staff quarters, Pump house, all Bulk Transmission and Distribution pipelines, valves, pumping machinery & electrical equipment etc for the Ahwa water supply scheme, including supply of 6.46 <b>MLD</b> potable water to all the, 69/villages, 01/ Town for 06 months period. Taluka: Ahwa District: Dang based on Check Dam and Open wells Including PAC Solution/Alum but excluding supply of, Bleaching Powder, Water and Energy Charges.
2.	Estimated Cost	:	<b>Rs. 73,65,320=00</b>
3.	Eligibility of contractor	:	Any bidder with "A" class of registration or higher in R&B/WRD of Govt. of Gujarat. However, the bidder will have to Post Qualify as per Financial & Technical Criteria given in the bid document.
4.	Last date of submission of tender	:	04/07/2026

**Note: GWSSB reserves the right to reject any or all tenders without assigning any reason. For detailed information regarding tender & conditions, one may contact office mentioned above during office hours and is binding to all.**

**Executive Engineer**

**Public Health Works Division,**

**Ahwa-Dang**

## 2.BID DATA SHEET

1	Department Name	Gujarat Water Supply & Sewage Board
2	Circle/Division	Public Health Works Division, Ahwa GWSSB
3	Tender Notice No	<b>Tender notice No.05//2026-27</b>
4	Name of Project& Scheme Type:	Comprehensive Operation, Preventive Maintenance & Repairs of Civil Structures of Ahwa RWSS Ta. Ahwa, <b>District:</b> Dang.
5	Name of Work:	Comprehensive Operation & Maintenance of Civil & Electromechanical assets such as Wells, Intake wells/structures or offtake structures, Elevated Service Reservoirs (E.S.R), HGLR, Sump, Water Treatment plant, Chemical House, Staff quarters, Pump house, all Bulk Transmission and Distribution pipelines, valves, pumping machinery & electrical equipment etc for the Ahwawater supply scheme, including supply of <b>6.46 MLD</b> potable water to all the, 69/villages, 01/Town for 06 months period. Taluka: Ahwa District: Dang based on Check Dam and Open Wells Including PAC Solution/Alum but excluding supply of, Bleaching Powder, Water and Energy Charges.
6	Estimated Contract Value (INR)	<b>Rs. 73,65,320=00</b> (06 Month O & M Cost)
7	Period of O & M of scheme(in Months)	<b>06</b> Months for Schedule B Comprehensive O and M works.
8	Bidding Type	Two Bid System
9	Bid Call (Nos)	1
10	Tender Currency Type	Single
11	Tender Currency Settings	Indian Rupee (INR)
12	Rebate	Applicable
13	Amount Details	
14	Bid Document Fee / Bid Processing Fees / Tender Fee :	<b>Rs. 2400/-</b>
15	Bid Document Fee Payable To :	<b>The Executive Engineer</b> , Public Health Works, Division, Ahwa-Dang.
16	Bid Security/EMD/Proposal Security (INR):	<b>Rs.73,653=00 (1% of Estimate value)</b>
17	Bid Security / EMD In Favour of:	<b>The Executive Engineer</b> , Public Health Works, Division, Ahwa-Dang. 1(a). Guarantees issued by following banks will be accepted as EMD / SD on permanent basis. (i) All Nationalized Banks including public sector bank, IDBI LTD, or(ii Private sector banks authorized by RBI to under take state government business (at present Axis Bank, ICICIC Bank & HDFC Bank or 1(b). Guarantees issued by following banks will be



		accepted as SD/EMD for the period up to. 1. Commercial Banks (i) Kotak Mahindra Bank. (ii) Regional (2). Regional Rural Banks of Gujarat. (i). Saurashtra Gramin Bank. (ii). Baroda Gujarat Gramin Bank, (iii) Dena Gujarat Gramin Bank. (3). Co-Operative Banks of Gujarat. (i). The Kalupur Commercial Co-Operative Bank Ltd., (ii). Rajkot Nagarik Sahakari Bank Ltd., (iii) The Ahmedabad Mercantile Co-operative Bank Ltd.
18	<b>Tender Dates</b>	Note: All Dates are in dd/mm/yyyy, hr: min as per Indian Standard Time (IST)
19	Bid Document Downloading Start Date	20/06/2026 10:00
20	Bid Document Downloading End Date	04/07/2026 18:00
21	Last Date & Time for Online submission of Bids	04/07/2026 18:00
	Pre-Bid Meeting Date and Time Address:	-
22	Physical Submission of documents last Date & Time	13/07/2026 18:00
23	Bid Opening Date	14/07/2026 12:00 (If Possible)
24	Bid Validity Period	180 Days from the last date of submission of bid.
25	Physical submission of Tender Fee, Earnest Money Deposit and PQ supporting document.	Instrument of tender fee & EMD shall be submitted in electronic format only through online (By scanning while uploading the bid). This submission shall mean that Tender Fee and EMD are received for purpose of opening the bid. Accordingly offer of only those shall be opened whose tender fee and EMD is received electronically. However, for the purpose of realization of instrument of tender fee & EMD, bidder shall send the same in original through <b>RPAD/SPEED POST/HAND DELIVERY</b> so as to reach to Office of Executive Engineer, P.H. Works Division, GWSSB Ahwa Jalbhavan, Saputara Road, Ahwa, Dist. Dang- 394710 with in next 7 day of last date of bidding by 18:00. For not submitting DD/FDR/BG in original, bidder shall be banned to participate in any tender of the Board for period of 6 Months as a penal action. <b>Any document in supporting to tender bid shall be submitted in electronic format only through online (by scanning etc.) and submission only in hard copy will not be accepted separately.</b>
26	Payments details	1. Document submission of Tender fee, Earnest money deposit, PAN Card shall be uploaded online only. 2. Tender Fee (Document fee) amounting to <b>Rs. 2400</b> in favour of "The Executive Engineer, Public Health Works, Division, Ahwa" in form of Demand Draft shall be issued by any nationalized

		<p>bank or as per list mentioned in GR of. Finance Department,</p> <p>GR. No : <b>EMD/04/2023/0057/DMO</b> Dt:<b>21/04/2023</b></p> <p><b>Earnest Money Deposit</b></p> <p><b>Rs.73,653.00</b> in form of FDR or Bank Guarantee in favour of "<b>The Executive Engineer</b>, Public Health Works, Division, Ahwa" valid up to 28 days from the date of closure of the bid validity period of 180 days i.e.<b>(Total of 180+28=208 days)</b>, shall be issued by any nationalized bank or as per list mentioned in GR of. GR of. Finance Department,</p> <p>GR. No :<b>EMD/04/2023/0057/DMO</b></p> <p>Dt: <b>21/04/2023</b></p>
	OTHER DETAILS	
27	Officer Inviting Bids:	Executive Engineer, Public Health Works Division, Ahwa.Dist : Dang.
28	Bid Opening Authority:	Superintending Engineer, Public Health Circle, Valsad,Gujarat.
29	Address:	Superintending Engineer, P.H. Circle, GWSSB, 2 <sup>nd</sup> Floor, Jalbhavan, Opp. Kusum Vidhyalay, Tithal Road, Bhagavadavada, Valsad, Dist.: Valsad, 396001.
30	Contact Details of Officer Inviting Bid:	Phone 9638653436
31	Submission of tender	<p>The following documents shall be uploaded while submitting the BID online:</p> <ul style="list-style-type: none"> <li>• Scanned copy of Demand Draft as tender fee</li> <li>• Scanned copy of FDR / BG as EMD</li> <li>• Scanned copy of Valid Registration as ‘A’ Class or above as Civil or Electrical Contractor in R &amp; B/ Water Resource Department, Government of Gujarat</li> <li>• Electrical contractor’s license issued by Electric Licensing Board, Gandhinagar (MOU Not Accepted.)</li> <li>• Scanned copy of PAN card</li> <li>• Scanned copy of GST registration</li> <li>• Income tax return certificate</li> <li>• Scan copies of financial documents, Scan copies of Experience Certificates of O&amp;M of project and other documents as per evaluation criteria.</li> </ul> <p>In addition to the documents mentioned above, the documents required as per attached Forms &amp; Annexure are also to be uploaded. Bidder shall submit their offer i.e. technical bid as well as price bid in electronic format on stipulated website&amp; date as mentioned in the tender document. No offer in physical form will be accepted.</p>
OT	General Terms & Conditions	As Per Tender Document



## 1. INSTRUCTION TO BIDDERS

### A. GENERAL

#### 1.1.1. General terms& instructions

No Bidder shall submit more than 1 (one) Bid for the Project.

- 1) The Bid Document Fee will not be refunded under any circumstances.
- 2) EMD in the form specified in tender document only shall be accepted.
- 3) The offer shall be valid for 180 days from the last date of submission of bid.
- 4) Tenders without Bid Document Fee, Earnest Money Deposit (EMD), Valid Registration Certificate and which do not fulfil all or any of the conditions or those submitted incomplete, in any respect shall not be considered for evaluation.
- 5) Not more than one tender shall be submitted by a Bidder.
- 6) Conditional tender shall not be accepted.
- 7) GWSSB reserves the right to accept the lowest responsive offer, based on evaluation of the scheme and reject any or all tenders without assigning any reason.
- 8) Tender notice shall form a part of contract document.
- 9) The bidders are advised to read carefully the "Instruction" and "Eligibility Criteria" contained in the tender documents.
- 10) The internet site address for E-Tender is <http://www.nprocure.com> and that of corporate website is [watersupply.gujarat.gov.in](http://watersupply.gujarat.gov.in)

#### Details to be furnished along with application:

Interested Bidders can view these tender documents online. The bidders who are interested in bidding in these tenders can download tender documents as mentioned above.

Tender Documents are available only in electronic form. Bidders shall upload the tender documents as per timeline specified as above, Tender fee and Bid Security (EMD) shall have to be furnished as specified in **Tender Notice**. The intending bidders have to submit the following documents also. The bidder should submit all the forms electronically only.

#### Stamp Duty Charges

Stamp Duty charges, wherever necessary shall be borne by the Contractor. The contract agreement will be executed on non-judicial stamp paper of the value of Rs. 300/- (Rupees Hundred Only).

#### 1.1.2. Corrupt or Fraudulent Practices

GWSSB requires that bidders/suppliers /contractors to follow the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy. Defines for the purposes of this provision, the terms set forth below as follows:

- i. "Corrupt Practices" means behavior on the part of officials in the public or private sectors by which they improperly and unlawfully enrich themselves and/or those close to them, or induce others to do so, by misusing the position in which they are placed, and it includes the offering, giving, receiving or soliciting of anything of value to influence the Action of any such official in the procurement process or in contract execution; and
- ii. "Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the determination 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.
- iii. Will reject a proposal for award if it determines that the bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question.
- iv. Will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a contract if it at any time determines that the firm has engaged in corrupt and fraudulent practices in competing for, or in executing an contract.

#### 1.1.3. **Work Schedule**

All Bidders are cautioned that tenders containing any deviation from the contractual terms and conditions, specifications or other requirements may be rejected as non-responsive.

Price bid of bidders qualified in primary bid shall be opened for evaluation of price and further decision of accepting the tender will be taken.

All bidders are requested to discuss and obtain clarifications or additional information as may be required by them.

#### 1.1.4. **Eligible bidders**

A Bidder shall not have a conflict of interest. All Bidders found to have a conflict of interest shall be disqualified. A Bidder may be considered to be in a conflict of interest with one or more parties in this bidding process if any of, including but not limited to, the following apply:

- 1) they receive or have received any direct or indirect subsidy from any of them; or
- 2) they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to material information about or improperly influence the bid of another Bidder, or influence the decisions of the Employer regarding this bidding process; or
- 3) a Bidder was affiliated with a firm or entity that has been hired (or is proposed to be hired) by the Employer or Borrower as Employer's Representative for the Contract

A Bidder shall not be under suspension from Bidding by the Employer as the result of the execution of a Bid-Securing Declaration.

Bidders shall provide such evidence of their continued eligibility satisfactory to the Employer, as the Employer shall reasonably request.

**1.1.5. Contents of this document**

The Bidding Document consists of two volumes, which include all the sections indicated below, and should be read in conjunction with any Addendum issued by GWSSB.

**1) Volume-1: Instructions to Bidder, Scope of Work and General Conditions**

- (a) Section 1 Instructions to Bidders (ITB)
- (b) Section 2 Scope of Work
- (c) Section 3 Conditions of Contract

**2) Volume-2: Price Bid**

**1.1.6. Addenda & Corrigenda**

Addenda and corrigenda will form, a part of the contract documents, and full consideration shall be given to all addenda and corrigenda in the part of tender documents.

Tenderers shall verify the number of addenda and corrigenda issued. if any and acknowledge the receipt of all addenda and corrigenda to the Engineer and failure to do so may cause the tender to be rejected.

All addenda, corrigenda issued by GWSSB and sent to the contractor shall be a part of the contract.

**1.1.7. Download of Tender**

The tender document for this work are available only in Electronic format, which bidders can download free of cost from the internet site [www.gwssb.nprocure.com](http://www.gwssb.nprocure.com)

## B. PREPARATION OF BIDS

### 1.1.8. General

Bidders shall be aware of the provision of conditions of particular application.

- 1) The intending Tender should visit the site, examine the site details, including geological and geo-hydrological conditions and verify the technical details given in the tender, collect additional or supplementary data as may be required and formulate their offer accordingly.
- 2) **Intending tenders shall have the liberty to send technical query relating to the work and the Tender Document in hard copy to the office before Prebid meeting or 7 days of last date of bid submission in case if no Prebid meeting is proposed.**
- 3) All Tenders are cautioned that tenders containing any deviation from the contractual terms and conditions, specifications or other requirements will be treated as non-responsive and rejected outright.
- 4) Conditional tenders shall be treated as non-responsive and rejected outright.
- 5) Contractors will have to quote for the entire work and all items mentioned in the schedules containing bill of quantities and scope of work. Alternative offer is not acceptable and such offers will be considered non-responsive and out rightly rejected.
- 6) Contractors should invariably give elaborate and correct information in Schedules enclosed with this Post qualification Bid. They should also give whatever additional information in support of their claim for qualifying them as technically competent and financially sound agency to carry out the work under this contract and for evaluation of Post- qualification Bid and selection of contractors for opening of the Price Bid.
- 7) After opening the Post-qualification and Technical Bids, the procedure of Post- qualification will be adopted and Price Bid of only such Post- qualified contractors will be opened.

### 1.1.9. Language of Bid

Tender shall be submitted in the prescribed form in *English*. All literature and correspondence in connection with tender shall be. in *English*.

### 1.1.10. Cost of Bidding

The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the Employer shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

### 1.1.11. Contact Authority

The following officers may be contacted for any further information on the tender.

Sr. No.	Name of Officer	Designation & Address	Contact Nos.	
			Office	Mobile
1.	R.A. Patel	Superintending Engineer, P.H. Circle, GWSSB, 2 <sup>nd</sup> Floor, Jalbhavan, Opp.	-----	9978405476

		Kusum Vidhyalay, Tithal Road, Bhagadavada, Valsad, Dist.: Valsad, 396001.		
2.	S. J. Patel	Executive Engineer, Public Health Works Division, Ahwa Jalbhavan, Saputara Road, Dist. Dang-394710	----	9638653436
3.	Piyush A. Chaudhari	Deputy Executive Engineer, Public Health and Sanitation Sub Division, Ahwa	-----	9727799260

#### 1.1.12. Documents comprising the bid

Tender must submit:

- 1) Tender shall be considered only if accompanied by full information as required under this tender.
- 2) The Tender must digitally sign the tender.
- 3) Any tender containing vague and indefinite expressions, which are against the terms and conditions laid down by GWSSB, will be considered as non-responsive.
- 4) Tenders are requested to furnish all the technical data, description literature, leaflet and supplementary description and relevant specification, in English Wherever required the tenders, to supplement may furnish additional information and data, amplify or clarify the information required in the specification online only.
- 5) The tenders shall indicate in a summary form:
  - a) Accessories/fitments which are standard with the equipment which though not specified in the tender are included in the scope of supply and are included in tender price.
  - b) Accessories/fitments which may occasionally or frequently be required but have been specifically excluded by the tenders from the scope of supply and which are not included in tender price.

#### 1.1.13. Letter of bid & schedules

The Letters of Technical Bid and Price Bid, and the Schedules, and all documents listed under ITB 2.1.9, shall be prepared using the relevant forms furnished in Sub section 5 (Bidding Forms). The forms must be completed without any alterations to the text, and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested, and as required in the BDS.

#### 1.1.14. Alternative Bids

Alternative Bids are not allowed.

#### 1.1.15. Currency



The Rates and Prices shall be quoted in the Indian Rupees.

**1.1.16. Validity of Bids**

The bid proposal shall remain valid for 180 days from the last date of submission of Technical Bid. Tender valid for a shorter period may be rejected by the GWSSB as non-responsive.

The Bidder is expected to examine all instructions, forms, terms, and requirements in the Bidding Document. Failure to furnish all information or documentation required by the Bidding Document may result in the rejection of the Bid. Bidders should visit and inspect site and submit bids online accordingly. GWSSB shall presume that the Bidder who submits his bids online has properly understood the tender and is fully aware of the site conditions.

**1.1.17. Bid Security/ Earnest Money Deposit**

The Tender shall furnish, as part of its Tender, Earnest Money Deposit for the amount as indicated in the invitation for tender.

- 1) Any Tender without EMD will be rejected by the GWSSB as non- responsive.
- 2) Unsuccessful Tender's Earnest Money will be discharged / returned as Early as possible.
- 3) The successful Tender's Earnest Money will be discharged upon the Tenderer signing the Contract and furnishing the performance/security Deposit.
- 4) No interest will be paid on Earnest Money Deposit.

**1.1.18. Format and signing of tender**

Tenders signed by the Tender or a person or persons duly authorised to sign the Tender. The power of Attorney in favour of the person authorised to sign the Tender shall accompany the Tender.

**C. SUBMISSION & OPENING OF BIDS**

**1.1.19. Submission of tender**

- 1) The Bidder must submit online duly filled in the entire tender document i.e. technical bid and price-bid available on website the rate and the along with other details in Schedule B of tender document.
- 2) The bidder shall fill the required details/ data/ information in the prescribed form of tender document.
- 3) Tender in offline mode will not be accepted.
- 4) The tender i.e. Technical bid and Price bid, dully filled in shall be uploaded on [www.gwssb.nprocure.com](http://www.gwssb.nprocure.com) up to the date and time mentioned in the Tender Notice.

- 5) The employer at his discretion can extend the last date for submission of tender by amending the bidding document in which case all rights and obligations of the employer and bidder will thereafter be subject to the last date as extended. The bidder shall be responsible for extending the validity of tender, accordingly, failing which his bid shall be rejected as non-responsive.
- 6) Bidders will have to submit F.D.R. or Bank Guarantee for Earnest Money Deposit and Demand Draft of tender fee in a separate sealed envelope and other technical documents in another sealed envelope. The documents shall be submitted by RPAD/Speed Post/ Hand Delivery only to the designated officer, as mentioned in the Tender Notice. Each cover must clearly be marked with the contents i.e. "TENDER FEE & EMD" and "TECHNICAL BID DOCUMENT"

#### **1.1.20. Method of tendering**

- 1) If the tender is uploaded by an individual, it shall be digitally signed by the individual.
- 2) If the tender is uploaded by a proprietary firm, it shall be digitally signed by the proprietor.
- 3) If the tender is uploaded by a limited company or a corporation, it shall be digitally signed by a duly authorized person holding the powers of attorney for signing the tender. Such limited company or corporation may be required to furnish satisfactory evidence of its existence before the contract is awarded. They should also furnish Articles of Memorandum of Association.
- 4) Each bidder shall submit only one bid for the particular work. A bidder who submits more than one bid in the particular work will be disqualified.
- 5) All witnesses and sureties shall be person of status and probity their full name, occupation and addresses when they fill the vendor registration form provided in the website. [www.gwssb.nprocure.com](http://www.gwssb.nprocure.com)
- 6) In case at time of tender uploading, if any of the above information has changed then the Bidder shall correct the same by making the modification in his personal profile.

#### **1.1.21. Deadline for submission of bid**

Bids must be received by the Employer at the address specified above not later than mentioned in the BDS.

The Employer may, at its discretion, extend the deadline for submission of bids by issuing an addendum, in which case all rights and obligations of the Employer and the bidders previously subject to the original deadline will thereafter be subject to the deadline as extended.

#### **1.1.22. Late Bid**

Any bid received by the Employer after the deadline for submission of bids will be rejected and returned unopened to the bidder.

#### **1.1.23. Modification & withdrawal of bids**

The bidder may modify or withdraw its bid after bid submission, provided that written notice of the modification or withdrawal is received by the Employer prior to the deadline for submission of bids.

However, no modification or withdrawal shall be permitted and accepted after the deadline for submission of bids.

No bid may be modified by the bidder after the deadline for submission of bids.

Withdrawal of a bid during the interval between the deadline for submission of bids and the expiration of the period of bid validity shall result in the forfeiture of the bid security.

#### **1.1.24. Opening of Technical proposal**

The Employer will open the technical proposals, including modifications made in the presence of bidders' representatives' online website who choose to attend at:

Venue: Superintending Engineer, P.H. Circle, P.H. Circle, GWSSB, 2<sup>nd</sup> Floor, Jalbhavan, Opp. KusumVidhyalay, Tithal Road, Bhagadavada, Valsad, Dist.: Valsad, 396001.

Date &Time:14/07/2026 @ 12.00 Hrs.(IF Possible)

The bidder's representatives who are present shall sign a register evidencing their attendance.

The price proposals will remain unopened until the time of bid opening of the price proposals. The time and date and location of the bid opening of the price proposals will be given through mail online by the Employer and will follow the receipt of approval by the GWSSB of the evaluation of the technical proposals.

The bidder's name, bid modifications and withdrawals, such other details, as the Employer may consider appropriate, will be announced and recorded by the Employer at the opening. The bidders' representatives will be required to sign this record.

The Employer shall prepare minutes of the bid opening, including the information disclosed to those present.

#### **1.1.25. Confidentiality**

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. Any effort by a bidder to influence the Employer's processing of bids or award decisions by any way may result in the rejection of the bidder's bid.

### **D. EVALUATION& COMPARISON**

#### **1.1.26. Preliminary examination of technical proposal**

The Employer will examine the bids to determine whether they are complete, whether the documents have been properly signed, whether-the required security is included, and whether the bids are generally in order. Any bids found to be non-responsive for any reason or not meeting the minimum levels of the performance or other criteria specified in the bidding documents will be rejected by the Employer and not included for further consideration.

#### **1.1.27. Examination of bids and determination of responsiveness**

- 1) Prior to the detailed evaluation of bids, the Employer will determine whether each bid (a) meets the eligibility criteria (b) has been properly signed (c) is accompanied by the required securities (d) is substantially responsive to the requirements of the bidding documents and (e) provides any clarification and/or substantiation that the Employer may require to determine responsiveness pursuant.
- 2) A substantially responsive bid is one that conforms to all the terms, conditions, and specifications of the 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.
- 3) If a bid is not substantially responsive, it will be rejected by the Employer, and cannot subsequently be made responsive by correction or withdrawal of the non-conforming deviation or reservation.

#### **1.1.28. Evaluation and comparison of technical proposal**

The Employer will carry out a detailed evaluation of the bids in order to determine whether the bidders are qualified and whether the technical aspects are substantially responsive to the requirements set forth in the bidding documents. In order to reach such a determination, the Employer will examine the information supplied by the Bidders and other requirements in the bidding documents, taking into account the following factors:

##### **Qualification:**

- 1) The determination will take into account the Bidder's financial, technical and production capabilities and past performance; it will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, as well as such other information as the Employer deems necessary and appropriate; and
- 2) An affirmative determination will be a prerequisite for the Employer to continue with the evaluation of the technical proposal; a negative determination will result in rejection of the Bidder's bid.

##### **Technical:**

- 1) Overall completeness and compliance with the Employer's Requirements; the technical merits of plant and equipment offered and deviations from the Employer's Requirements; suitability of the facilities offered in relation to the environmental and climatic conditions prevailing at the site; quality, function and operation of any process control concept included in the bid;
- 2) Achievement of specified performance criteria by the facilities;
- 3) Compliance with the time schedule called for in Technical proposal and any alternative time schedules offered by Bidders, as evidenced by a milestone schedule provided in the bid;
- 4) Any deviations to the commercial and contractual provisions stipulated in the bidding documents.

#### **1.1.29. Clarification of technical proposals**

The Employer may conduct clarification meetings with any Bidder to discuss any matters, technical or otherwise, where the Employer requires amendments or changes to be made to the Technical Proposal.

Any effort by the bidder to influence the employer in the Employer's evaluation of technical proposals, bid comparison or the Employer's decisions on acceptance or rejection of bids may result in the rejection of the bidder's bid.

#### **1.1.30. Invitation to attend opening of price proposals**

At the end of the evaluation of the technical proposals the Employer will invite bidders who have submitted substantially responsive technical proposals and who have been determined as being qualified for award to attend the bid opening of the price proposals. Bidders shall be given reasonable notice of the price proposal bid opening.

The Employer will notify Bidders that have been rejected on the grounds of being substantially non-responsive to the requirements of the bidding documents in writing

#### **1.1.31. Opening of price proposals**

The Employer will open the price proposals of all bidders who submitted substantially responsive technical proposals at the time and date at the location advised to the bidders. The bidder's representatives who are present shall sign a register evidencing their attendance.

The bidder's names, the Bid Prices, the total amount of each bid, any discounts, and such other details as the Employer may consider appropriate, will be announced and recorded by the Employer at the opening. The bidder's representatives will be required to sign this record.

The Employer shall prepare minutes of the bid opening, including the information disclosed to those present in accordance with Sub-Clause.

#### **1.1.32. Clarification of price proposals and contacting the employer**

To assist in the examination, evaluation and comparison of price proposals, the Employer may, at its discretion, ask any bidder for clarification of its bid. The request for clarification and the response shall be in writing or by cable.

No bidder shall contact the employer on any matter relating to its bid from the time of opening of price proposals to the time the contract is awarded. If the bidder wishes to bring additional information to the notice of the Employer, it should do so in writing.

Any effort by the bidder to influence the Employer in the Employer's evaluation of price proposals, bid comparison or contract award decisions may result in the rejection of the bidder's bid.

#### **1.1.33. Preliminary examination of price proposals and determination of responsiveness**

The Employer will examine the bids to determine whether they are complete, whether the documents have been properly signed, whether the required security is included, whether the bids are substantially responsive to the requirements of the bidding documents; and whether the bids provide any clarification and/or substantiation that the Employer may require.

A substantially responsive bid is one which conforms to all the terms, conditions and requirements of the bidding documents, without material deviation or reservation and includes the amendments and changes, if any, requested by the Employer during the evaluation of the bidder's technical proposal.

If a price proposal is not substantially responsive, it will be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the nonconforming deviation or reservation.

#### **1.1.34. Correction of errors**

Price Proposals determined to be substantially responsive will be checked by the Employer for any arithmetic errors. Arithmetic errors will be rectified on the following basis. If there is a discrepancy between the unit rate and the total cost that is obtained by multiplying the unit rate and quantity, the unit rate shall prevail and the total cost will be corrected unless in the opinion of the Employer there is an obvious misplacement of the decimal point in the unit rate, in which case the total cost as quoted will govern and the unit rate corrected. If there is a discrepancy between the total bid amount and the sum of total costs, the sum of the total costs shall prevail and the total bid amount will be corrected.

The amount stated in the Form of Bid for Price Proposal will be adjusted by the Employer in accordance with the above procedure for the correction of errors and, shall be considered as binding upon the bidder. If the bidder does not accept the corrected amount of bid, its bid will be rejected, and the bid security may be forfeited.

#### **1.1.35. Evaluation and comparison of price proposal**

The Employer will evaluate and compare only the bids determined to be substantially responsive.

The Employer's evaluation of a bid will take into account, in addition to the bid prices indicated in the Schedule of Prices, the following costs and factors that will be added to each Bidder's bid price in the evaluation using pricing information available to the Employer, in the manner and to the extent and in the Employer's Requirements.

- 1) The additional price, if any, reflected in the price proposal. If the price stated is not realistic the bid is liable to be rejected,
- 2) Compliance with the time schedule called for in the Appendix to Price Proposal and evidenced as needed in a milestone schedule provided in the bid;
- 3) The projected operating costs during the initial period of operation of the facilities,

- 4) The functional guarantees of the facilities offered against the specified performance criteria of the plant and equipment; and
- 5) The extra cost of work, services, facilities etc. required to be provided by the Employer or third parties.
- 6) The Employer reserves the right to accept or reject any variation or deviation. Variations, deviations, and other factors which are in excess of the requirements of the bidding documents or otherwise result in the accrual of unsolicited benefits to the Employer shall not be taken into account in bid evaluation.
- 7) The estimated effect of the price adjustment provisions of the Conditions of Particular Application, applied over the period of execution of the Contract, shall not be taken into account in bid evaluation.
- 8) If the bid of the successful bidder is substantially below the Employer's estimate for the contract, the Employer may require the bidder to produce detailed price analyses to demonstrate the internal consistency of those prices. After evaluation of the price analysis, the Employer may require that the amount of the performance security 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
- 9) If any dispute Or Contradiction, interpretation in tender document the decision of Superintending Engineer, P.H. Circle, Valsad will be final & shall be binding to the agency.

#### **1.1.36. Employer's right to accept any bid or to reject any or all bids**

The employer reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids, at any time prior to award of Contract, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders of the grounds for the employer's action.

### **E. AWARD**

The Employer will award the Contract to the bidder whose bid has been determined to be responsive to the bidding documents and who have offered the workable Evaluated Bid Price, provided that such bidder has been determined to be eligible & qualified.

#### **1.1.37. Notification of award**

Prior to expiration of the period of bid validity prescribed by the Employer, the employer will notify the successful bidder by fax, confirmed by registered letter, that its bid has been accepted. This letter (hereinafter and in the Conditions of Contract called the "Letter of Acceptance") shall name the sum, which the Employer will pay the Contractor in consideration of the supply, execution and completion of the Works by the Contractor as prescribed by the Contract (hereinafter and in the conditions of contract called "the Contract Price"). The notification of award will constitute the formation of the Contract.

Upon the furnishing by the successful bidder of a performance security (and domestic preference security where required), the Employer will promptly return the other bidders that their bid security.

#### 1.1.38. **Signing of contract**

At the same time that the employer notifies the successful bidder about the acceptance of bid, the Employer will send the bidder the Form of Contract Agreement provided in the bidding documents, incorporating all agreements between the parties.

Within 15 days of receipt of the Form of Agreement, the successful bidder shall sign the Form and return it to the Employer.

#### 1.1.39. **Performance Security**

Within 15 days of receipt of the notification of award from the Employer, the successful bidder shall furnish to the Employer a performance security in accordance with the General conditions of contract, Clause 1. The form of performance security provided in the bidding documents may be used or some other form acceptable to the Employer.

Failure of the successful bidder to comply with the requirements shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security.

Security Deposit shall be released in accordance with the general conditions of contract (clause-1)

#### 1.1.40. **Declaration form: (form-H)**

In conjunction to Sub Clause 'C' under "29. Evaluation to Technical bids" the bidder should submit undertaking as per Form-H on non-judicial stamp paper of Rs. 300/- duly attested by notary public regarding document submitted, are true. GWSSB would have the right to forfeit the EMD and blacklist the bidder if any of the information given by the bidder is found faulty or incorrect or misleading.

#### 1.1.41. **Other Requirements**

The applicant in the same name and style shall be a well-established Civil/Mechanical/Electrical (as per type of the tender) Engineering Contractor, shall have Registration in the required class for the work and should be in category as per operations and maintenance performance evaluation system.



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**CONTRACT NO.**

**GUJARAT WATERSUPPLY & SEWERAGE BOARD  
GANDHINAGAR**

**(A WHOLLY OWNED GOVERNMENT OF GUJARAT UNDERTAKING)**

**VOLUME – I**

**QUALIFICATION CRITERIA & EVALUATION PROCEDURE**

## QUALIFICATION CRITERIA & EVALUATION PROCEDURE

### 1.2. General

All information requested for in the downloaded forms should be furnished against the respective columns in the forms in electronic formats. If information is nil, it should also be mentioned as nil or no such case. If any query is not applicable in case of the applicant, it should be stated as not applicable. However, the tender/ Bidders are cautioned that not giving complete information called for in the tender Documents in the form required or not giving it in clear terms or making any change in the prescribed forms may result in the Bidder being summarily disqualified.

- 1) The tender's/ Bidder's name shall appear on each page of the prescribed Performa.
- 2) Reference, Information and certificates from the respective clients certifying suitability, technical know-how or capability of the Bidder shall be signed by that client, in full with his name underneath in block letter and designation in that organization.
- 3) No further information will be entertained after submission of Tender Document unless it is called for by the GWSSB.
- 4) Any effort by a Bidder/Bidder to influence the GWSSB in the process of examination, Clarification, evaluation of Tender and in decision concerning qualification, may result in disqualifying the Bidder.
- 5) The successful per-qualification made in the case of any Bidder for any other work of GWSSB will not be considered valid for the present work.

### 1.3. Minimum qualifying criteria

To qualify, each bidder in the same name and style should have achieved the following performances:

#### 1.3.1. General eligibility criteria

- 1) The bidder should be a company registered under Companies Registration act 1956/2013 or Limited Liability Partnership Act, 2008, or a Proprietorship registered in India as on bid submission date.
- 2) The bidder must have a valid registration as "A" Class or above as Civil or Electrical Contractor in R & B / Water Resources Department, Government of Gujarat
- 3) Electrical contractor's license issued by Electric Licensing Board, Gandhinagar or MOU with the agency having Electrical contractor's license issued by Electric Licensing Board, Gandhinagar
- 4) Bidder should not be under the effect of blacklisting/debarment by any Ministry of Government of India or by any State Government of any other State in India or by Government of Gujarat or any of the Government PSUs at the time of bidding.

## બાંહેધરી

આથી હું નીચે સહી કરનાર હું \_\_\_\_\_ આ સાથે લેખિત બાંહેધરી એજન્સિના લેટર પેડ પર લખી બંધાઉ છું કે, ગુજરાત પાણી પુરવઠા અને ગટર વ્યવસ્થા બોર્ડના કાર્યપાલક ઈજનેરશ્રી, જા.આ.બાં.વિ.,આહવાની કચેરીના આહવાજુથ યોજનાના ૩૬ માસ માટેના મરામત અને નિભાવણી અર્થે ઓનલાઈન ટેન્ડર ભાવો મેળવી મંજૂરી મળ્યેથી કામગીરી કરવાની બનતી હોઈ જે મંજૂર થયાથી જે સ્તરે ૦૬ માસ અર્થેના મરામત અને નિભાવણી કામો હશે તે રદ કરવામાં આવશે જે માટે હું બંધાઉ છું અને બાકી રહેતા સમય માટે ભાવ વધારો માંગીશ નહીં તેમજ બોર્ડ દ્વારા કોઈ વિલંબીત ચુકવણું થયેલ હોય તે માટે ટેન્ડરની શરતો મુજબ કે તે સિવાય પણ વ્યાજ નો દાવો /કોર્ટ કેસ કરીશ નહીં જે માટે હું શુધ્ધ બુધ્ધિથી મન કાયમ રાખીને સમજી વિચારીને નીચેની શરતો અને જોગવાઈઓ સહીત સહી શાખ કરી આપેલ છે.

### 1.3.2. ~~Financial Capacity & Experience~~

The bidder must satisfy any one of the following two scenarios to be eligible to bid for the services in the tender.

#### **Scenario-1: A bidder, under this scenario shall satisfy below financial capacity and experience criteria**

- a) ~~**Turnover:** Bidder must have achieved minimum annual financial turnover (at current price level) from contract receipt of works (in all classes of civil engineering construction works or O&M services only) of Rs. 4 Crores in any three financial years out of last Seven (7) financial years i.e. from 2019-20 to 2025-26~~

**And**

- b) ~~**Experience:** The bidder shall have successfully completed operation and maintenance for minimum 1 years for any water supply system or part of its civil or electromechanical components such as water supply network, WTP, pumping machineries, intake/ offtake structure, storage structures, municipal STP or municipal sewage network etc. in last seven (7) financial years i.e. from 2019-20 to 2025-26~~

#### **Scenario-2**

- a) ~~**Turnover:** Bidder must have achieved minimum annual financial turnover (at current price level) from contract receipt of works (in all classes of civil engineering construction works or O&M services only) of Rs. 10 Crores in any three financial years out of last Seven (7) financial years i.e. from 2019-20 to 2025-26~~

#### ~~**b) Note to Turnover requirement:**~~

The details pertaining to turnover for the year 2019-20 to 2025-26 shall be certified by Chartered Accountant on his own letter head and duly attested. Turnover of financial year 2023-24 shall be considered subject to submission of provisional/audited certificate from chartered accountant by the Bidder. Turnover of previous year shall be given additional weightage of ten percent per year to bring them to current price level to account for price escalation as illustrated below:

Financial Year	Turnover	Turnover at current price level
<del>2019-2020</del>	G	<del>1.77 x G</del>
<del>2020-2021</del>	F	<del>1.61 x F</del>
<del>2021-2022</del>	E	<del>1.46 x E</del>
<del>2022-2023</del>	D	<del>1.33 x D</del>
<del>2023-2024</del>	C	<del>1.21 x C</del>
<del>2024-2025</del>	B	<del>1.10 x B</del>
<del>2025-2026</del>	A	<del>1.00 x A</del>

**Note:**

- ~~1) Financial year means period beginning from the 1st April to 31st March of the next year.~~
- ~~2) The details pertaining to Turnover for the year 2019 20 to 2025 26 shall be certified by Chartered Accountant on his own letter head and duly attested. Turnover for financial 2025-2026 shall be considered subject to submission of provisional/audited certificate from chartered accountant by the Bidder.~~
- ~~3) The cost of material supplied by the Government/ Client shall not be taken into account for experience against Turnover & Similar nature of work.~~

**Note to Experience requirement:**

- ~~1) The O & M works for which bidder have not entered in to contract agreement will not be considered~~
- ~~2) The above experience shall be within last seven (7) financial years i.e. from 2019 20 to 2025 26 and up to one month prior to last date of submission of the bid for which Form— 3A/11 must be submitted.~~
- ~~3) Experience as sub-contractor shall not be considered.~~
- ~~4) The experience of O & M works executed in Government (State/Central), Board, Corporation, and Government Undertaking /Organisations of state & central government shall only be considered for evaluation. The experience certificate from the client equivalent to not below the rank of Executive Engineer shall be considered. The experience of sublet works shall not be considered. In case of Nagarpalika, the experience certificate of duly Sign by Chief officer shall only be considered.~~

## 2.Bid Forms

### TO BE FILLED UP BY THE BIDDER

The qualification questionnaire contains the following forms:

FORM NO.	DESCRIPTION OF PROFORMA
Form – 1	Letter for submission of tender
Form – 2	Form-H (Declaration)
Form – 3	Bank Guarantee (EMD)
Form – 4	Performance bond/ Performance guarantee Proforma for bid security
Form – 5	Details of organization structure of the bidder
Form – 6	Litigation History / Debarment / Blacklisting
Form – 7	Financial data
Form – 8	Details of experience of completed work (similar nature)
Form – 9	Details of works on hand with Bidder
Form - 10	Information for tenders submitted but not awarded

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**Note:**

1. If necessary, additional sheets may be added to the forms. Each page of each form should be clearly marked in the right top corner as follows: Form-1, page 1; Form 2, page 2, etc.
2. Some of the forms will require attachments. Such attachments should be clearly marked as follows: Attachment 1 to Form 1, Attachment 2 to Form 2, etc.
3. All submittals shall be numbered chronologically, and reference of page nos shall be mentioned. The same is to be uploaded online and submitted in physical form as well

**FORM -1**  
**LETTER FOR SUBMISSION OF TENDER**

**To**

(Board's concern officer's designation)

(Office address of Board's concern officer)

**Sub:** SUBMISSION OF TENDER APPLICATION FOR (NAME OF WORK)

Sir,

- 1) Having examined the details given in the invitation to Bidder for qualification and brief note, the condition of contract and Specification..... for the execution of Operation & Maintenance work, we the undersigned, offer to execute and complete such works and remedy any defects therein in conformity with the conditions of contract, Specifications, and quoted amount in accordance with the said conditions.
- 2) We hereby certify that all the statements made and information supplied in the enclosed forms and accompanying statements are true and correct.
- 3) We have furnished all information and details necessary for qualification and have no further pertinent information to supply.
- 4) We hereby apply for qualification for (Name of work).
- 5) We undertake, if our Tender is accepted, to commence the Operation & Maintenance work immediately after the receipt of the Engineer's notice to commence.
- 6) We agree to abide by this Tender for the period of 180 days from the last date fixed for receiving the same and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
- 7) We enclose here with fixed Deposit receipt / Deposit at call receipt / cross demand draft / Bank Guarantee amounting to Rs. .... Towards Earnest Money Deposit which is to be absolutely forfeited by Board should we not Deposit the amount of Security Deposit specified in the Clause 1, General Conditions of Contract, Volume-IB
- 8) We enclose..... DD in favour of **The Executive Engineer**, Public Health Works, Division, Ahwa amounting to Rs. .... towards tender fees.
- 9) Unless and until a formal Agreement is prepared and executed this Tender, together with your written acceptance thereof, shall constitute a binding contract between us.
- 10) We submit the following certificates in support of our suitability, technical know-how and capability for having successfully completed the following works

Sr. No.	Works	Client / owner
---------	-------	----------------

- 11) We hereby confirm that there are no deviations to the terms & conditions of the contract and we are liable for execution of this contract in accordance with the stipulated conditions of the contract.
- 12) We understand that you are not bound to accept the lowest or any tender you may Receive. Dated this \_\_\_\_\_ day of \_\_\_\_\_ (Year) Signature \_\_\_\_\_ in the capacity of \_\_\_\_\_ Duly authorized to sign tender for and on behalf of \_\_\_\_\_



13) We are enclosing herewith ‘‘Form H’

14) Irrespective of whatsoever has been stated to the contrary anywhere else in our offer no technical deviations have been taken and the entire work shall be performed as per your specifications and Tender documents.

Signature of Applicant.

**(NAME IN BLOCK CAPITALS)**

Address \_\_\_\_\_

Seal of Applicant

Date of submission

Witness \_\_\_\_\_

Address \_\_\_\_\_

Occupation \_\_\_\_\_

Enclosures:

**FORM -2**  
**PROFORMA FOR LETTER OF UNDERTAKING (FORM-H)**

**(TO BE EXECUTED ON NON-JUDICIAL E-STAMP PAPER OF Rs. 300/- AND SUBMITTED  
BY THE TENDERER ALONG WITH HIS TENDER IN A SEPARATE COVER)**

To,

Gujarat Water Supply and Sewerage Board,  
JalBhawan, Sector-10A,  
Infront of Air Force Office,  
Gandhinagar, Gujarat

Dear Sir,

- i. I/We hereby declare that I/We have visited the site and fully acquainted myself / ourselves with local situations pertaining to the work before submitting this tender.
- ii. I/We hereby declare that I/We have read the Tender Documents published on website [www.gwssb.nprocure.com](http://www.gwssb.nprocure.com) and accordingly submitted online price Bid for the work of -----  
-----
- iii. I/We hereby declare that I/We have carefully studied the conditions of contract and specifications and other documents of this work and agree to execute the same accordingly.
- iv. I/We hereby declare that my/our near relatives are not working in this division or in its sub-divisions as an Engineer of any category, Divisional Accountant, Storekeeper, and in the Circle Office as a Superintending Engineer as on today.
- v. I/we hereby declare that I/we are not declared ineligibility for corrupt or fraudulent practices issued by the central/state govt. or not in the list of blacklisted contractors announced by GWSSB/ GWIL / Govt of Gujarat or its Public Sector Undertakings, Government of India, Other states Government or Public Sector Units.
- vi. I/ We hereby submit our tender and undertake to keep our tender valid for a period of 180 days from the date of opening of tenders i.e. up-to -----. I/We shall not vary/ alter or revoke my/ our tender during the validity period of tender. This undertaking is in consideration of **Gujarat Water Supply and Sewerage Board, Gandhinagar** agreeing to open my/ our tender, consider and evaluate the same for the purpose of award in terms of provisions of tender documents. Should this tender be accepted, I/ We also agree to abide by fulfill and comply with all the terms and conditions and provisions of the above mentioned tender documents.
- vii. I/We also declare that the bid duly filled in online and digitally signed and the required Earnest Money Deposit, Tender Fee and other required documents (scanned copy submitted online) will be handed over in physical form to the .....by **RPAD/Speed Post/ Hand Delivery only**.

If this declaration is found to be incorrect then without prejudice to any other action that may be taken I/weshall be debarred from bidding in GWSSB/GWIL tender for three years and my/our

security deposit may be forfeited by GWSSB in full & the tender, if any, to the extent accepted, may be cancelled.

**Signature along with seal of the Company**

-----  
(Duly authorised to sign the tender on  
behalf of the Bidder)

Name:

Designation:

Name of Company (BLOCK LETTERS)

**WITNESS:**

Signature:

Date :

Date :

Postal Address :

Name &Address :

Telephone/Fax No.

**FORM -3**  
**FORM OF BANK GUARANTEE**

**(Earnest Money Deposit)**

Whereas M/s ..... (herein after called the Bidder) is desirous and prepared to tender for work in accordance with Terms & Conditions of Tender Notice of (financial year) dated ..... and whereas We, ..... Bank of ..... [Name of Country] having our registered office at ..... (hereinafter called "the Bank"); agree to give the Tenderer a guarantee for the Earnest Money Deposit.

- 1) Therefore, we hereby affirm that we are Guarantors on behalf of the Bidder upto a total of Rupees ..... ( i.e. Rs.....) and we undertake to pay the Executive Engineer, ..... upon his first written demand and without demur, without delay and without necessity of previous notice of individual or administrative procedure and without necessity to prove the bank the defects or shortcomings or debit of the contractor any sum within the limit of Rupees.....
- 2) We further agree that the guarantee here in contained shall remain in full force and effective during the period that would be taken for the acceptance of the tender. However, unless a demand or claim under this guarantee is made only in writing on or before the ..... We shall be discharged from all liabilities under the guarantee thereafter.
- 3) We undertake not to revoke the guarantee during its currency except with the previous consent of the Executive Engineer, ..... in writing.
- 4) We lastly undertake not to remove the guarantee for any change in constitution of the Tenderer or the Bank.

Signature and Seal of the  
Guarantor Bank:

Address:

Date:

**FORM -4**  
**PERFORMANCE BANK GUARANTEE**

(The date of this bond must not be prior to the date of the instrument in connection with which it is given)\_\_\_\_\_

Principal (Contractor) \_\_\_\_\_

Surety (Scheduled or Nationalized Bank) \_\_\_\_\_

Sum of bond (express in words and figures) \_\_\_\_\_

Contract No. and date of contract \_\_\_\_\_

**KNOW ALL MEN BY THESE PRESENTS THAT WE, THE PRINCIPALS AND SURETY** above named are held and firmly bound up to the \_\_\_\_\_ hereinafter called the Employer in the amount stated for payment of which sum, well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors jointly and severally, firmly by these presents subject to the provisions of which the aforesaid Contractor on demand and without demand on a claim being made by the Employer.

**THE CONDITION OF THIS OBLIGATION IS SUCH that** whereas the principals have entered in to a contract with the Employer numbered and 'dates as shown above and hereto attached for the execution \_\_\_\_\_ of work \_\_\_\_\_.

**NOW THEREFORE**, if the Principal shall well and truly perform and fulfil all the undertakings, covenants, terms, conditions and agreements of said contract during the original terms of the said Contract and any extensions thereof that may be granted by the Employer with or without notice to the surety and during the life or any guarantee required under the contract and shall also well and truly perform and fulfil all the Undertakings, covenants, terms, conditions and agreements of any all duty and unduly authorized modifications of said Contract that may hereafter be made, notice of which modifications to the surety being hereby waived or shall pay over, make good and reimburse to the Employer all loss and damages which the employer may sustain by reason of failure or default on the part of said Principal so to do.

We \_\_\_\_\_ further agree that the guarantee herein Contained shall remain in full force and effect during the period that would be taken for the validity of the said Contract, and that it shall continue to be enforceable till all the dues of the employer under or by virtue of the Contract have been fully paid and its claims satisfied or discharged or till the Employer certifies that the terms and conditions of the Contract have been fully and properly carried out by the said Contractor and accordingly discharges the guarantee. Unless a demand or claim under this guarantee is made on us in writing on or before the \_\_\_\_\_ we shall be discharged from all liability under this guarantee thereafter.

**IN WITNESS WHERE OF**, the above bounded parties have executed this instrument under their several seals on the date indicated above the name and corporate seal, of each corporate party being hereto affixed and these presents duly signed by is undersigned representatives, pursuant to authority of its governing body.

In the presence of witness \_\_\_\_\_

individual

Principal

1. \_\_\_\_\_ as to \_\_\_\_\_ (seal)

2. \_\_\_\_\_ as to \_\_\_\_\_ (seal)

3. \_\_\_\_\_ as to \_\_\_\_\_ (seal)

4. \_\_\_\_\_ as to \_\_\_\_\_ (seal)

By \_\_\_\_\_ affix Corporate Seal

Attested

Corporate Surety

Business address

Affix by \_\_\_\_\_ Corporate Seal

Title \_\_\_\_\_

For and on behalf of the Employer

**FORM -5**  
**DETAILS OF ORGANIZATION OF THE BIDDER**

1.	Name of Bidder	
2.	Nationality of Bidder	
3.	Office address Telegraphic Address Telephone Number Fax Number E-mail address.	
4.	Year of Establishment	
5.	Location of Establishment	
6	Bid is submitted as a) An individual/ proprietary firm b) A partnership firm c) A limited Company or Corporation	
7.	Attach the Organization chart showing the structure of the organization including the names of the Directors and Position of officers	
8.	Number of years of experience a) as a prime contractor (Contractor shouldering main responsibility) i) in own country ii) other countries (Specify countries)	
9.	For how many years has your organization been in business of Operation & Maintenance of works of similar nature under its present name? What were your fields when your organization was established?	
	Whether any new fields have been added in your organization? and if so, when?	
10	Whether you were required to suspend Operation & Maintenance work for a period of more than six months continuously after the work was started? If so, give the name of project and reasons thereof.	
11	Have you ever left the work awarded to you incomplete? (If so, give name of project and reasons for not completing work)	
12	In how many of your projects penalties were imposed for delays? (Please give details)	
13	Give details of testing laboratory, if any.	

**FORM-6**  
**LITIGATION HISTORY/ DEBARMENT/ BLACKLISTING**

**Name of Applicant:**

**1. PLEASE DESCRIBE:**

Company's history of litigation or arbitration / Debarment / Blacklisting from contract executed in the last ten years or currently under execution. Please indicate for each case the year, name of employer, cause, matter in dispute, disputed amount, and whether the award was for or against the company.

2. Please add any further information that you consider to be relevant to the evaluation of your application. If you wish to attach other documents, please list below:

**SIGNATURE OF BIDDER**



**FORM -7FINANCIAL DATA**

All individual firms are requested to complete the information in this form. The information supplied should be the annual turnover of the Applicant, in terms of the amounts billed to clients for each year for work in progress or completed.

Applicants should not enclose testimonials, certificates, and publicity material with their applications; they will not be taken into account in the evaluation of qualifications.

1)	<b>Name of Firm</b>		
2)	<b>Name of Partner / Director</b>		
3)	<b>Capital</b> <b>(a) Authorized</b> <b>(b) Issued and paid up</b>		
<b>Sr. No.</b>	<b>Year</b>	<b>Turnover (Rs in Crores)</b>	<b>Reference page No. to balance sheet or other documents</b>
4)	Furnish Balance sheet and profit and loss statement with Auditor's Reports and Income Tax assessment orders for last Seven (7) financial years. It should, interlaid include the following information  Turnover for the last seven (7) financial year, the contract receipts of works in all classes of civil engineering construction works. (Furnish reference page number to balance sheet attached)		
(I)	<b>2019-2020</b>		
(II)	<b>2020-2021</b>		
(III)	<b>2021-2022</b>		
(IV)	<b>2022-2023</b>		
(V)	<b>2023-2024</b>		
(VI)	<b>2024-2025</b>		
(VII)	<b>2025-2026</b>		
<b>GROSS INCOME IN THE LAST SEVEN (7) FINANCIAL YEAR</b>			
<b>Sr. No.</b>	<b>Year</b>	<b>Gross Income (Rs in Crores)</b>	<b>Reference page No. to balance sheet or other documents</b>

(I)	<b>2019-2020</b>		
(II)	<b>2020-2021</b>		
(III)	<b>2021-2022</b>		
(IV)	<b>2022-2023</b>		
(V)	<b>2023-2024</b>		
(VI)	<b>2024-2025</b>		
(VII)	<b>2025-2026</b>		
5.	What is the maximum cost of the project that has been handled? (Please give details)		
6.	List your sources of finance		
7.	Have you ever been denied tendering facilities by any Government / Government Undertaking Organisations / Public sector undertaking etc.? (If Yes, Please give details)		
8	Amount of financial soundness certified by Bank. (Attach copy of certificate)		
9.	Name and address of Bank from whom reference can be obtained		
10.	Have you ever been declared bankrupt? (If yes, please give details)		

**Note:** Firms owned by individuals, and partnerships, may submit their balance sheets certified by a registered accountant, and supported by copies of tax returns. Attach Certificate(s) issued by any Bank or Financial Institution for available credit to the firm.

**SIGNATURE OF BIDDER**

**FORM -8**  
**DETAILS OF EXPERIENCE OF COMPLETED WORKS**

**List of O & M works of similar nature already completed by the bidder during last 7 financial years i.e. From .....to .....& up to one month prior to last date of submission of the bid**

Sr. No.	Name of the Project	Place/ Dist./ State	Cost of O & M work (Rs in Lac)	Date starting of	Date of completion	Remarks

**Give details in the following Proforma. (Separate form for each work)**

1)	Name of the Project	
2)	Agreement No. & Date	
3)	Country and location	
4)	Client's Name and Address	
5)	Cost of O & M work (Rs. in Lac)	
7)	Brief description of O & M work(scope showing intake structure details, WTP/STP, villages and/or towns covered, pipeline network (rising, gravity) etc)	
8)	Period of completion	
9)	Name of applicant's Engineer - in -charge of the work and his educational qualification	
10)	Were there any Penalties/ Fines / Stop notice / Compensation / Liquidated Damage imposed? (Yes or No. If yes, give case wise details)	
11)	Attach Client's certificate (Not below the rank of Executive Engineer or equivalent)	

**SIGNATURE OF BIDDER**

**(\*) If the information is hidden or misleading by the bidder, he shall be disqualified for the Tender and debarred for three financial years.**

## FORM -9BIDDER'S WORK IN HAND

### **DETAILS OF WORKS ON HAND WITH BIDDER**

Work performance and Value of the existing commitments (Work on Hand) as on the date of bid submission for works (complete or partial) to be completed in the next .....years (Project Duration in Years) (In separate form for each work)

1)	Name of the Project	
2)	Agreement No. & Date	
3)	Country and location	
4)	Client's Name and Address	
5)	Cost of O & M work (Rs. in Lac)	
7)	Brief description of O & M work (scope showing intake structure details, WTP/STP, villages and/or towns covered, pipeline network (rising, gravity) etc)	
8)	Period of completion	
9)	Name of applicant's Engineer - in -charge of the work and his educational qualification	
10)	Were there any Penalties/ Fines / Stop notice / Compensation / Liquidated Damage imposed? (Yes or No. If yes, give case wise details)	
11)	Attach Client's certificate (Not below the rank of Executive Engineer or equivalent)	

**SIGNATURE OF BIDDER**

**Note:** Necessary certificates showing the year wise breakup of amount of work done from the officer concerned shall be attached with the tender.

**FORM -10**  
**INFORMATION FOR TENDERS SUBMITTED BUT NOT AWARDED**

Not required. Omitted

## **Section II: Scope of Services**

## 2. SCOPE OF WORK

### INTRODUCTION

#### About GWSSB

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GWSSB is a statutory body set up by the State Government for Development, Regulation and Control of the Drinking water sector in the State. The jurisdiction of the GWSSB (Board) extends to the whole state. The Board largely works for putting in place rural water supply system as well as operational management of Rural Regional water supply schemes covering cluster of villages. In this area the main function of the Board is to prepare, execute, promote and finance the schemes for supply of water for drinking purposes. The Rural water supply systems include Installation of hand pumps, mini water supply system, etc. in small hamlets and piped water supply system for individual villages including large water supply system covering several villages.

#### About this bid

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Gujarat Water Supply and Sewerage Board intends to carry out the operations and maintenance of its facilities through contractor selected in this bidding process. The selected contractor (hereafter called as “contractor”) shall perform the operations to fulfil the deliverables as set out in the terms and conditions laid out in this bid. He shall also be responsible for the maintenance of all the assets under the scope of this bid. At the end of the contract period, he shall handover the assets in good working condition so that the system’s reliability is sustained and cost of maintaining the water system does not increase.

Operations and maintenance of the water supply scheme involves two steps;

#### **Operations:**

The contractor shall carry out the operation of water supply system i.e. timely and daily operation of the components of a water supply system such as headwork’s, treatment plant, machinery and equipment, transmission mains, service reservoirs and distribution system etc. efficiently and economically to attain the objective of supplying safe and potable water equitably to the consumers.

#### **Maintenance:**

The contractor shall maintain the water supply system by keeping the structures, plants, machinery and equipment and other facilities in an optimum working order and proper functioning without any interruption. Maintenance shall include both Preventive Maintenance and Corrective Maintenance. He shall undertake preventive maintenance which shall constitute routine works and precautions to be taken periodically and ensure that the different components of the water supply system perform correctly over their service life (their expected lifetime). This in turn shall avoid the occurrence of a major fault or breakdown in the water supply system that calls for corrective maintenance that is many times more expensive.

Contractor shall undertake corrective maintenance which shall involve carrying out works related to break down, which has actually occurred by replacements, correction of defects etc.

## SCOPE OF CONTRACTOR

The board intends to hire contractor for comprehensive O&M through e-tendering system for a duration of 06 (six) months for the said scheme/s covering 69 villages and 01 Town spread across Ahwa Taluka of Dang District/s based on Check Dam and Open Well. Under This contract the successful bidder is required to supply water 69 villages and 01 Town only.

### About the schemes in this package:

Sl. No.	Scheme Name	Commissioning Year	Cost (in lacs)	Total commissioned habitations (village, towns and Hamlets)	Technical issue villages as on date	Voluntary villages as on date
1	AHWA RWSS	1990/2012	1635.44	69 Village/01 Town	---	---
Total			1635.44	69 Village/01 Town	00 Villages	00 Villages

*Note: Total commissioned habitations- technical issue habitations - voluntary habitations= operational habitations*

**Habitation means** all villages, towns, and census hamlets directly connected with the RWSS. In cases where the RWSS delivers water directly to the census hamlets, such hamlets shall be treated as habitation for monitoring and evaluation of SLAs.

List of habitations and their operational status is provided in Annexure I. Various civil structures, machineries and other electrical components have been constructed under the said regional water supply scheme as per Annexure I & IX.

### Brief scope of work:

Under this contract, it is expected that the contractor will supply safe and potable water on daily basis to all habitations connected to the water supply scheme:

Sl. No.	Category	Description	No. of habitations as on date
1	Operational	Habitations where water supply is operational currently	69 V/01 Town
2	Technical issue	Water is currently not being supplied to the village/ ULB/ hamlet due to technical reasons	00V
2a		<i>Carry out activities detailed in Part C of Schedule B of Volume II Price Bid to restore water supply</i>	0
2b		<i>Where contractor may take up restoration work to successfully operationalize such habitations. The contractor will be eligible to receive incentive as per the provisions of this contract</i>	0



3	Voluntary forgoing	Some habitations use their local sources during wet period. During summers or shortfall period, they seek water from RWSS. Supply of water when demanded by the GP as well as every 15 days to maintain the systems.	0
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The contractor shall maintain all assets in as-is (as handed over) condition during the contract period so that the scheme/s remains functional throughout its design life. The contractor also has to ensure smooth handing over to new contractor/GWSSB during transition phase/ after contract completion.

### Detailed scope of work

The scope of work for the O&M will include the following;

- 1) The works shall include Comprehensive Operation & Maintenance of Civil & Electromechanical assets such as intake wells/structures or offtake structures, elevated service reservoirs (E.S.R), HGLR, sump, water treatment plant, chemical house, staff quarters, pump house, all bulk transmission and distribution pipelines, valves, pumping machinery & electrical equipment etc. for the Ahwa Regional water supply scheme, including supply of 6.46 MLD potable water to all the 69 villages/ 01 Town.
- 2) Operation and Maintenance of the water supply schemes involve the following scope of work;
  - a. **Operation** to ensure prescribed quantity of water supply to the beneficiaries. The scope of operations involves;
    - i. Regular supplying 6.46 MLD of treated water to 69 villages/01 Town spread across Ahwa Taluka of Dang District/s on a daily basis as per Annexure I. The Scope excludes supply of water from villages to faliya.
    - ii. Quality compliance, testing and reporting on daily basis for the frequency and parameters as per Annexure II. Agency shall ensure safe and potable water supply up to the delivery point with adequate residual chlorine (last ESR/ sump etc.)
    - iii. Provide trained, competent manpower for efficient operation of the water supply scheme in accordance with Annexure III. All the manpower should attend the site in uniform and carry identification cards.
    - iv. Conduct planning and review meetings on daily, weekly, monthly and quarterly basis and document as per the guidelines in Annexure IV.
    - v. Daily, monthly or periodic reporting in the ERP/reporting system of the employer/authority/GWSSB as specified by authorities in charge or engineer and as per formats in Annexure V.
    - vi. Water supply infrastructure is critical from safety & security point of view. Therefore, the authority desires to have a biometric attendance system at all its HW locations. Wherever it is installed, the contractor must ensure recording of attendance by its deployed personnel so that the authority is aware of the identity of individuals working at asset locations.
    - vii. Redressal of grievances attributable and assigned to the O&M contractor within stipulated time as per Annexure VI.
    - viii. Conduct training sessions for its staff as per Annexure XVI.
    - ix. Always procure and maintain adequate stock of consumables. Usage of consumables shall be based on desired output quality parameters. Raise chemical consumables demand to the authority 3-months prior to requirement.
    - x. The contractor during the contract period shall ensure that the power factor does not fall below 0.90.
  - b. **Preventive & Curative maintenance** of the assets to ensure efficient operations  
The bidder shall be responsible for maintenance of equipment and assets under this RFP;
    - i. Preventive Maintenance:
      - The bidder will carry out such maintenance activities as per schedule given in **Annexure VII**. The bidder shall carry out all monitored/non-monitored or paid/unpaid maintenance

activities periodically as per the schedule and submit completion reports as per formats in annexure.

- The activities for which separate payments will be made by the authority includes; painting, cleaning of reservoirs/ tanks/sumps on actual basis. Unpaid activities shall include but not limited to routine maintenance, housekeeping, oiling of machineries> etc. It shall be bidder's responsibility to account the costs for such unpaid preventive maintenance activities in the price quote.
- The bidder will carry out minor repairs and replacements within one month of scheme handover for components which were found to require such works during joint inspection and handover survey. The bidder shall ensure that the assets are restored to optimum working condition by such minor repairs and replacements.

ii. Curative Maintenance:

Curative maintenance activities are the activities for troubleshooting and are to be carried out as and when fault, breakdown, breakage etc. are reported. It is bidder's responsibility to attend and resolve such issues within the time frame stipulated in **Annexure VI**. In case of failure to comply with these timelines, the authority shall impose penalties as per the said annexure. Troubleshooting procedures may be referred from Annexure XV or CPHEEO O&M Manual.

**c.General Maintenance and activities**

The bidder has to carry out the following activities during the contract tenure;

- i. Trimming of grass, trees and bushes at least once in a month. This shall also include landscaping and gardening for beautification of the premise
  - ii. Sweeping of the premises on daily basis for the built-up area mentioned in **Annexure IX**. Sweeping shall be carried out twice a day (at beginning of the day and evening).
  - iii. Record keeping of all the important data on daily basis as prescribed in **Annexure VIII** viz;
    - a. Filter plant operation records
    - b. Pumping station operation records
    - c. Chemical stock and dosing
    - d. Stores
    - e. Grievances
    - f. Visitors
    - g. Preventive and curative maintenance activities (in the formats and printed booklets provided by GWSSB)
    - h. Water supply to villages/cities/ hamlets
    - i. Leakage records
- 3) Electricity Bill should be submitted to GWSSB office for payment as soon as received from concerned Electricity authority. If charges for delay in payment, levied on account of late submission of bills to GWSSB office by the contractor, then the same will have to be borne by contractor.
  - 4) Maintain IT hardware necessary for reporting in software and printing reports at main head works. The data operator deployed for the scheme shall have computer/ laptop with internet connection to facilitate reporting. This computer and internet modem/data card will be owned by the contractor.
  - 5) Authority's equipment and assets other than water supply assets: Contractor shall preserve authority's equipment such as biometric attendance device, CCTV etc and if lost or damaged, it should be replaced and repaired by the contractor.
  - 6) The contractor shall immediately notify the authority of any illegal connections found in the distribution system. The contractor shall take needful action for removal of such illegal connections.
  - 7) The contractor will be responsible for all statutory & regulatory requirements related to handling of hazardous chemicals, health, safety & environment (HSE) compliances and due care shall be taken to abide the law. Any implication due to non-compliance or violation shall be borne by the contractor.
  - 8) O&M of pumping machinery must be scheduled as per CE (M & P), GWSSB circular No- Circular/ **PM/125/Dt. 12/05/2022** and Annexure VII.

- 9) All deployed staff shall be in uniform issued by the contractor as per the specifications provided in Annexure XIII. The uniform must have 'O&M Agency's name' and its logo so that during interaction with officials and beneficiaries they can be identified as personnel associated with water supply system.
- 10) Provide utility vehicle (inspection vehicle) for pipeline inspection and repair activities. Quantity as per Annexure III. This utility vehicle shall be a 4-seater pickup truck (utility vehicle) (mandatory). The provided vehicle shall not be used for any purpose other than inspection/ repair of pipeline infrastructure. The vehicle must feature a "On Duty for Water Supply System" & a logo of GWSSB (blue colour), complying to the logo usage guidelines. The agency shall arrange sufficient two wheeler and four wheel utility vehicle to ensure proper inspection activities. The number mentioned in this document is minimum and the agency must arrange additional vehicles as required.
- 11) All manpower working on GWSSB's asset locations shall at all times, carry valid ID cards issued by the contractor. The contractor must have a fool-proof mechanism for issuance of ID cards which will ensure that no fraud happens. Agency will be responsible in case of any fraudulent activity. Format provided on Annexure XIV.

## **SCOPE OF EMPLOYER**

- 1) Handing over of water supply infrastructure as specified in this contract document for operation and maintenance by the contractor.
- 2) Carry out Inspection & asset survey 2 months' prior to contract end date as defined in Exit Management.
- 3) Employer shall conduct and facilitate a joint inspection for "Handing over and taking over" with both relieving agencies and new agency.
- 4) Carry out an inspection on completion of one month from handover date to ensure minor repairs and replacement has been completed by the new agency
- 5) Deciding target quantity of water and target villages/ town/ hamlets.
- 6) Transfer of grievance to the contractor through grievance management system/software
- 7) Payment of Electricity bills for operations
- 8) Take up major repair or replacement in the assets, which have been damaged due to floods, earthquake, cyclone or any natural calamities.
- 9) Payment of raw water charges to Water Resources Department/ SSNNL/ GWIL
- 10) Supply chemical consumables such as chlorine, PAC and bleaching powder as per Schedule A of Vol-II. Agency shall raise demand for the requirement of such consumables at least three (3) months prior.

## **EXIT MANAGEMENT**

- 1) The authority will conduct inventory and asset survey at least 2 months prior to the end date of contract. Authority expects O&M as per the contract conditions such that all assets remain in good condition to deliver the intended objective throughout its design life. However, during the asset survey specified above, if it is found that any asset (electromechanical or civil) has not been maintained properly and degradation is due to poor maintenance & up keep beyond expected due to ageing, then it will be contractor's responsibility to restore the asset in healthy and usable condition for efficient operation. Defects found attributable to lack of maintenance & upkeep, shall have to be mandatorily rectified before handing over of assets upon completion of contract.
- 2) The contractor will have to carry out repairs and replacements as per the remarks of Deputy Executive Engineer in the DEE's asset survey report attributed to the contractor for corrective actions.
- 3) The handing over and taking over will be done in presence of a) Both contractors' representatives (relieving & taking over agency) and b) Deputy Executive Engineer or Executive Engineer. The report shall be countersigned by Executive Engineer.

### 3. ANNEXURES

## ANNEXURE-I SCHEME DETAILS & BENEFICIARY LIST

### Scheme Salient Features & Operational Data

Sl. No.	Particulars	Description			
1	Scheme Name	Ahwa Regional Water Supply Scheme.			
2	Commissioning Year	1990 to 2012			
3	Actual cost of scheme	1635.44Lakh			
4	Augmentation history (year and cost)	Year		Cost	
		-		-	
		-		-	
		-		-	
5	Existing Components with capacity	Refer the sub points below (a to f)			
a	Water source	Check Dam & Open well			
b	Filter Plants (nos., location, capacity)	Bhisya, Swaraj Ashram & Sadadvahir O& M work provided by Agency (un skilled Labour)			
		Location		Nos.	Capacity
		Bhisya		2 no.	2.65 MLD
		Swaraj Ashram Ahwa		1 no.	1.65 MLD
Sadadvahir		1 no.	1.30 MLD		
c	Pumping Machinery	As per Attached sheet			
d	Storage sumps/ tanks	As per Attached sheet			
e	Pipe network (length, make, class and Dia)	As per Attached sheet			
f	Distribution ESRs/ sumps	As per Attached sheet			
6	Total Beneficiary Demand	Category	Nos of Villages/ towns/ hamlets	Population	Demand (MLD)
		Village/Hamlets	69	54561	3.82
		Towns	01	18831	2.64
		Industries	0	N/A	N/A
		Institutional	0	N/A	N/A
		...			

7	Operational Hours	Location	Summer (Hours)	Winter/Monsoon (Hours)	Minimum (Hours)
		Mahardar HW	12	14	10
		Kodmal HW	9	11	7
		Sati HW	9	11	8
		Sunda HW	4	6	4
		Kamad HW	6	9	6
		Ravchond HW	7	8	5
		Pandva HW	5	7	5
		Galkund HW	8	11	7
		Bhisya HW	19	22	19
		Sadadvahir HW	15	19	15

Sr. No	Name of Village/Hamlet	Taluka	Details of storage Sump	
			Capacity	No.
1	2	3	7	8
1	Mahardar	Ahwa	50,000	1
2	Chinchdhara	Ahwa	1.10 lac	1
3	Chinchli	Ahwa	1.50 lac	1
4	Gadhvahir	Ahwa	65000	1
5	Hanvatpada (ChinchliSeja)	Ahwa	65000	1
6	Karadiamba	Ahwa	65000	1
7	Nimpada	Ahwa	65000	1

8	Kalmvahir	Ahwa	1.40 lac	1
9	Pipalghodi	Ahwa	90,000	1
10	Mahalpada	Ahwa	65,000	1
11	Nadanpeda	Ahwa	1.50 lac	1
12	sati	Ahwa	40,000	1
13	Bhavandagad	Ahwa	65,000	1
14	Chikatiya	Ahwa	1.20 lac	1
15	Davdahad	Ahwa	50,000	1
16	Golsta	Ahwa	20,000	1
17	Khapri	Ahwa	20,000	1
18	Kutarnachiya	Ahwa	40,000	1
19	Vagan	Ahwa	60,000	1
20	Vavada	Ahwa	30,000	1
21	Mulchond	Ahwa	45,000	1
22	Pimpri	Ahwa	1.40 lac	1
23	Sunda	Ahwa	10,000	1
24	Kasvdahad	Ahwa	1.00 lac	1
25	Ghoghali	Ahwa	40,000	1
26	Bilmal	Ahwa	70,000	1
27	Kamad	Ahwa	50,000	1
28	Linga	Ahwa	1.10 lac	1
29	Vakariya	Ahwa	1.00 lac	1
30	Ravchond	Ahwa	60,000	1
31	Chokiya	Ahwa	80,000	1
32	Isdar (BorkhalSeja )	Ahwa	50,000	1

33	Javtala	Ahwa	40,000	1
34	Garmal	Ahwa	40,000	1
35	Pandva	Ahwa	70,000	1
36	Galkund	Ahwa	1.00 lac	1
37	Lahanchariya	Ahwa	1.00 lac	1
38	Motachariya	Ahwa	40,000	1
39	Pipalpada	Ahwa	50,000	1
40	Sinbandh	Ahwa	70,000	1
41	Mohpada	Ahwa	30,000	1
42	Dhumkhal	Ahwa	50,000	1
43	Chinchpada	Ahwa	40,000	1
44	Bhisya	Ahwa	1.00 lac	1
45	Borkhet	Ahwa	1.00 lac	1
46	Chankhal	Ahwa	1.70 lac	1
47	Ghubita	Ahwa	30,000	1
48	Gondalvihir	Ahwa	1.40 lac	1
49	Nilsakiya	Ahwa	50,000	1
50	Pipalyamal	Ahwa	70,000	1
51	Ahwa	Ahwa	15 & 9 lac	2
52	Sadadvahir	Ahwa	50,000	1
53	Kamdiawan	Ahwa	50,000	1
54	Ghaniamba	Subir	30,000	1
55	Vanzattembrun	Ahwa	65,000	1
56	Karanjadi (GadadSeja)	Ahwa	70,000	1
57	Garkhadi	Subir	1.10 lac	1

58	Ahirpada	Subir	60,000	1
59	Jhari	Subir	90,000	1
60	Jamanya	Subir	40,000	1
61	Harpada	Ahwa	60,000	1
62	Taklipada	Ahwa	1.00 lac	1
63	Vanzarghodi	Ahwa	45,000	1
64	Pipalaidevi	Subir	85,000	1
65	Pipalda	Subir	70,000	1
66	Hindla	Subir	50,000	1
67	Bokadmal	Subir	70,000	1
68	Vadpada	Subir	60,000	1
69	Chinchpada (vadpada)	Subir	50,000	1



<b>Statements Showing Details of ESR&amp; Sump</b>		
<b>MAHARDAR HW</b>		
RCC UG Sump of 100000 lit Cap.	1	Nos.
<b>Sadadvahir HW</b>		
RCC UG Sump of 10,00,000 lit Cap. At main H.W.	1	Nos.
RCC UG Sump of 50000 lit Cap. At Garkhadi H.W.	1	Nos.
RCC UG Sump of 50000 lit Cap. At Jhari H.W.	1	Nos.
<b>Galkund HW</b>		
RCC UG Sump of 70000 lit Cap. At main H.W.	1	Nos.
<b>Pandava HW</b>		
RCC UG Sump of 80000 lit Cap. At main H.W.	1	Nos.
<b>Bhisya HW</b>		
RCC UG Sump of 500000 lit Cap. At main H.W.	1	Nos.
RCC UG Sump of 50000 lit Cap. At Borkhet S.H.W.	1	Nos.
RCC UG Sump of 2500000 lit Cap. At Dang swaraj H.W.	1	Nos.
RCC ESR of 350000 lit Cap.X 12 mt. HT At Dang swaraj H.W.	1	Nos.
RCC UG Sump of 4000000 lit Cap. At Jalbhavan H.W.	1	Nos.

No	Name of Headworks	Nos., Type& Capacity of working pump sets			
		Type of Pump	Discharge (LPS)	Head (meter)	Nos.
					Working + Standby
1	2	3	4	5	6
1	Mahardar HW Sump	Submersible Pumpset	4.0	170	1+0
2	Mahardar HW Openwell - 1	Submersible Pumpset	2.25	120	1+0
3	Mahardar HW Openwell - 2	Submersible Pumpset	3.0	108	1+0
4	Mahardar HW Openwell - 3	Submersible Pumpset	3.0	108	1+0
5	Kodmal HW Openwell -1	Submersible Pumpset	5.33	150	1+0
6	Kodmal HW Openwell -1	Submersible Pumpset	4.0	170	1+0
7	Kodmal HW Openwell -1	Submersible Pumpset	3.0	180	1+0
8	PipalghodiOpenwell -1	Submersible Pumpset	2.25	120	1+0
9	PipalghodiOpenwell -2	Submersible Pumpset	2.25	120	1+0
10	MahardarOpenwell -1	Submersible Pumpset	2.25	120	1+0
11	Sati HW Openwell	Submersible Pumpset	4.0	170	1+0
12	Vavanda HW Borewell	Submersible Pumpset	0.66	180	1+0
13	Sunda HW Openwell- 1	Submersible Pumpset	2.25	120	1+0
14	Sunda HW Openwell- 2	Submersible Pumpset	4.0	210	1+0
15	GhoghliOpenwell -1	Submersible Pumpset	3.0	180	1+0
16	Kamad HW Openwell -1	Submersible Pumpset	3.0	180	1+0
17	Bilmal HW Openwell -1	Submersible Pumpset	3.0	180	1+0
18	Ravchond HW Openwell -1	Submersible Pumpset	3.0	108	1+0
19	Ravchond HW Openwell -2	Submersible Pumpset	3.0	180	1+0
20	IsdarOpenwell -1	Submersible Pumpset	2.25	120	1+0
21	Pandva HW Sump	Submersible Pumpset	3.0	180	1+0
21	Pandva HW Sump	Submersible Pumpset	3.0	108	1+0
22	PandvaOpenwell - 1	Submersible Pumpset	2.25	120	1+0

23	PandvaOpenwell - 2	Submersible Pumpset	2.25	120	1+0
24	PandvaOpenwell - 3	Submersible Pumpset	2.25	120	1+0
25	GalkundIntakewell	Submersible Pumpset	3.0	180	1+0
26	Galkund HW Sump	Submersible Pumpset	4.0	170	1+0
27	PipalpadaOpenwell	Submersible Pumpset	2.25	120	1+0
28	SinbandhOpenwell	Submersible Pumpset	3.0	180	1+0
29	MotacharyaOpenwell	Submersible Pumpset	3.0	180	1+0
30	BhisyaIntakewell	Submersible Pumpset	13.33	108	2+0
31	BhisyaIntakewell	Submersible Pumpset	13.33	72	1+0
32	Bhisya HW	Submersible Pumpset	2.25	120	1+0
33	Lashkariya HW	Submersible Pumpset	5.33	150	1+0
34	Lashkariya HW	Submersible Pumpset	4.0	170	1+0
35	NilsakyaIntakewell	Submersible Pumpset	16.66	126	2+0
36	NilsakyaIntakewell	Submersible Pumpset	13.33	144	1+0
37	Jalbhavan 40 Lacs Litre Sump	SubMonoPumpset	16.66	58	1+1
38	Jalbhavan 40 Lacs Litre Sump	SubMonoPumpset	21.66	50	1+0
39	Dang Swaraj Ashram	SubMonoPumpset	16.66	58	1+0
40	WanzetembrunIntakewell	Submersible Pumpset	13.33	72	1+0
41	Garkhadi HW	Submersible Pumpset	2.25	120	1+0
42	Chinchpada / Zari HW	Submersible Pumpset	3.0	180	1+0
43	Devinamad MHW & Boosting	Submersible Pumpset	13.33	198	2+0
44	Devinamad MHW Bore-3	Submersible Pumpset	2.25	120	3+0

**Headwork/ Sub headwork**

<b>Name of Headworks/Sub headworks</b>	<b>Water requirement (MLD)</b>
Mahardar Head works	0.500
Kodmad Head works	0.357
Sati Head works	0.618
Sunda Head works	0.126
Kamad Head works	0.248
Ravchond Head works	0.151
Pandva Head works	0.115
Galkund Head works	0.374
Bhisya Head works	3.110
Sadadvahir Head works	0.857

## Name of Scheme :Ahwa Regional Water Supply Scheme

### Statement Showing the Detail of Pipeline

Sr.No	Type of pipe	Pipe Dia in mm	Thickness/class	Pipe Qty in Mt
1	D.I.	150 mm Dia	k-9	2700
2	D.I.	250 mm Dia	K-9	1200
3	D.I.	300 mm Dia	K-9	5140
			<b>Total</b>	<b>9040.00</b>

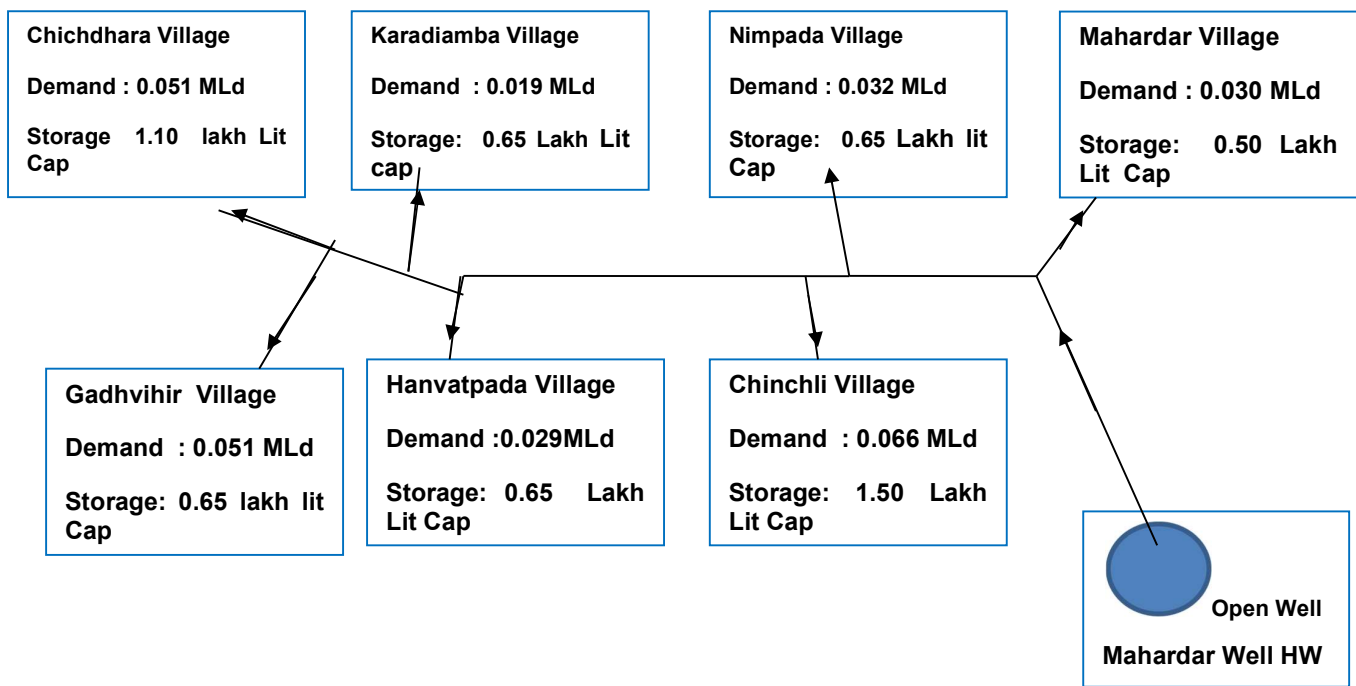
1	C.I.	80 mm Dia	-	77500
2	C.I.	100 mm Dia	-	3200
3	C.I.	150 mm Dia	-	8520
4	C.I.	200 mm Dia	-	1300
			<b>Total</b>	<b>90520.00</b>

1	G.I.	50 mm Dia	B-Class	6400
2	G.I.	65 mm Dia	B-Class	29760
3	G.I.	80 mm Dia	B-Class	54630
4	G.I.	150 mm Dia	B-Class	1400
			<b>Total</b>	<b>92190.00</b>

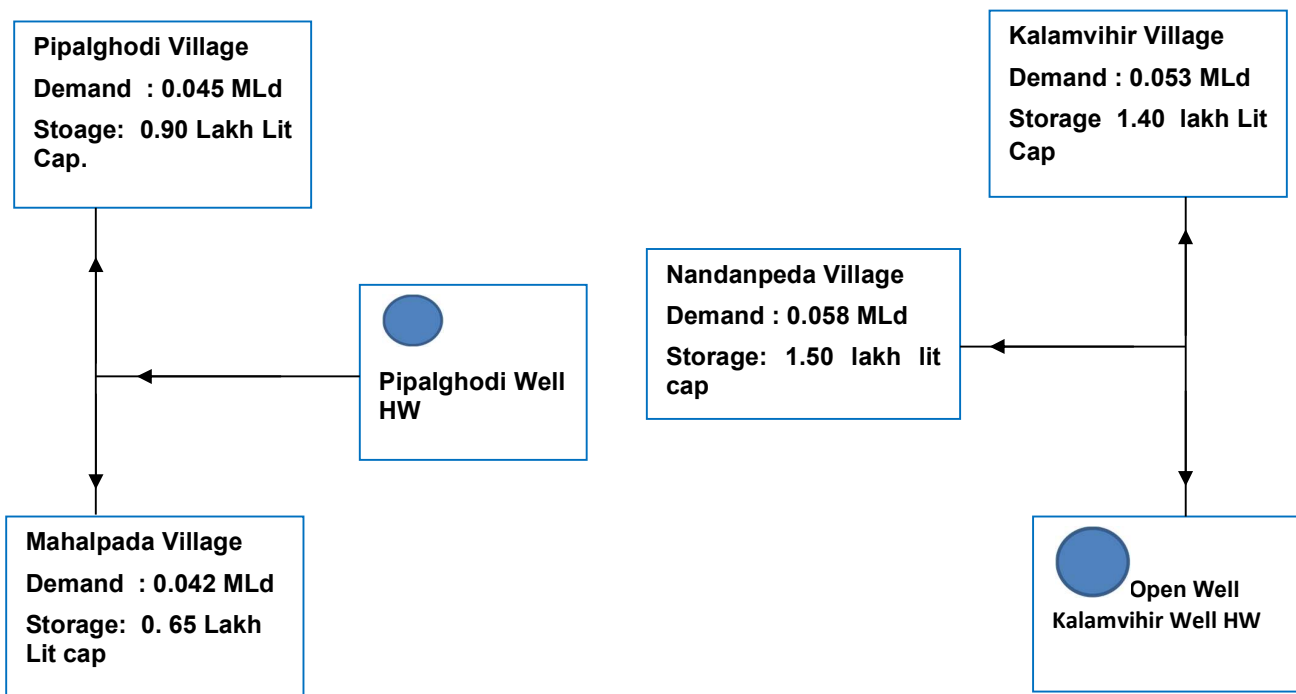
1	HDPE	50 mm Dia	6 Kg/cm2	2020
2	HDPE	75 mm Dia	6 Kg/cm2	17220
3	HDPE	90 mm Dia	6 Kg/cm2	22960
4	HDPE	110 mm Dia	6 Kg/cm2	7180
5	HDPE	140 mm Dia	6 Kg/cm2	11680
6	HDPE	160 mm Dia	6 Kg/cm2	28720
			<b>Total</b>	<b>89780.00</b>

<b>Total Length (In mtr)</b>	<b>281530 mtr (281.53 Km)</b>
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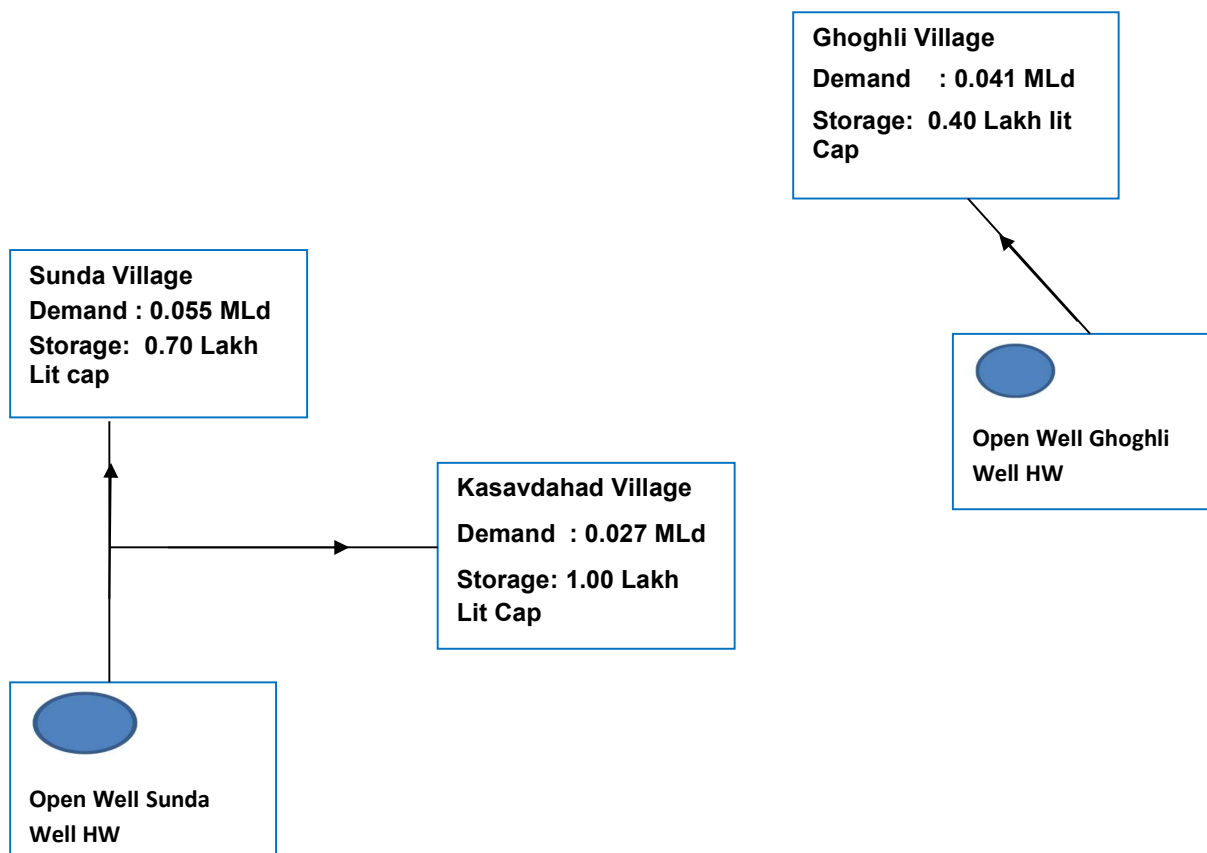
## Mahardar Water Supply Scheme (Flow Diagram)



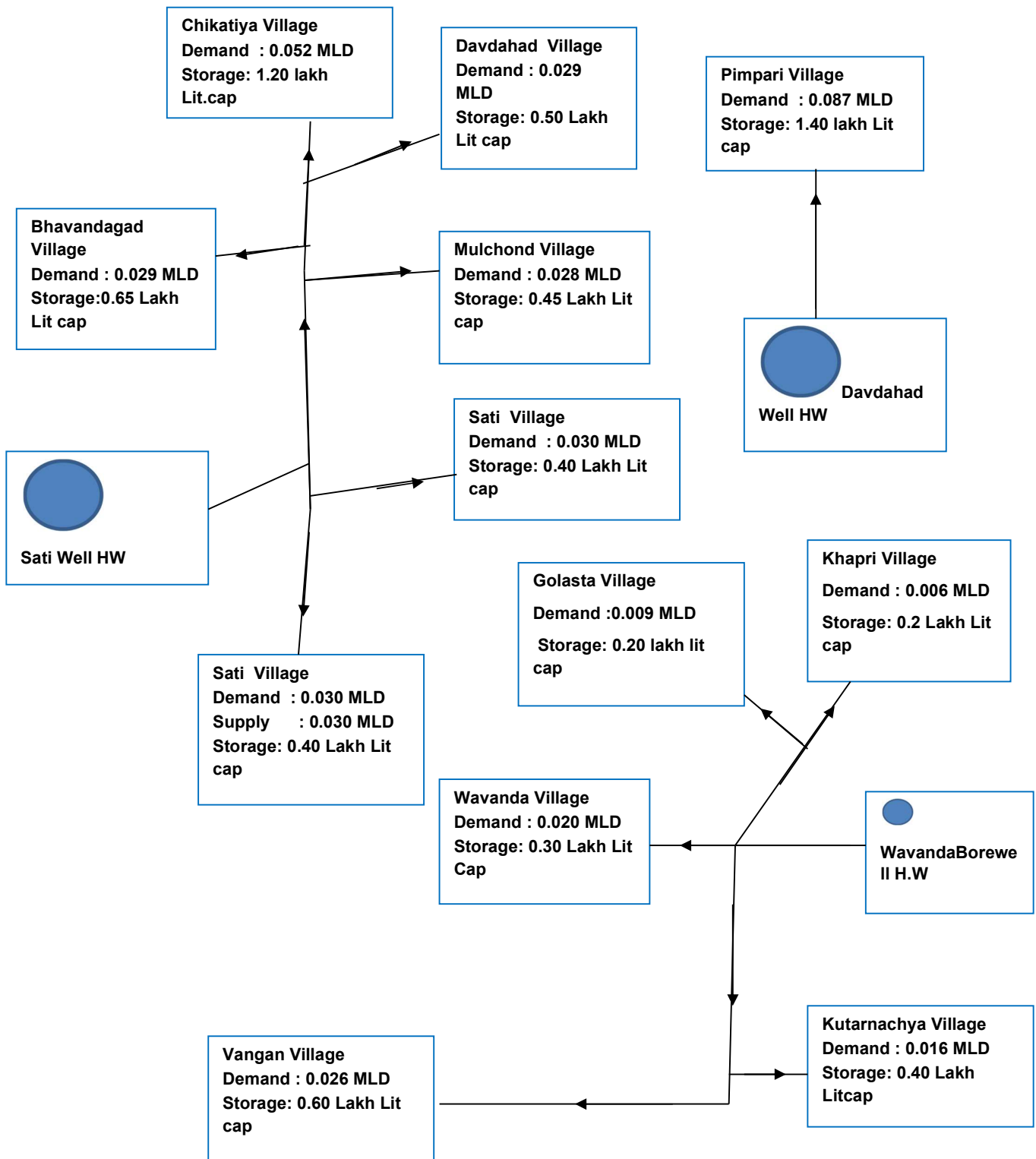
## Kodmal Water Supply Scheme (Flow Diagram)



## Sunda Regional Water Supply Scheme (Flow Diagram)

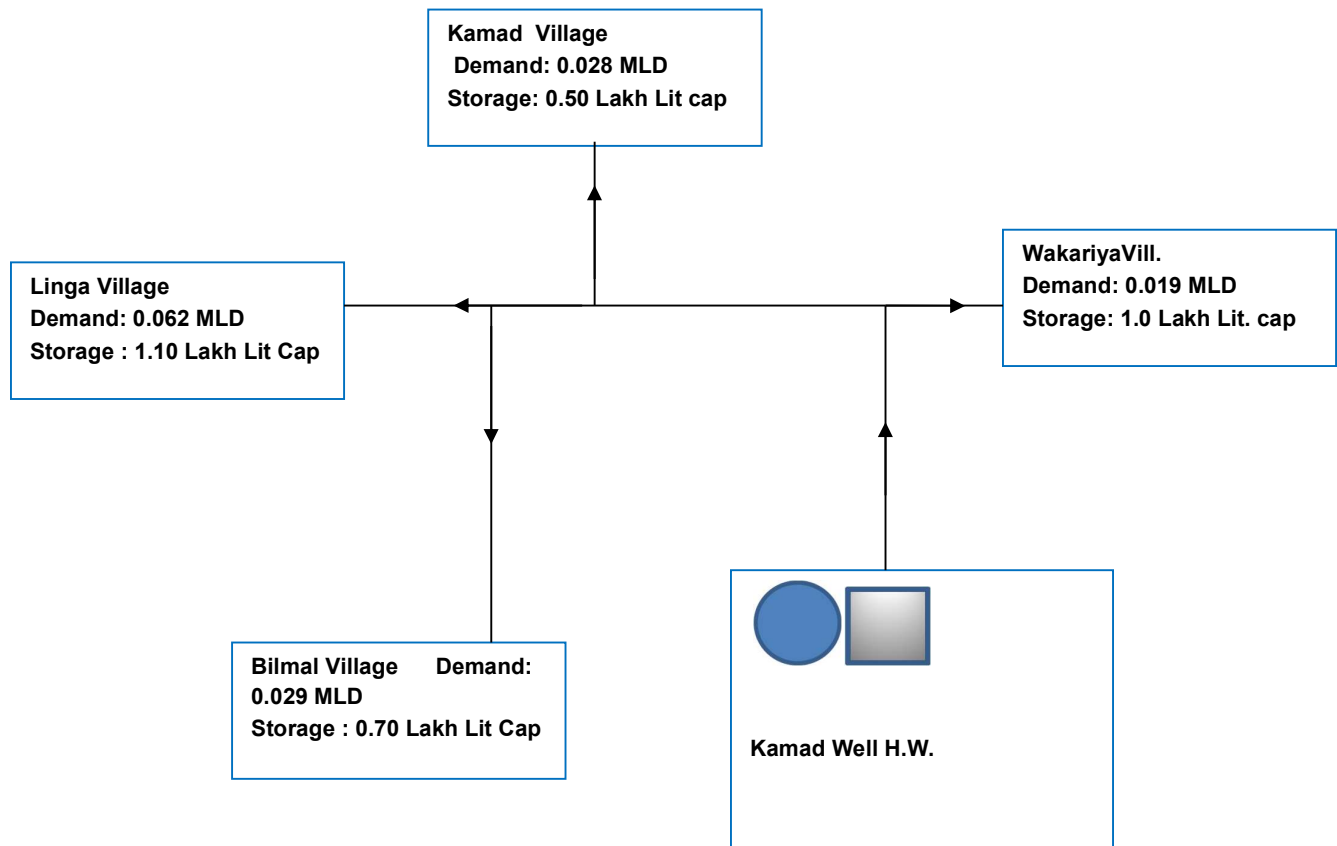


# Sati Regional Water Supply Scheme (Flow Diagram)

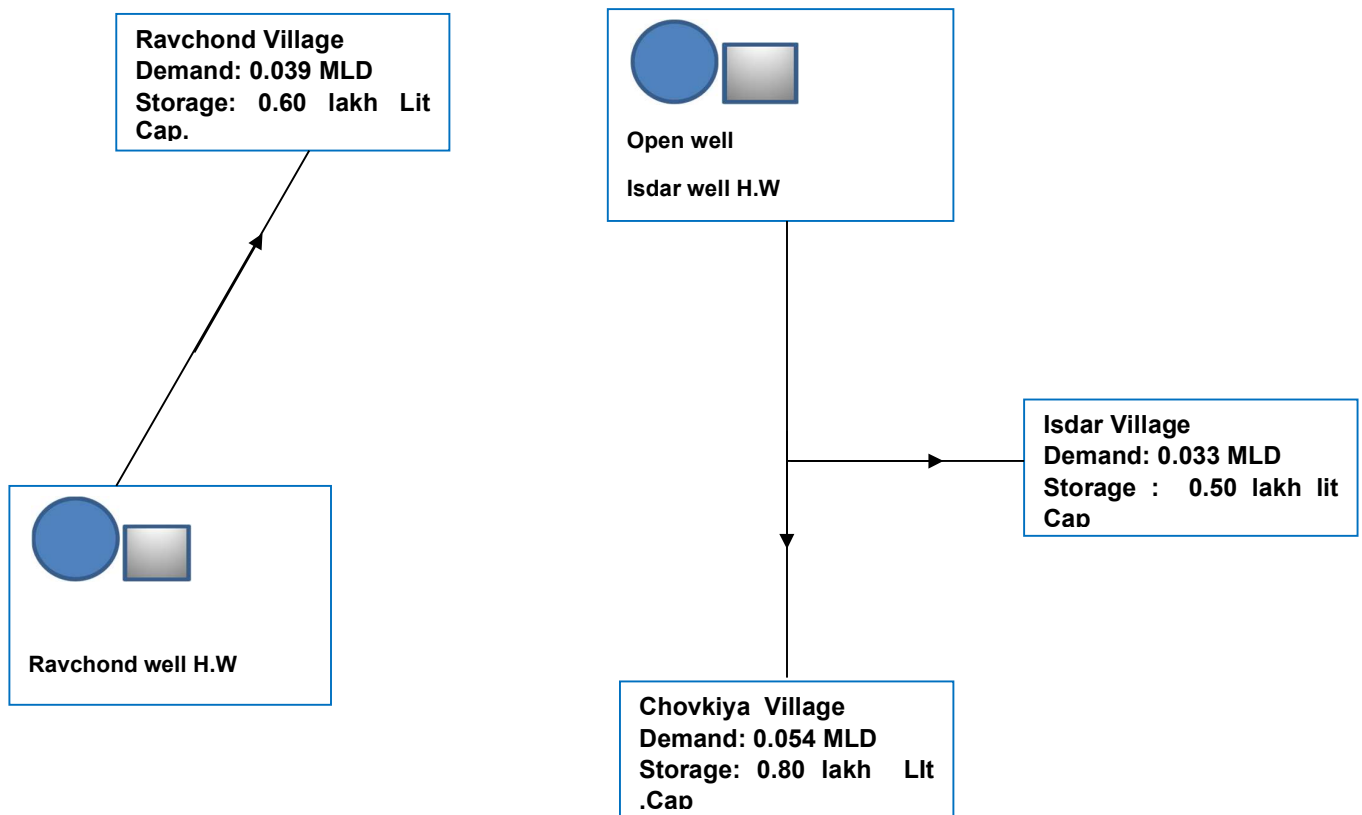




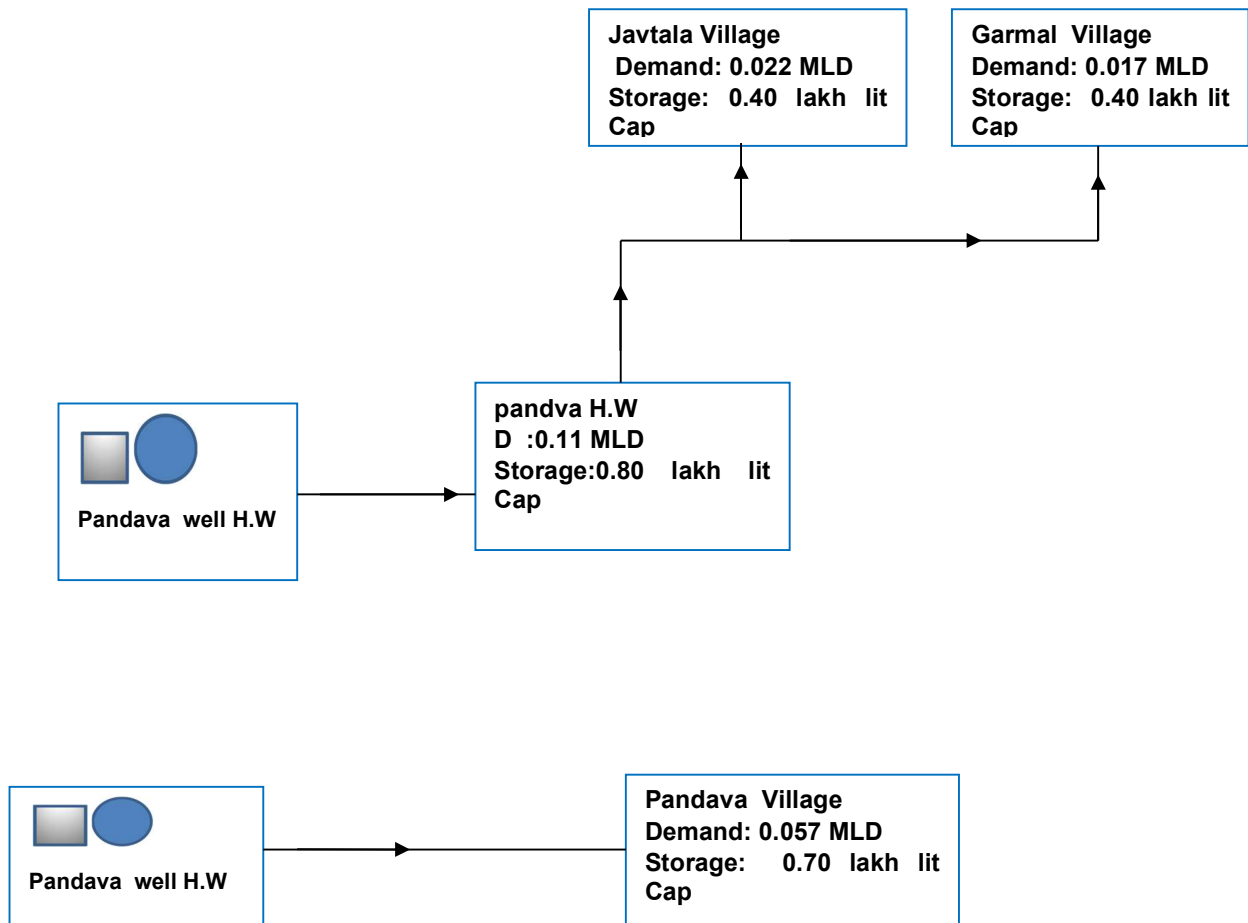
## Kamad Water Supply Scheme (Flow Diagram)



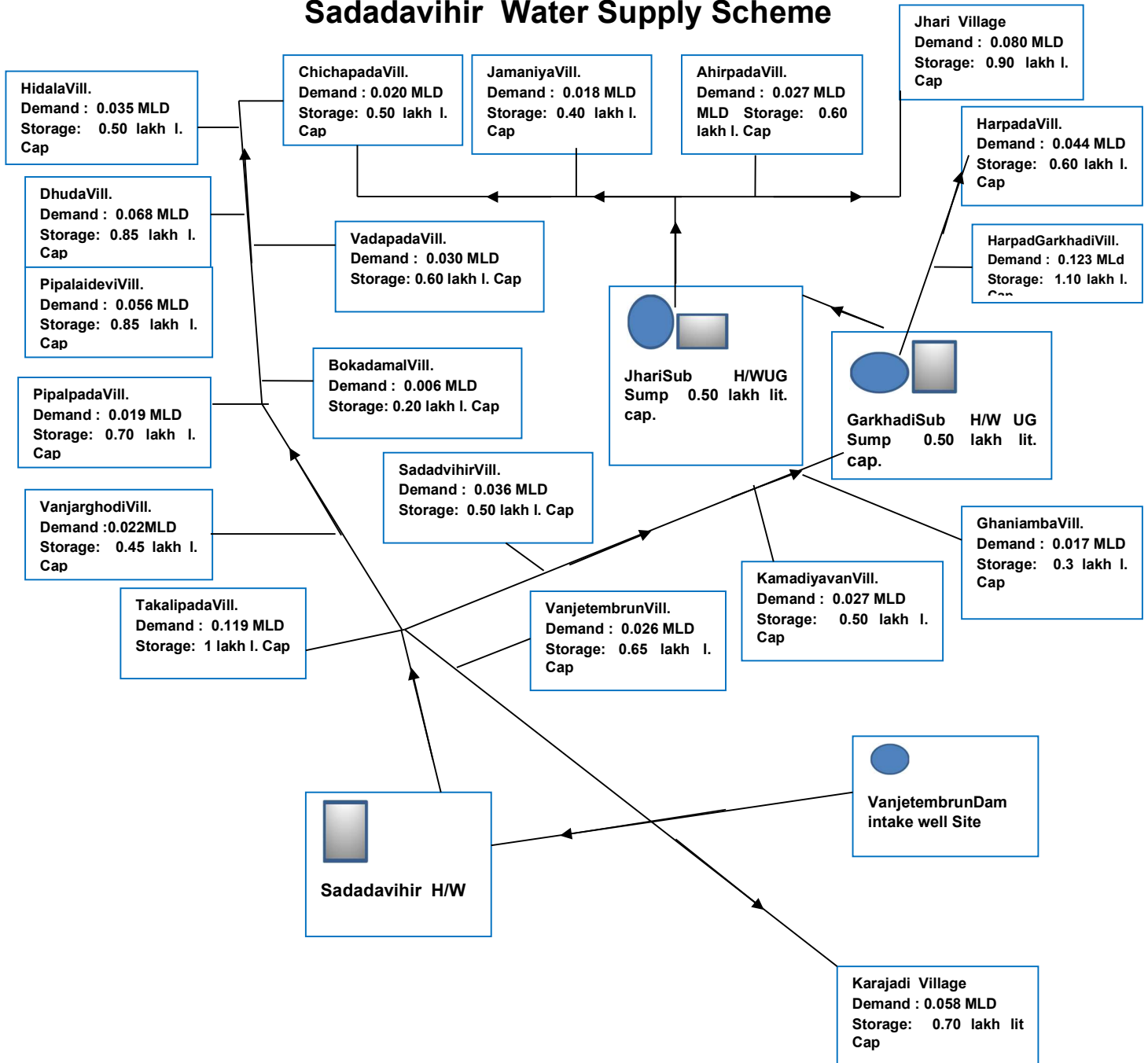
## Ravchond Water Supply Scheme (Flow Diagram)



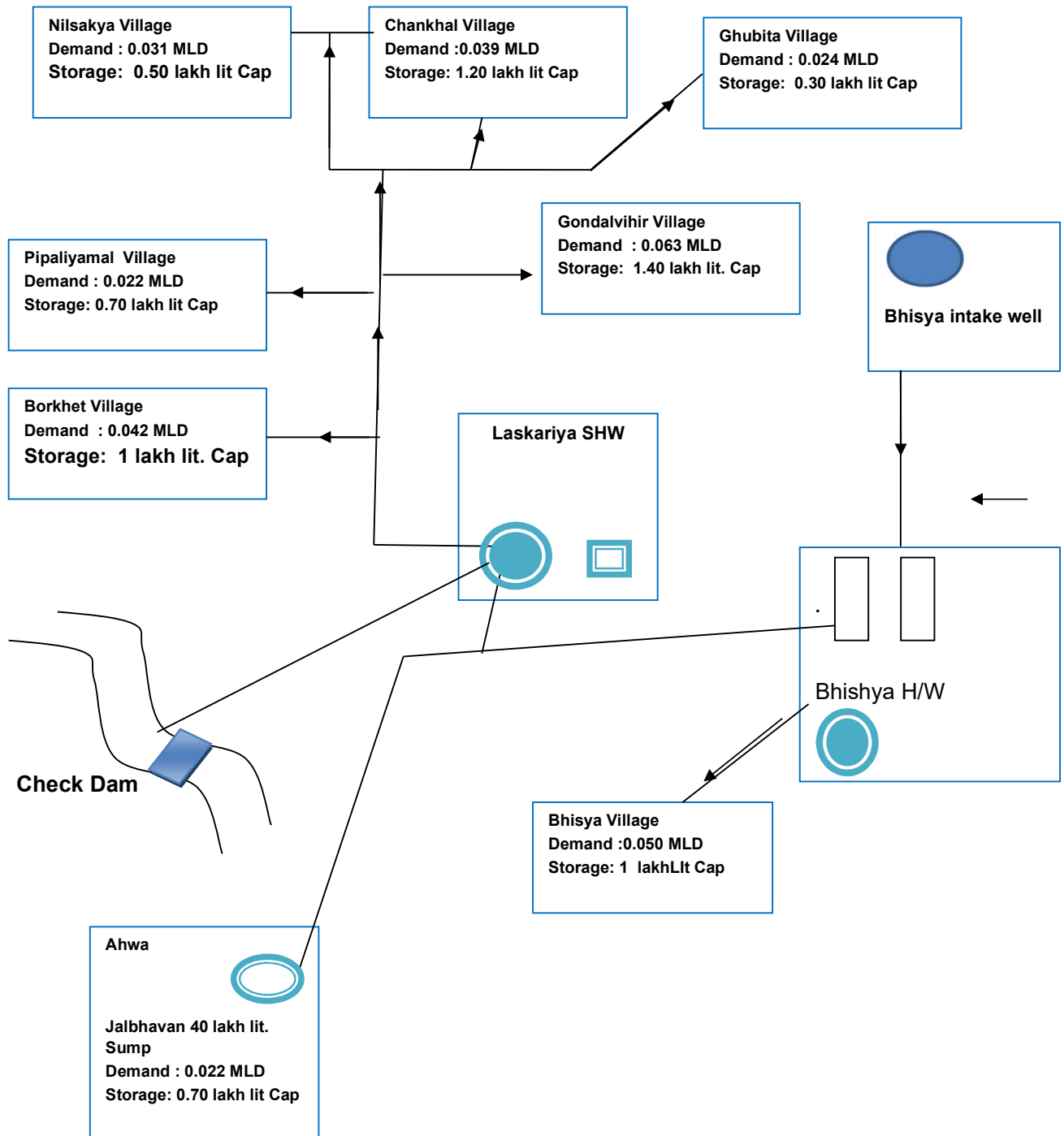
## Javtala-Garmal Water Supply Scheme (Flow Diagram)



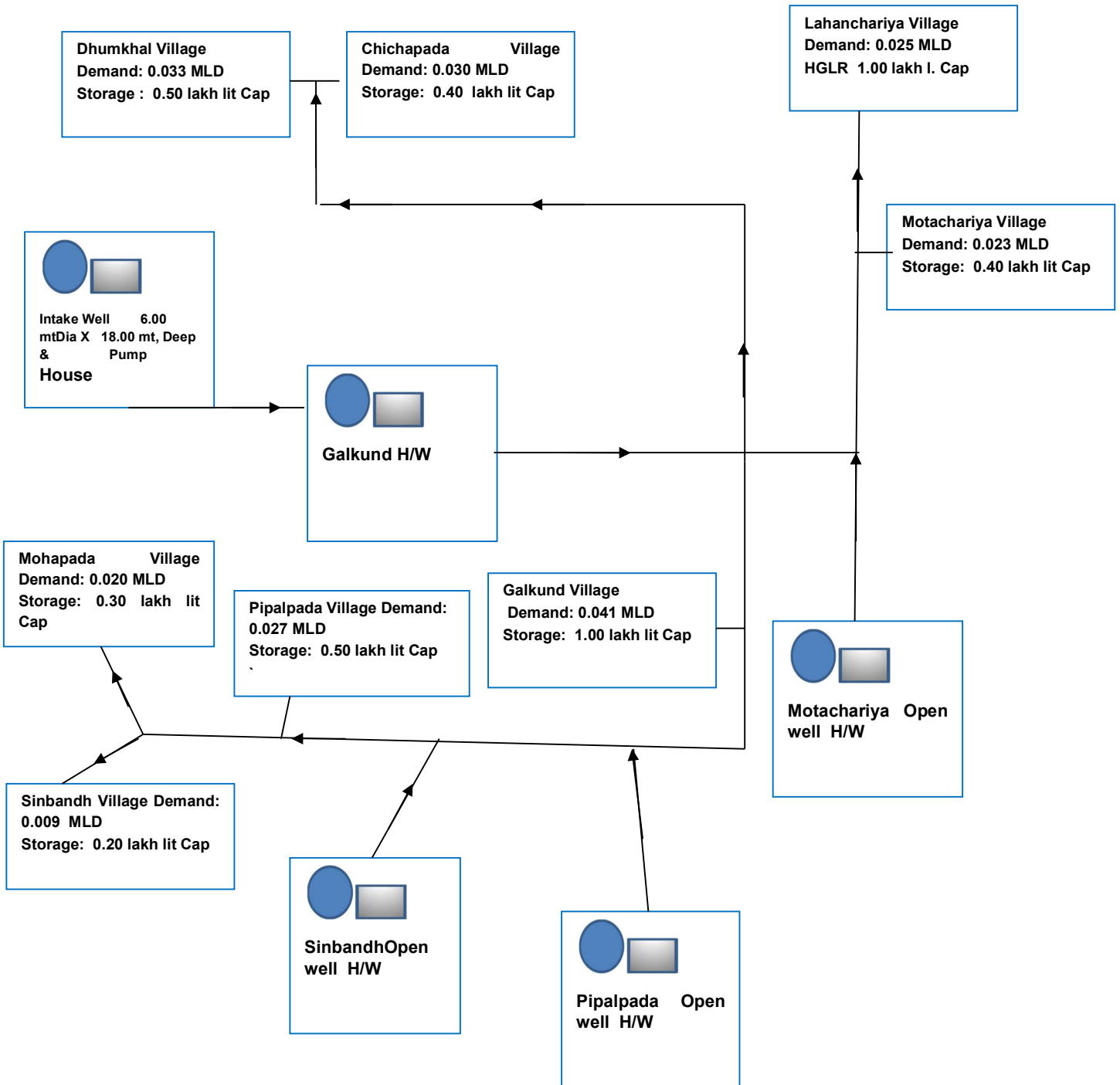
# Sadadavihir Water Supply Scheme



## Bhisya Regional Water Supply Scheme (Flow Diagram)



# GALKUND Water Supply Scheme (Flow Diagram)



## List of Habitations

▪ Supply to Villages, ULBs& Hamlets

Sr. No.		Name of village	Taluka	Population (year of tendering)	Target LPC D	Target Supply (in MLD)	Water Supply of past 12 months (MLD)	Habitation Category	Status of Water Supply	In case of technical, is the habitation W/s restoration work included in Part C of Schedule B? (Y/N)
1	2	3	4	5	6	7	8	Initial (I), Intermediate (IN), Tail End (T)	((O) Operational, (T) Technical issue, (V) Voluntary not taking)	11
A	RAW WATER RECEIVED FROM Check Dam with Intake well & Open well.									
		MahardarH/W								
	1	Mahardar	Ahwa	771	70	0.054	19.1772	I	O	N
	2	Chinchdhara	Ahwa	1321	70	0.092	32.8356	T	O	N
	3	Chinchli	Ahwa	1695	70	0.119	42.1344	IN	O	N
	4	Gadhvihir	Ahwa	1302	70	0.091	32.3568	IN	O	N
	5	Hanvatpada (ChinchliSeja)	Ahwa	745	70	0.052	18.522	IN	O	N
	6	Karadiamba	Ahwa	494	70	0.035	12.2724	IN	O	N
	7	Nimpada	Ahwa	818	70	0.057	20.3112	IN	O	N

		<b>KodmadH/W</b>								
	8	Kalmvihir	Ahwa	1373	70	0.096	32.0846	I	O	N
	9	Pipalghodi	Ahwa	1169	70	0.082	27.3041	IN	O	N
	10	Mahalpada	Ahwa	1070	70	0.075	24.9873	IN	O	N
	11	Nadanpeda	Ahwa	1494	70	0.105	34.90	IN	O	N
		<b>Sati H/W</b>								
	12	Sati	Ahwa	760	70	0.053	17.7433	I	O	N
	13	Bhavandagad	Ahwa	745	70	0.052	17.3914	IN	O	N
	14	Chikatiya	Ahwa	1343	70	0.094	31.3807	IN	O	N
	15	Davdahad	Ahwa	741	70	0.052	17.3034	T	O	N
	16	Golsta	Ahwa	243	70	0.017	5.66026	IN	O	N
	17	Khapri	Ahwa	162	70	0.011	3.78328	IN	O	N
	18	Kutarnachiya	Ahwa	418	70	0.029	9.76614	IN	O	N
	19	Vagan	Ahwa	676	70	0.047	15.7783	IN	O	N
	20	Vavada	Ahwa	524	70	0.037	12.2297	I	O	N
	21	Mulchond	Ahwa	731	70	0.051	17.0688	IN	O	N
	22	Pimpri	Ahwa	2490	70	0.174	58.1863	I	O	N
		<b>Sunda SH/W</b>								
	23	Sunda	Ahwa	806	70	0.056	18.8284	I	O	N
	24	Kasvdahad	Ahwa	395	70	0.028	9.20892	IN	O	N
	25	Ghoghali	Ahwa	602	70	0.042	14.048	T	O	N
		<b>Kamad SH/W</b>								
	26	Bilmal	Ahwa	737	70	0.052	17.2154	IN	O	N
	27	Kamad	Ahwa	728	70	0.051	17.0101	IN	O	N
	28	Linga	Ahwa	1596	70	0.112	37.2756	T	O	N
	29	Vakariya	Ahwa	482	70	0.034	11.2619	I	O	N



		<b>Ravchond HW</b>								
	30	Ravchond	Ahwa	664	70	0.046	15.5144	IN	O	N
	31	Chokiya	Ahwa	923	70	0.065	21.5559	I	O	N
	32	Isdar (BorkhalSeja )	Ahwa	563	70	0.039	13.1388	IN	O	N
		<b>PandvaH/W</b>								
	33	Javtala	Ahwa	369	70	0.026	8.62236	T	O	N
	34	Garmal	Ahwa	297	70	0.021	6.92135	IN	O	N
	35	Pandva	Ahwa	976	70	0.068	22.7877	I	O	N
		<b>GalkundH/W</b>								
	36	Galkund	Ahwa	1063	70	0.074	24.8406	I	O	N
	37	Lahanchariya	Ahwa	636	70	0.045	14.8398	T	O	N
	38	Motachariya	Ahwa	589	70	0.041	13.7547	IN	O	N
	39	Pipalpada	Ahwa	705	70	0.049	16.4529	IN	O	N
	40	Sinbandh	Ahwa	224	70	0.016	5.22034	T	O	N
	41	Mohpada	Ahwa	514	70	0.036	11.9951	IN	O	N
	42	Dhumkhal	Ahwa	843	70	0.059	19.6789	T	O	N
	43	Chinchpada	Ahwa	765	70	0.054	17.8606	IN	O	N
		<b>BhisyaH/W</b>								
	44	Bhisya	Ahwa	1247	70	0.087	29.1225	I	O	N
	45	Borkhet	Ahwa	1055	70	0.074	24.6353	IN	O	N
	46	Chankhal	Ahwa	981	70	0.069	22.905	T	O	N
	47	Ghubita	Ahwa	604	70	0.042	14.1067	IN	O	N
	48	Gondalvihir	Ahwa	1567	70	0.110	36.601	IN	O	N
	49	Nilsakiya	Ahwa	769	70	0.054	17.9486	IN	O	N
	50	Pipalyamal	Ahwa	540	70	0.038	12.6109	IN	O	N
	51	Ahwa	Ahwa	18831	140	2.636	880.067	I	O	N

		<b>SadadvihirH/W</b>								
	52	Sadadvihir	Ahwa	531	70	0.037	12.4056	T	O	N
	53	Kamdiawan	Ahwa	402	70	0.028	9.38488	IN	O	N
	54	Ghaniamba	Subir	250	70	0.018	5.83622	IN	O	N
	55	Vanzattembrun	Ahwa	381	70	0.027	8.88631	I	O	N
	56	Karanjadi (GadadSeja)	Ahwa	853	70	0.060	19.9135	IN	O	N
	57	Garkhadi	Subir	1800	70	0.126	42.056	IN	O	N
	58	Ahirpada	Subir	401	70	0.028	9.35556	IN	O	N
	59	Jhari	Subir	1181	70	0.083	27.5974	IN	O	N
	60	Jamanya	Subir	260	70	0.018	6.07085	T	O	N
	61	Harpada	Ahwa	649	70	0.045	15.1625	IN	O	N
	62	Taklipada	Ahwa	1744	70	0.122	40.7363	T	O	N
	63	Vanzarghodi	Ahwa	326	70	0.023	7.59589	IN	O	N
	64	Pipalaidevi	Subir	828	70	0.058	19.327	IN	O	N
	65	Pipalda	Subir	282	70	0.020	6.56942	IN	O	N
	66	Hindla	Subir	518	70	0.036	12.083	T	O	N
	67	Bokadmal	Subir	95	70	0.007	2.19958	IN	O	N
	68	Vadpada	Subir	440	70	0.031	10.2647	IN	O	N
	69	Chinchpada (vadpada)	Subir	293	70	0.021	6.83337	T	O	N
	70	Dhuda	Ahwa	798	70	0.070	15.1623	IN	O	N
		<b>Total Rural</b>		<b>54561</b>		<b>3.82</b>				
		<b>Total Town</b>		<b>18831</b>		<b>2.64</b>				
		<b>Total</b>		<b>73392</b>		<b>6.46</b>				

▪ **Supply to industries**

Sr No	Industry Name& location	Sanctioned water quantity	Average Water Supply of past 12 months (MLD)	Peak Water drawn (MLD)	Status of Water Supply ((O) Operational, (T)Technical Error, (V)Voluntary not taking)
1	--	--	--	--	--
2	--	--	--	--	--
3	--	--	--	--	--

▪ **Supply to institutions**

Sr No	Institute Name	Sanctioned water quantity	Average Water Supply of past 12 months (MLD)	Peak Water drawn (MLD)	Status of Water Supply ((O) Operational, (T)Technical Error, (V)Voluntary not taking)
1	--	--	--	--	--
2	--	--	--	--	--
3	--	--	--	--	--

## ANNEXURE-II QUALITY TESTING & FREQUENCY

### Quality standards:

Parameter	Unit	Permissible
Turbidity	NTU	≤1
pH		6.5 to 8.5
Total Dissolved Solids (TDS)	mg/L	≤500
Residual (Free) Chlorine	mg/L	≥2.00 at H/W ≥0.20 at service point (but not more than 1.00)
Coli form Organisms	MPN	<2.00

### Testing frequency and location of sampling:

Sl. No.	Parameter	Location for sampling	Frequency
1	Raw water turbidity	At inlet/ aerator	Per Shift
2	Raw water pH	At inlet/ aerator	Per Shift
<b>Output parameters (to be monitored)</b>			
3	Treated water turbidity	Clear water Sump	Per Shift
4	Treated water pH	Clear water Sump	Per Shift
5	Residual chlorine	At Inlet/sump of next headworks by agency &at village level sumps, and other delivery points by GP/ VWSC in presence of agency	Per Shift
6	Total Dissolved Solids (TDS)	Outlet of filter plant	Per shift
7	Coli form organisms	Outlet of filter plant	Per shift

### Historical raw water quality data

Parameter	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Turbidity (NTU)												
pH												

## ANNEXURE-III SCHEDULE FOR ESTABLISHMENT

The contractor shall employ the competent staff for O&M of the Water Supply Scheme as under with qualification and experience stated below, Contractor may deploy additional staff over and above those prescribed as per his requirement in order to run the system efficiently.

S. N.	Designation	Minimum Education	Role and office	Minimum Experience	No.
1	O&M Manager	MBA or PGDM in Business Management <b>and</b> - Bachelor's degree in Civil/ Mechanical/ Electrical/ Environmental/ Public Health engineering	<b>Role:</b> O&M coordinator / District coordinator  <b>Location:</b> Agency's office within 10 km radius from GWSSB's division	<b>Minimum 7 years of experience</b>	00
2	Maintenance Engineer (Supervisor)	- Bachelor's degree in Civil/ Mechanical/ Electrical/ Environmental/ Public Health engineering	<b>Role:</b> O&M Overseer (supervisor)  <b>Location:</b> At Main Headwork	<b>Minimum 5 years of experience</b>	00
3	Asst. Maintenance Engineer	- Bachelor's degree in Civil/ Mechanical/ Electrical/ Environmental/ Public Health engineering	<b>Role:</b> Assistance to Engineer <b>Location:</b> Agency's office within 10 km radius from each of GWSSB's sub division	<b>Minimum 1 years of experience</b>	01
4	Operators	ITI (mech/ electrical/ instrumentation/ water supply operator) <b>or</b> Diploma (Mechanical/ Electrical/ Instrumentation) <b>or</b> B. Sc. Environmental Science	<b>Role:</b> For operating Filter plant/ pumping machinery/ chlorination plant  <b>Location:</b> Respective plant/ pumping station	<b>Minimum 1 year of experience</b>	4+19=23
5	SCADA Operator	Diploma in Instrumentation/ Electrical/	<b>Role:</b> Supervise operations via SCADA, generate	<b>Minimum 1 year of experience</b>	00

		Electronics	MIS reports periodically <b>Location:</b> SCADA location		
6	Electrician	ITI certificate in Electrical/ Wireman trade	<b>Role:</b> Maintenance and troubleshooting of electrical components <b>Location:</b> Pumping station	<b>Minimum 3 years of experience</b>	01
7	Lab in charge/ Chemist	B.Sc. Chemistry or Environmental Science / Diploma in environmental engineering	<b>Role:</b> Carry out quality sampling and analysis <b>Location:</b> Laboratory at headwork	<b>Minimum 1 year of experience</b>	01
8	Pipe Fitter / Valve man	ITI (Fitter / Plumber)	<b>Role:</b> Inspection and repair of network <b>Location:</b> Section offices/ sub headworks	<b>6 months of experience</b> in maintenance and repairing work of pipeline network	10+8=18
9	Data Entry Operator with internet & PC/Laptop	Any Graduate.	<b>Role:</b> Data entry in the MIS/ ERP software <b>Location:</b> With the Maintenance Engineer	Understanding of MS office and MIS reporting is must	01
10	Helpers for fitter/ operator/ laboratory		<b>Role:</b> Assistance to fitter, electrician, operators, water quality sampling etc. <b>Location:</b> With respective group		Helper =06 WTP helper = 04 Helper pump operator=15 Helper laboratory =01
11	Sweeper		<b>Role:</b> Maintain cleanliness and housekeeping <b>Location:</b> at different premises		05
12	Outdoor Premise Maintainer		<b>Role:</b> Landscape maintenance, gardening		02

			<b>Location:</b> At all premises having area 2500 sqm or more		
--	--	--	---	--	--

**Note:**

a) Any personnel deployed in the scheme must be on contractor's payroll and should be above 25 years of age and below 60 years of age with reference to the date of submission of the tender.

b) Agency must arrange and maintain adequate two-wheel vehicles for line inspection, repairs, and distribution of water. The provision of Two-wheel vehicles to ensure that work is not hindered when all utility vehicles are engaged or the location is in-accessible by four-wheel vehicle.

c) All office staff, engineer & manager shall be available on call 24x7 i.e. all days. They shall be present at appropriate/ defined location for at least 8 hours per day for 6 days a week except Sunday.

d) Field staff, operators, helpers etc. shall be present on site 24x7 on shift-based rotation system.

## ANNEXURE-IV GUIDELINES AND STRUCTURE FOR SITE MEETINGS

1. **Daily Planning Meeting (DPM):** This shall be conducted on daily basis on each asset location prior to start of day's work. These meetings shall include discussion on operational and maintenance parameters including target for the day, activities for the day, inventories, safety, critical issues faced by field staff.

<b>Attendees</b>	1) Operator's Maintenance Engineer 2) Operator's skilled and unskilled staff
<b>Conducted by</b>	Operator's Maintenance Engineer
<b>Time &amp; Venue</b>	Daily morning prior to start at all asset locations
<b>Topic/ Agenda</b>	3) Target supply quantity, quality 4) Target supply hours 5) Potential issues in achieving the targets 6) Routine maintenance activities 7) Fast moving spares- Inventory levels 8) Leaks repaired and machinery requirement 9) Safety while working with chlorine, while working on heights, fire safety etc. 10) Major maintenance and overhaul activities (such as replacement of spares)
<b>Documentary record</b>	Attendance sheet & discussion points

2. **Weekly Planning Meeting (WPM):** This shall be conducted on weekly basis on each asset location at the start of the working week. These meetings shall include discussion on operational and maintenance parameters including target for the week, activities for the week, inventories, safety, critical issues faced by field staff.

<b>Attendees</b>	11) GWSSB AAE & JE 12) Operator's Maintenance Engineer 13) Operator's skilled and unskilled staff
<b>Conducted by</b>	GWSSB AE/ AAE/ JE
<b>Time &amp; Venue</b>	Monday morning
<b>Topic/ Agenda</b>	14) Target supply quantity, quality 15) Target supply hours 16) Potential issues in achieving the targets 17) Routine maintenance activities 18) Fast moving spares- Inventory levels 19) Safety while working with chlorine, while working on heights, fire safety etc. 20) Major maintenance and overhaul activities (such as replacement of spares)
<b>Documentary record</b>	21) Attendance sheet & discussion points 22) Observation sheet: assets not working properly to be recorded by AAE/ JE

3. **Monthly Review Meeting (MRM):** This shall be conducted on a monthly basis preferably on the last day of the month or the first day of the following month.

<b>Attendees</b>	23) GWSSB Deputy Executive Engineer 24) GWSSB AAE & JE 25) Operator's O&M Manager 26) Operator's Maintenance Engineer
<b>Conducted by</b>	GWSSB DEE



<b>Time &amp; Venue</b>	11:00 AM on 1 <sup>st</sup> Wednesday of each month
<b>Topic/ Agenda</b>	27) Detailed review of operational performance for the month 28) Critical issues faced, downtime, cause analysis 29) Review of overall inventory and preparedness for the following month
<b>Documentary record</b>	30) Attendance sheet & discussion points 31) Monthly inspection report to be prepared and submitted by DEE

4. **Quarterly Review Meeting (QRM):** This meeting will be chaired by the Executive Engineer. It shall be held every quarter to review the performance of the agency and schemes

<b>Attendees</b>	32) GWSSB EE 33) GWSSB Deputy Executive Engineer, AAE & JE 34) GWSSB AAE & JE 35) Operator's O&M Manager 36) Operator's Maintenance Engineer
<b>Conducted by</b>	GWSSB EE
<b>Time &amp; Venue</b>	Last Tuesday of Jan, Apr, Jul and Oct of the year
<b>Topic/ Agenda</b>	37) Detailed review of operational performance 38) Critical issues faced, downtime, cause analysis 39) Demand & supply dynamics 40) Asset condition
<b>Documentary record</b>	41) Attendance sheet & Discussion points

## ANNEXURE-V REPORTING FORMATS

### Daily Reporting Format (MIS Portal/ ERP Operations O& M Module)

Coverage and quantity			
Supplied village & cities	69 Village/01 Town	Out of total	69 Village/01 Town
Supplied quantity	6.46MLD	Out of total	6.46MLD

#### Pumping

##### Location: H/W 1

Sr No.	Type	Design Supply Hours	Capacity (HP)	Condition	Hours supplied	Reason case failure any)	in of Breakdown (if since
1	Working			O Working O Breakdown			
2	Working			O Working O Breakdown			
3	Standby			O Working O Breakdown			

##### Location: H/W 2

Sr No.	Type	Design Supply Hours	Capacity (HP)	Condition	Hours supplied	Reason case failure any)	in of Breakdown (if since
1	Working			O Working O Breakdown			
2	Working			O Working O Breakdown			
3	Standby			O Working O Breakdown			

#### Grievance Redressal (Scheme Related)

Pending complaints carried forward from previous day	Total complaints received today	Total complaints redressed today	Total complaints yet to be redressed

#### Water quality

Raw water turbidity	NTU		
Treated water turbidity	NTU		
Treated water Ph			
PAC/Alum dose	mg/L		
Residual chlorine	Headwork 1	PPM	

	Sub headwork 1	PPM	
	Headwork 2	PPM	
	Sub headwork 2	PPM	
	Add new rows if required	PPM	
Reason for issue in water quality (if any)			
<b>Other Issues</b>			
Issue	Reported Date	Cause <text>	Resolution Remark
Water Leakage			
O&M System failure attended			
Repairs			
Add more rows as required			

## Monthly Reporting Format (MIS Portal/ ERP Operations O & M Module)

<b>Electricity consumed</b>		Location (HW/SHW)			
Meter reading at start of the month					
Meter reading at end of the month					
Units consumed in the month					
Bill amount for the month (in INR)					
<b>Power outage (if any)</b>					
Sr No.	Date	Number of hours			
1					
2					
Add more rows as required					
<b>Power factor</b>		Location-1		Location-2	
Power Factor					
<b>Grievance Redressal</b>					
Pending complaints carried forward from previous month	Total complaints received in a month	Total complaints redressed in a month	Total complaints redressed within stipulated time limit	Total complaints yet to be redressed	
<b>Grievance Redressal Time</b>					
Average of Monthly Grievance resolution time (Autofill by ERP)					
<b>Preventive Maintenance activities (payable)</b>					
Inside-Outside Painting			Yes/ No	Attach Photos	
Cleaning of Storage reservoir and head works premises				Attach Photos	
Replace Filter Media				Attach Photos	
Add more rows as required				Attach Photos	
<b>Consumables</b>					
Monthly usage of PAC/Alum		Kg			
Monthly usage of Chlorine		Kg			
Monthly usage of Bleaching Powder		Kg			

## Annual Reporting Format (MIS Portal/ ERP Operations O & M Module)

Sr. No.	Particulars	Details																																																	
1	Name of RWSS: Name of Agency: Address: Telephone No.: Email Id:																																																		
2	Details of Customers: Population being serviced Nos. of Villages Nos. of Towns Nos. of Connections of Category	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">Type</td><td style="width: 15%;">Metered</td><td style="width: 15%;">Unmetered</td><td style="width: 15%;">Total</td><td style="width: 30%;"></td></tr> <tr> <td>Residential</td><td></td><td></td><td></td><td></td></tr> <tr> <td>Commercial</td><td></td><td></td><td></td><td></td></tr> <tr> <td>Industrial</td><td></td><td></td><td></td><td></td></tr> <tr> <td>Institutional</td><td></td><td></td><td></td><td></td></tr> <tr> <td>Others</td><td></td><td></td><td></td><td></td></tr> </table>	Type	Metered	Unmetered	Total		Residential					Commercial					Industrial					Institutional					Others																							
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3	Details of Water Sources	List of water sources (Please indicate all water sources from which piped water supply is drawn) <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 15%;">Source</th><th colspan="6">Drawn water quantity during last one year</th></tr> <tr> <th>Piped/ Ground Water</th><th>Max. drawn in a day  (KL or ML)</th><th>Min drawn in a day  (KL or ML)</th><th>Total in a month  (ML)</th><th>Avg. in a month in MLD</th><th>Total in year  (ML)</th><th>Avg. in a year  (MLD)</th></tr> <tr> <td>Bulk/RWSS</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>Pipeline</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>Ground Water</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>Local Surface sources</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>Total  (For All sources)</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>	Source	Drawn water quantity during last one year						Piped/ Ground Water	Max. drawn in a day  (KL or ML)	Min drawn in a day  (KL or ML)	Total in a month  (ML)	Avg. in a month in MLD	Total in year  (ML)	Avg. in a year  (MLD)	Bulk/RWSS							Pipeline							Ground Water							Local Surface sources							Total  (For All sources)						
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		water source _____ For the year = Applicable Rate X Total water drawn in a year																																																						
5	Distribution Charges recovered by the Authority in Rs. Lakhs*	<table border="1"> <thead> <tr> <th>Consumer Type</th><th>Annual Billing</th><th>Annual Receipt</th><th>Outstanding Dues</th></tr> </thead> <tbody> <tr> <td>Domestic</td><td></td><td></td><td></td></tr> <tr> <td>Institutional</td><td></td><td></td><td></td></tr> <tr> <td>Commercial</td><td></td><td></td><td></td></tr> <tr> <td>Industrial</td><td></td><td></td><td></td></tr> <tr> <td>Total</td><td></td><td></td><td></td></tr> </tbody> </table> <p>*To be obtained from Division/ Sub division offices</p>				Consumer Type	Annual Billing	Annual Receipt	Outstanding Dues	Domestic				Institutional				Commercial				Industrial				Total																														
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6	Service Level  A. Per capita distribution in your authority area = <u>Total Water supplied in the year</u> in litres/ Population X 365 B. Frequency of water supply at Household level Once/Twice in a day or once every _____ days. C. Period for which water supplied on the day of supply, measured at household level	<table border="1"> <thead> <tr> <th>Zone</th><th>Per capita water supply per day (LPCD)</th><th>Frequency of Supply (Once/Twice in a day or once every _____ days.)</th><th>Duration of Supply (Minutes)</th></tr> </thead> <tbody> <tr> <td>Zone 1</td><td></td><td></td><td>➤</td></tr> <tr> <td>Zone 2</td><td></td><td></td><td>➤</td></tr> <tr> <td>Zone 3</td><td></td><td></td><td>➤</td></tr> <tr> <td>-----</td><td></td><td></td><td>➤</td></tr> </tbody> </table>				Zone	Per capita water supply per day (LPCD)	Frequency of Supply (Once/Twice in a day or once every _____ days.)	Duration of Supply (Minutes)	Zone 1			➤	Zone 2			➤	Zone 3			➤	-----			➤																															
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7	Water Distribution Grievance Analysis (from 1916 helpline)	Nos. of applications received during the year <table border="1"> <thead> <tr> <th rowspan="2">Sr. No</th><th rowspan="2">Customer type</th><th rowspan="2">Total Complaints</th><th colspan="2">Disposed</th><th colspan="4">Pending since</th></tr> <tr> <th>Positive</th><th>Negative</th><th>Within 1 Week</th><th>1-2 Week</th><th>2-4 Week</th><th>Above 4 weeks</th></tr> </thead> <tbody> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>				Sr. No	Customer type	Total Complaints	Disposed		Pending since				Positive	Negative	Within 1 Week	1-2 Week	2-4 Week	Above 4 weeks																																				
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9	Proposed course of action to prevent water loss, improve spatial distribution asymmetry, improve service level & address quality	I. _____ II. _____ III. _____ IV. _____																																																						

	problem issues				
10	Regulatory action taken under Gujarat Domestic Water Supply (Protection) Act or the law for concerned authority	a) Unauthorized drawl (Please report nos. of cases) <ol style="list-style-type: none"> <li>Excess drawl</li> <li>Unauthorized drawl</li> <li>Change of use for water connection</li> </ol> b) Penalty/Assessment orders levied for unauthorized connection/drawl <ol style="list-style-type: none"> <li>Nos. of case in which assessment/penalty order made</li> <li>Amount in assessment order made</li> <li>Amount collected</li> <li>Amount yet to be collected</li> </ol>			
		Recovery pending from the consumer in reference to penalty imposed under the act			
		Current Year	Previous Year	Years prior to last year	Total
			➤		
11	Remarks				

## ANNEXURE-VIPAYMENT, RESOLUTION TIME & PENALTIES

### PAYMENT & INCENTIVES

- 1) The contractor or O&M agency shall raise monthly invoice to the authority within 5<sup>th</sup> to 10<sup>th</sup> date of any billing month. This will include amount payable according to Part A, B and C subject to execution of the items described in this tender document.
- 2) The invoices submitted will be subject to incentives and/or penalties which the authority has laid down through this contract.
- 3) Billing for Part B and Part C will be as per actual, as measured and approved by the concerned officer.

Aspect	Activity	Type	Description
<b>Billing for water supply and incentives</b>	a) 100% operational habitations covered, & b) Voluntary habitations, which have demanded water supply, are covered (As per the baseline assessment signed by DEE and provided in this tender) c) Technical habitations which are operational and sustained during contract period	Regular Billing	100% payment of Part A, per month, if a) and b) has been satisfied.  Any deductions, penalties will be as per the Operational Penalties mentioned in this annexure.  No deduction for habitations not receiving water due to any technical issue (as identified through the baseline in this tender)

**For calculation of One-time incentive, Annual rate per habitation** shall be calculated as:

Annual rate per habitation= \_\_\_\_\_ Total of Part A (for the year)

Total no. of villages, towns & hamlets\* (operational+ voluntary+ technical)

\*Hamlets is defined as Census Hamlets. Only include those census Hamlets where the hamlet is covered under Faliya Connectivity project and the RWSS delivers water directly to that hamlet.

### DEDUCTIONS & PENALTIES

Every habitation should receive adequate and safe water on a daily basis as per the target quantity decided by GWSSB. In case of any fault, the shortfall shall be provided on the next day along with that day's regular supply quantity. i.e. The shortfall in quantity shall be compensated on the following day. For the purpose of establishing service level agreement, a 2-day block period is considered.

#### A. Operational

Aspect	Activity	Description
<b>Water supply coverage</b>	Less habitations served (from baseline: Operational) or less quantity water is served to the habitations against the target	Penalties will be as per the three cases (a, b and c) as shown below. For non-compliance, applicable case will be identified, and such penalty will be levied.
	a) Within the 2-day block period, less quantity of water supply to any habitation	Total quantity of water supplied to a habitation within the 2-day block period: i. 0% or up to 50% of 2-day requirement: No



Aspect	Activity	Description
	(One instance= 1 non-compliant block of 2-days)	payment ii. >50% to ≤90%: Payment at 70% per day rate per habitation iii. If total supplied water is ≥ 90%: 100% payable to contractor
b)	No supply for three consecutive 2-day blocks i.e. 6 days	No payment and a penalty of 50% per day per habitation.  (For understanding, total deduction will be 6 days' payment + 3 days' of payment as penalty)
c)	Non supply of water for 20 days or more continuous in a month. Such habitation will be considered as habitation with technical issue.	No payment for the billing month and a penalty of 100% of monthly rate per habitation  Note: <ul style="list-style-type: none"> <li>Three consecutive months of non-supply for 20 or more days/month will be a cause for termination.</li> </ul>
	Special notes for a, b, and c.	<ul style="list-style-type: none"> <li>If penalty c is applied for a month, then a or b will not apply during that month.</li> <li>If penalty b or c is applicable, then during the same period/ days, penalties under 'a' will not be applicable (concurrent period of 6 days or 20 days).</li> <li>Separate instances of a &amp; b or any combinations thereof will be levied during a billing period (except for concurrent period)</li> <li>In case of technical issue habitations which are operational, penalties will be applicable after trial period i.e. after 3 months of resolution</li> <li>For exceptional circumstances such as damage to the assets due to flood or other natural calamities, power supply issue from DISCOM, or that beyond the control of O&amp;M agency, the EE shall issue a certificate to the agency for waiver of penalties.</li> </ul>
<b>Absence of manpower</b>	O&M Manager	Rs 5000/day
	Maintenance Engineer	Rs 2500/day
	Other operating staff	Rs 1500/day
<b>Quality non compliance</b>	Treated Water Turbidity, pH or chlorine at H/W and Sub H/W not compliant	Rs 5000 per failed sample. 10 or more failed sample in a month will be a cause for termination of the contract.
<b>Reporting</b>	Reporting in ERP or/ other MIS software such as quantity, quality, grievances, operational KPIs etc	Rs 5000/day  Late reporting will be considered non-compliant. Daily reports have to be submitted before 12 PM on the following day.
<b>Conduct of employees</b>	Staff not in uniform compliant to the contract condition or staff doesn't have ID card issued by agency	₹ 100/day per person
<b>Safety Non-compliance</b>	If the contractor's personnel are found to be working without required personal protective equipment (PPE) while handling chlorine gas, working with electrical	Rs 1000/- shall be deducted for every such instance. After three such deductions/ instances, issue a notice to the contractor. No improvement, i.e. the fourth instance will be a cause for termination.

Aspect	Activity	Description
	components or during working at heights more than 1.5m or in violation of provisions of Annexure XII.	

For calculation of penalties, monthly rate per habitation shall be calculated as:

$$= \frac{\text{Total of Part A (for 12 months)}}{12\text{months} \times \text{Total no. of Operational villages, towns, hamlets}^*}$$

For calculation of penalties, daily rate per habitation shall be calculated as:

$$= \frac{\text{Total of Part A (for the year)}}{365\text{days} \times \text{Total no. of Operational villages, towns, hamlets}^*}$$

\*Hamlets is defined as Census Hamlets. Only include those census Hamlets where hamlet is covered under Faliya Connectivity project and the RWSS delivers water directly to that hamlet.

## B. Maintenance

Aspect	Activity	Description
<b>Power Factor</b>	For Power Factor below 0.9	Total deduction: Penalty levied by DISCOM+ INR 10,000 per incidence (as per electricity bill)
<b>Preventive Maintenance</b> (stipulated time is as per Annexure VII, master framework for preventive maintenance)	Daily maintenance activities not carried out as per daily checklist	Rs 2,000/day
	Monthly maintenance activities not carried out within stipulatedtime	Rs 50,000 in the billing month
	Quarterly maintenance activities not carried out within stipulatedtime	Rs 2,00,000 in the billing month
	Any of the Annual maintenance activities, Overhaul, Calibration & Servicing, Performance Testing, Payable Maintenance Activities (Part B)not carried out within stipulatedtime	Rs 10,00,000 in the billing month

## C. Curative Maintenance & Repairs

Aspect	Activity	Description
<b>Repair, Breakdown response</b>	<p>Carryout repairs within 24 hours to restore water supply. Penalty will be levied for delay after first 24 hours.</p> <p>For calculation of penalties: First day = From 24 hours to 48 hours</p>	<p>First day: ₹ 1,000/day</p> <p>Second day &amp; onwards: ₹ 10,000/day</p> <p>(for all components incl WTP, pumping machinery, pipe network, intake structures, storage tanks, valves, transformer*, panels, starters, breakers, lifting devices, dosing devices etc.)</p> <p>Note: If due to such breakdown, water supply is affected, then operational penalties will also be applicable.</p> <p>*Except where DISCOM is responsible for repair of</p>

Aspect	Activity	Description
		transformer under major breakdown

#### D. Other penalties:

- Any implication, due to chemical leak hazard shall be borne by the agency
- The agency has to submit the documentary proof of GPF/ESI registration along with the bid documents. Further, as per the Employees Provident Fund and Miscellaneous Provisions Act, 1952, the contractor shall comply with all provisions of the said act if his/ her total establishment has 20 or more persons employed. Agency shall submit proof of PF contribution with every invoice. Entire bill payment will be put on hold if the same is not provided.
- The agency has to submit the license as per contract Labour Act within one month from the date of work order otherwise, a penalty of Rs.50,000/- per month will be imposed for two months, or otherwise contract will be terminated, and all the liabilities shall be borne by the contractor.
- Billing:** Agencies (O&M contractor) shall submit monthly bill to GWSSB as agreed in the T&C on timely basis i.e. 5<sup>th</sup> to 10<sup>th</sup> date of the following month, beyond which penalties will be levied:

Invoice (Monthly bill) submission	Penalty
Late submission of monthly bill	5% of monthly billed amount for each month of delay. E.g. for two months' delay, 5%+5%= 10% penalty will be levied.
Note	Such penalties will be separately calculated for each delayed bill.

#### TERMINATION

Termination due to SLA non-compliance: In addition to the provisions of this tender document, and not in contrary to any clause of this contract, the agency may be terminated under the following circumstances;

- If applicable penalties for each month exceed 25% of billing amount per month, for a block of 4 consecutive months, then contract shall be liable for termination.
- Cumulative penalties levied against non-performance in any of the SLA (viz. operational, preventive or curative maintenance) exceeds 10% of the total contract value.
- Non-performance from the contractor w.r.t. repetitive non-adherence to safety requirements or quality requirements of water as mentioned in this annexure's Deductions & Penalties.

In such cases of violation, a termination notice shall be served to the O&M contractor by the competent officer of GWSSB. Termination as per Clause 18 will be applicable.

## ANNEXURE-VII PREVENTIVE MAINTENANCE SCHEDULE

### Framework for carrying out maintenance activities

Periodicity of activities	Time frame to complete	Recording mechanism
Daily preventive maintenance activities	Daily morning in the first hour as part of the start-up activities	Daily checklists pasted near the asset
Monthly preventive maintenance activities	1 <sup>st</sup> or 2 <sup>nd</sup> of every month	Monthly maintenance checklist
Quarterly preventive maintenance activities	8 <sup>th</sup> to 14 <sup>th</sup> of January, April, July and October of every year	Quarterly maintenance checklist
Half yearly preventive maintenance activities	Between 8 <sup>th</sup> to 14 <sup>th</sup> of January and July of every year	Half-yearly maintenance checklist
Yearly preventive maintenance activities	Between 15 <sup>th</sup> and 30 <sup>th</sup> of January of every year	Annual maintenance checklist
Calibration & servicing	Along with the yearly preventive maintenance activities	Calibration and servicing log
Overhaul activities	15 <sup>th</sup> to 30 <sup>th</sup> of January every year Clariflocculator: every year Civil and plant: every 2 years Pumping machinery: every 1 year (submersible) or 2 years (VT, centrifugal) Transformer: every 5 years	Overhaul checklist
Painting works	Between 1 <sup>st</sup> to 30 <sup>th</sup> of October of the year (after monsoon)	Record log

### Schedule for Weather specific preparation

Periodicity of activities	Time frame to complete	Recording mechanism
Pre-Summer: Yearly performance testing	Testing from 15 <sup>th</sup> to 30 <sup>th</sup> of January of every year Systems should be ready for summer by 28 <sup>th</sup> February with all corrective actions	Performance testing log
Preparedness for Monsoon	15 <sup>th</sup> June to 30 <sup>th</sup> June of every year. Systems should be ready by 1 <sup>st</sup> July with all corrective actions	Record log

**i. Daily Operations Checklists**

**Daily Checklist: Pumps & Motors (Asset ID)**

RWSS name : \_\_\_\_\_ Asset Make & Capacity  
: \_\_\_\_\_

Location (H/W) : \_\_\_\_\_ Section  
: \_\_\_\_\_

Manufacture Year : \_\_\_\_\_ Quantity & Head : \_\_\_\_\_  
\_\_\_\_\_

Date	Bearing temperature	Noise	Vibration	Temperature	Visible Leaks	Coupling bushed and rubber spider integrity (in MPR)	Check stuffing box, gland, etc	Lubrication	Signature of Pump Operator
1 / ____ /20__	Ok/ Not Ok								
2 / ____ /20__									
3 / ____ /20__									
4 / ____ /20__									
5 / ____ /20__									
6 / ____ /20__									
7 / ____ /20__									
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28 / ____ /20__									
29 / ____ /20__									
30 / ____ /20__									
31 / ____ /20__									

**Daily Checklist: Panels, Circuit Breakers, Starters**

RWSS name : \_\_\_\_\_ Asset Make & Capacity  
 : \_\_\_\_\_

Location (H/W) : \_\_\_\_\_ Section  
 : \_\_\_\_\_

Manufacture Year : \_\_\_\_\_ Quantity & Head :

Date	Phase indicator	Voltage, Frequency	Current, Energy readings	meter	Temperature	Clean surface	external	Any connections loose / insulation	Signature of Electrician/ Operator
1 / ____ /20__	Ok/ Not Ok								
2 / ____ /20__									
3 / ____ /20__									
4 / ____ /20__									
5 / ____ /20__									
6 / ____ /20__									
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29 / ____/20__							
30 / ____/20__							
31 / ____/20__							



### Daily Checklist: Transformer & Substation

RWSS name : \_\_\_\_\_ Asset Make & Capacity  
 : \_\_\_\_\_

Location (H/W) : \_\_\_\_\_ Section  
 : \_\_\_\_\_

Manufacture Year : \_\_\_\_\_ Quantity & Head :

Date	Winding temperature	Oil temperature	Leaks in CT/PT unit	Silica gel colour (if pink not ok)	Oil level in tank	Any loose connections / insulation	Signature of Electrician/ operator
1 / ____ /20__	Ok/ Not Ok						
2 / ____ /20__							
3 / ____ /20__							
4 / ____ /20__							
5 / ____ /20__							
6 / ____ /20__							
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28 / ____/20__							
29 / ____/20__							
30 / ____/20__							
31 / ____/20__							

**Daily Checklist: Headworks (Filter Plant)**

RWSS name : \_\_\_\_\_ Asset \_\_\_\_\_ Make \_\_\_\_\_ & \_\_\_\_\_ Capacity \_\_\_\_\_  
 : \_\_\_\_\_

Location (H/W) : \_\_\_\_\_ Section \_\_\_\_\_  
 : \_\_\_\_\_

Manufacture Year : \_\_\_\_\_ Quantity & Head \_\_\_\_\_ :

Date	Leakages in Raw water conveyance	Cleanliness in inlet channel	Sludge on surfaces (Clariflocculator)	Leaks in Cylinder/ toner in Chlorine room	Water loss in filter gallery	Functioning of key components	Signature of Operator
1 / ____ /20__	Ok/ Not Ok						
2 / ____ /20__							
3 / ____ /20__							
4 / ____ /20__							
5 / ____ /20__							
6 / ____ /20__							
7 / ____ /20__							
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30 / ____/20__							
31 / ____/20__							

### Daily Checklist: Valves & Gates

RWSS name : \_\_\_\_\_ Asset Make & Capacity  
: \_\_\_\_\_

Location (H/W) : \_\_\_\_\_ Section  
: \_\_\_\_\_

Manufacture Year : \_\_\_\_\_ Quantity & Head :

Date	Bolts & nuts	Packing (gland, gasket, etc)	Leaks	Condition of valve	Lubrication (for sluice, butterfly)	Vibration or noise	Signature Operator	of
1 / ____/20__	Ok/ Not Ok							
2 / ____/20__								
3 / ____/20__								
4 / ____/20__								
5 / ____/20__								
6 / ____/20__								
7 / ____/20__								
8 / ____/20__								
9 / ____/20__								
10 / ____/20__								
11 / ____/20__								
12 / ____/20__								
13 / ____/20__								
14 / ____/20__								
15 / ____/20__								

16 / ____/20__							
17 / ____/20__							
18 / ____/20__							
19 / ____/20__							
20 / ____/20__							
21 / ____/20__							
22 / ____/20__							
23 / ____/20__							
24 / ____/20__							
25 / ____/20__							
26 / ____/20__							
27 / ____/20__							
28 / ____/20__							
29 / ____/20__							
30 / ____/20__							
31 / ____/20__							

**Calibration& Service Log for: \_\_\_\_\_ (name of equipment& Asset ID)**

RWSS name : \_\_\_\_\_ Asset Make & Capacity  
 : \_\_\_\_\_  
 Location (H/W) : \_\_\_\_\_ Section  
 : \_\_\_\_\_  
 Manufacture Year : \_\_\_\_\_ Quantity & Head : \_\_\_\_\_  
 \_\_\_\_\_

**Calibration & Service Log**

SI No.	Date of Calibration	Validity (next calibration date)	Calibration Agency Name	Signature of calibration agency's personnel	Signature of Maintenance Engineer

Agency shall hang/ paste/ stick this log near the equipment. Applicable for:

- 42)Pressure gauges
- 43)Flow measuring devices
- 44)Chemical dosing devices such as chlorinators
- 45)Laboratory equipment
- 46)Quality analysers
- 47)Voltmeter
- 48)Ammeter
- 49)Frequency meter
- 50)Protection relay
- 51)DG set
- 52)Others where applicable

## ii. Periodic Maintenance activities

### PUMP & MOTOR SET

#### Monthly

Activity	Check (Tick if complete)
Tighten the gland stuffing box and check gland packing	
Apply oil to the gland bolts	
Inspect mechanical seal for wear	
Tighten Foundation bolts	
Check condition of bearing	
Tighten electrical connections including earthing	

#### Quarterly

Activity	Check (Tick if complete)
Realignment of pump and drive (both shall be decoupled) (pump and motor shafts should be pushed to either side)	
Replenish clean oil or grease to lubricate bearings (Anti friction bearing should have one third to half of its housing as void space to avoid overheating)	
Replace oil or grease in the bearing housing	
Check condition of gland packing and replace	
Tighten cable gland, lugs and connecting bolts	
Tighten foundation bolts	
Inspect for leaks	
Greasing, Lubrication and Replenish Oil	
Clean flow indicators and other instruments/ appurtenances	

*Note: Monthly activities shall be undertaken during quarterly maintenance also.*

#### Annually

Activity	Check (Tick if complete)
Overhauling, if due	
Performance test before Summer	
Clean bearing and lubricate, replace	
Clean bearing housing examine for flaws, e.g. wear, grooving etc.	
Examine shaft sleeves for wear or scour and necessary rectification. If shaft	



sleeves are not used, shaft at gland packing's should be examined for wear.	
Calibration of all vital instruments i.e. pressure gauge, vacuum gauge, ammeter, voltmeter, Wattmeter, frequency meter, tachometer, flow meter, etc.	
Conduct performance test of the pump for discharge, head efficiency, pressures and power	
Examine earth connections and motor leads	
Restore running clearances through original specifications (adjust ring clearances or install new wear rings)	
Replace the impeller in case of corrosion or excessive wear	
Clean winding, bake and varnish	

*Note: Quarterly activities shall be undertaken during annual maintenance also.*

### Overhauling of the pumpset

Activity	Check (Tick if complete)
Restoring clearances (incl. clearance between impeller-casing rings, impeller-plates)	
Replacing worn-out/ damaged parts such as impeller, wear rings/ plates, o-rings and packings, drive shaft.	
Cleaning and lubricating bearings	
Replacing corroded parts	
Removal of scaling and leaks	
Recalibration of gauges and instruments	
Testing of reassembled pumps	

## **PANELS, CIRCUIT BREAKERS, STARTERS**

### **Monthly**

<b>Activity</b>	<b>Check (Tick if complete)</b>
Blow the dust and clean internal components in the panel, breaker	
Tighten all connections of cable, wires, jumpers and bus bars. All carbon deposits shall be cleaned.	
Adjust relay setting.	
Test spring charging mechanism and manual cranking arrangement.	
Clean all exposed insulators.	
Test functioning of trip circuit and alarm circuit.	
Conduct test for opening & closing timing of breaker.	
Check contact resistance between male & female contacts	

### **Quarterly**

<b>Activity</b>	<b>Check (Tick if complete)</b>
Clean with smooth polish paper all the fixed and moving contacts	
Replace the oil in oil tank	
Check insulation resistances.	
Check conditions of insulators and replace if necessary	
Tighten all connections in marshalling boxes of breakers and transformer.	
Oil top up in MOCB/LOCB/HT OCB.	
Measure contact resistance and check male & female contacts for any pitting	
Check dielectric strength of oil and replace (HT)	

*Note: Monthly activities shall be undertaken during quarterly maintenance also.*

### **Annually**

<b>Activity</b>	<b>Check (Tick if complete)</b>
Carry out servicing of all components, thoroughly clean and reassemble.	
Calibrate voltmeter, ammeter, frequency meter etc.	
Replace oil in breaker. (HT)	
Testing of protection relay with D.C. injection.	
Servicing of HT breaker and contactor	

*Note: Quarterly activities shall be undertaken during annual maintenance also.*

## **TRANSFORMER & SUBSTATION**

### **Monthly**

<b>Activity</b>	<b>Check (Tick if complete)</b>
Repair leakages through CT/PT unit, transformer tank and HT/LT bushings.	
Change the silica gel (if pink in colour)	
Top up oil level in transformer tank	
Tighten all connections (relay contacts, cable termination) in marshalling box etc.	
Test AB switch and DO fuse assembly.	
Clean radiators free from dust and scales.	
Pour 3-4 buckets (6 to 8 buckets in summer) of water in earth pit	
Inspect lightning arrestor and HT/LT bushing for cracks and dirt.	

### **Quarterly**

<b>Activity</b>	<b>Check (Tick if complete)</b>
Change or filter transformer oil in case of dielectric strength is not as desired.	
Check insulation resistance of all equipment's in sub-station, continuity of earthlings and earth leads.	
Test tap changing switch.	
Change or filter oil in CT/PT if dielectric strength is not in desired.	
Tighten contact faces of AB switch and DO/HG fuse; apply petroleum jelly or grease to moving components of AB switch.	

*Note: Monthly activities shall be undertaken during quarterly maintenance also.*

### **Annually**

<b>Activity</b>	<b>Check (Tick if complete)</b>
Replace Oil after monsoon	
Measure resistance of earth pit. Resistance shall not exceed 1 ohm.	
Tighten bus bar connections, clean contact faces, change rusted nut bolts.	
Calibrate the protection relay for functioning. Correct relay setting if necessary.	
Earth filling and metal spreading to remove water logging	
Test transformer oil for acidity test.	
Check drainage arrangement to prevent water logging	

*Note: Quarterly activities shall be undertaken during annual maintenance also.*

**Long term**

Activity	Frequency	Check (Tick if complete)
Painting transformer & steel structure	2 years	
Overhaul of Transformer: 53) Replace gaskets and rubber items: between tap changer flange and transformer tank, Gaskets for valve flanges, Gaskets for radiator valve flanges, Gaskets for turret and bushings flanges, Gasket between PRD and transformer tank cover, etc. 54) The core of transformer and winding replacement after 5 years for transformer up to 3000 kVA and after 7–10 years for transformers of higher capacity.	5 years	

**FILTER PLANT & HEADWORK****Monthly**

Activity	Component	Check (Tick if complete)
Calibrate optimum dosage of coagulant (based on laboratory analysis)	Inlet channel	
Lubricating & oiling all motors & gearbox	Alum dosing	
Clean all electric connections	All units	
Repairing leaks (pressure grouting in civil structures)	All units	
Greasing/ Lubrication/ Oil top up of all moving parts of bridge (trolley, gearbox)	Clariflocculator	
Repairing leaks in chemical feeder, dosing plumbing, air blower pipes	All units	

**Quarterly**

Activity	Component	Check (Tick if complete)
Lubrication and oiling of motors	All units	
Lubricate bearing and gear trains	Alum dosing	
Cleaning all electromechanical components	All units	
Valve/Gate Lubrication and servicing	All units	
Lubrication, oiling, greasing and servicing of backwash pump	Filter gallery	
Cleaning of alum, PAC, chlorine storage rooms	Chemical storage	
Calibrate all dosing equipment	All chemical dosing units	

Replace all corroded parts all water level indicators,bolts, nuts, washers, ladders, rungs, metal railings, insert plates	All units	
All signages (repairs, replacement if damaged)	All units	
Replenish safety kits	Chlorine room	
Mock drill	Filter plant	

*Note: Monthly activities shall be undertaken during quarterly maintenance also.*

#### **Half yearly**

<b>Activity</b>	<b>Component</b>	<b>Check (Tick if complete)</b>
Replace lost filter media (as per schedule B)	All units	
Servicing chlorine lifting device	Alum dosing	
Cleaning of reservoirs	All units	

#### **Annually**

<b>Activity</b>	<b>Component</b>	<b>Check (Tick if complete)</b>
Calibration of flow measuring devices, weighing machine, gauges	All units	
Servicing and checking of the valves/ gates	Alum dosing	
Cleaning, plastering and coating of mixing tanks	Flash mixer	
Repairing leaks in all pipes, channels, laterals	All units	
Painting all metallic components (valves, handrails, pipes, ladders etc)	All units	
Overhaul of clarriflocculator bridge <ul style="list-style-type: none"> <li>i. Realign traction wheels</li> <li>ii. Replace rubber wheels</li> <li>iii. M.S Scrapper condition check and replace if necessary</li> <li>iv. Adjust clearances and alignments</li> <li>v. Motor servicing</li> </ul>	Clariflocculator	

*Note: Quarterly activities shall be undertaken during annual maintenance also.*

#### **Long term**

<b>Activity</b>	<b>Frequency</b>	<b>Check (Tick if complete)</b>
Painting civil structures (external & internal), fixtures (window, doors etc)	2 years	

**VALVES (sluice, butterfly, NRV, kinetic air, zero velocity)****Monthly**

Activity	Check (Tick if complete)
Tighten bolts, nuts, packing	
Disc and seat ring lapping in sluice valves	
Lubrication of sluice and butterfly valve	
Plug leakages (gaskets, packing etc)	
Clean small orifice nipple in Kinetic air valves	

**Quarterly**

Activity	Check (Tick if complete)
Valve/Gate Lubrication and servicing	
Servicing of isolating valve (kinetic air valve)	
Replace damaged balls or seats of orifices(kinetic air valve)	
Check seal ring and tight shut-off (Butterfly valve)	

*Note: Monthly activities shall be undertaken during quarterly maintenance also.*

**Annually**

Activity	Check (Tick if complete)
Painting all valves with oil paint	
Oil/ grease change in gearing arrangement (Butterfly valve)	
Calibration and servicing of all valves and gates	

*Note: Quarterly activities shall be undertaken during annual maintenance also.*

**Long term**

Activity	Frequency	Check (Tick if complete)
Replacement of spindle or spindle nut (sluice valve)	2 years	

## **WATER METERS/ FLOW METERS**

### **Monthly**

<b>Activity</b>	<b>Check (Tick if complete)</b>
Cleaning chamber, casing, box	
Check and plug leakages	
Clean deposits	

### **Annually**

<b>Activity</b>	<b>Check (Tick if complete)</b>
Calibrate & validate readings and range	
Disconnect and service (ultrasonic)	

*Note: Monthly activities shall be undertaken during annual maintenance also.*

## **OVERHAUL SCHEDULE**

<b>Activity – Included in quoted price</b>	<b>Frequency (months)</b>	<b>Tentative schedule</b>
Replace Gland packings, mechanical seal	3	Jan, Apr, Jul, Oct
Replace balls & seats in Kinetic air valves	3	Jan, Apr, Jul, Oct
Oil topup in panels/ starters/ circuit breakers	3	Jan, Apr, Jul, Oct
Check conditions of insulators and replace (panels/ starters/ breakers)	3	Jan, Apr, Jul, Oct
Replace lost filter media – Effective size of filter sand 0.45 to 0.70 mm, uniformity coefficient not more than 1.7 nor less than 1.3, depth of filter 0.75 M, free board 50 cm, gravel 0.45 M in depth, sand and gravel conforming to IS: 8491 (i) – 77	6	Jan and Jul
Replace all corroded parts all water level indicators, bolts, nuts, washers, ladders, rungs, metal railings, insert plates (Note: Corrosion should not occur if preventive measures like painting, etc are done. As such, the replacement is supposed to be done immediately post identification)	12	Jan
Overhaul of clariflocculator bridge (realignment, servicing, rubber wheels, motor, gearbox)	12	Jan
Calibration & Servicing of gauges, flow meters, valves	12	Jan
Servicing (Starters, Breakers and Panels)	12	Jan
Leak repairs, plastering in all civil components	12	Jan



- Pressure grouting to arrest leaks from structures and additional coating of cement mortar plastering to plug the leakage from structure of SR and through the pipes and valves		
Pump Overhaul (activities as per checklist)- submersible set	12	Jan
Pump Overhaul (activities as per checklist)- VT/ centrifugal	24	Jan 20XX and 20XX
Replacement of spindle or spindle nut (sluice valve)	24	Jan 20XX and 20XX
Transformer overhaul: Core and winding replacement, gaskets etc	60	Jan 20XX
Painting of metallic blades and shafts (Flash mixer)	12	Oct
Painting MS pipes within headwork premise	12	Oct
Painting Handrails	12	Oct
Painting and marking level indicators, instruments, charts	12	Oct
Painting ladders	12	Oct
Painting of Alum and lime solution tanks with anti-corrosive paint. (Chemical feed unit)	12	Oct
Painting air valve, sluice valve, riser pipe of air valve, zero velocity valve, butterfly valve (outdoor), bypass arrangement	12	Oct
<b>Activity – Paid separately</b>	<b>Frequency (months)</b>	<b>Check (Tick if complete)</b>
Cleaning water storage structures	6	Jan and Jul
Painting civil structures (external & internal)	24	Oct 20XX and 20XX
Painting transformer & steel structure	24	Oct 20XX and 20XX
Food grade epoxy painting in the internal of all water retaining structures (sumps, ESRs etc) to avoid corrosion due to chlorine	24	Oct 20XX and 20XX
Painting doors, windows, ventilation, shutter, pump, motor, equipment inside pump house, transformer yard, D.P. structure	24	Oct 20XX and 20XX

**iii. Specifications for painting:**

- 55) Exterior paint: shall be acrylic emulsion paint colour (like APEX): pump house, treatment plants, treated water pumping stations, GSRs, ESRs, sump, store
- 56) Oil paint colour: All type of doors, windows, ventilation, shutter, pump, motor, all valves & equipment inside pump house, transformer yard, D.P. structure, transformer etc
- 57) Black japan colour: air valve, sluice valve, riser pipe of air valve, zero velocity valve, butterfly valve (outdoor), bypass arrangement etc.

**iv. Activities in general housekeeping and maintenance:**

- 58) Desilting of channels, wells, tanks
- 59) Remove debris from the premises
- 60) Remove aquatic weed from channels, storage structures and premises
- 61) Removal of algae from surfaces

- 62) Sorting, Stacking and Marking of inventory (Tools, pipes, fittings, Spares etc.)
- 63) Sweeping the entire premises
- 64) Maintaining signages
- 65) Pre-summer site cleaning and Pre-monsoon cleaning of storm water drains
- 66) Gardening and maintaining the landscapes in the premise
- 67) Maintenance of safety kits, fire extinguishers

#### v. Signages

- 68) Safety Signs: To warn workers and visitors of potential hazards, such as hazardous chemical, low ceilings, or hazardous materials.
- 69) Directional Signs: To guide visitors and employees through the plant, indicating where various work areas and equipment are located.
- 70) Identification Signs: Label equipment, rooms, or areas with specific names or numbers
- 71) Informational Signs: Instructions for using equipment, procedures for handling hazardous materials, or emergency evacuation routes.
- 72) Instructional Signs: Step-by-step instructions on how to perform specific tasks or use the machinery correctly and safely.
- 73) Regulatory Signs: Mandated by OSHA and other regulatory entities to notify employees of laws and regulations that apply to the plant.
- 74) Layout/ flow diagram of the RWSS: Shall be printed on A2 size paper and mounted on the wall of HW office for information of the visitors. Assets: All assets must have signages to indicate design capacity, OEM, type etc. (e.g. in case of pump set- the section catered by the pump, maker of the pump and designed flow of the pump)

#### vi. Weather specific activities

##### a) Pre-summer: Yearly performance testing

- a) **Performance test** shall be conducted for full capacity in the month of January or February, and all rectifications shall be completed before 28 February. All equipment and assets shall be ready for summer by the end of February.

<b>Period/ Time</b>	15 <sup>th</sup> January to 30 <sup>th</sup> January of each year
<b>Parameters to be observed and recorded</b>	<ul style="list-style-type: none"> <li>▶ Head achieved</li> <li>▶ Discharge achieved</li> <li>▶ Power Input to motor &amp; Speed of pump</li> <li>▶ Water distribution to tail end</li> <li>▶ Leaks</li> </ul>
<b>Test codes</b>	BIS 9137, 10981 and 5120
<b>Performance tests for</b>	<ol style="list-style-type: none"> <li>i. All pump- motor set (including working &amp; standby) shall be tested one at a time.</li> <li>ii. All working pump-motor set to be tested (30-60 minutes)</li> <li>iii. All standby pump-motor set to be tested (30-60 minutes)</li> <li>iv. Filter plant to be operational for entire test duration (i, ii, iii)</li> </ol>

##### b) Preparedness activities before summer

- Stocking of critical spares and consumables
- Clear the site of all materials susceptible to fires such as oil papers, jute cloths, dry leaves
- All firefighting systems shall be in working condition
- All electrical connections shall be tightened and insulated properly
- Cleaning, testing and replacement of silica gel in breathers etc. of transformers

- Owing to power demand surges, voltage fluctuations occur more frequently, causing damage to critical equipment. It is crucial to monitor the input voltage or take precautions by installing components such as on-load tap changer (OLTC) for transformer

**b) Preparedness for monsoon**

- c) **Preparedness activities before monsoon:** In monsoon, raw water turbidity is high. Chlorine and PAC consumption is higher in monsoon. Contractor shall maintain adequate stock of these important consumables and spares necessary for ensuring functioning of the plant.

- Stock review of Consumables such as Chlorine and PAC
- Performance testing of dosing devices & calibration
- Leak and seepage rectification work to avoid ingress of water
- Insulation of electrical panels, water seals to be checked
- Cleaning, testing and replacement of silica gel in breathers etc. of transformers
- Clearing drainages choked with dust, leaves and other materials
- Dewatering pumps to be serviced and kept in working condition
- Cover all open excavations and drains.

## ANNEXURE-VIII RECORDS

### 1) Filter Plant Register

Name of Project:

<b>Zone</b>									
<b>District</b>									
<b>Scheme Name</b>									
<b>Filter Plant Capacity (MLD)</b>									
<b>Filter Plant Type</b>									
Date	Condition of filter plant (working/breakdown)	Daily treated water quantity (MLD)	Raw water turbidity	Treated water turbidity	Pre chlorination (ppm)	Post chlorination (ppm)	Clear water pH	PAC usage for the day (kg)	Total units of electricity consumed

**Signature of Contractor**

## 1.1 Filter bed Head loss & Backwash register

Name of Project:

Filter No.	Time & Date		Hours Operated			Head Loss		Backwash		Notes on condition of filters & problem in operations
	Start	Stop	Today	Previous	Total	Start (m)	Stop (m)	Minutes	Quantity (m <sup>3</sup> )	

Signature of Contractor

## 2) Pumping Station Report

Name of Project:

Daily Pumping Report

Sr. No.	Pump No.	Pump Starting Time	Pump Stopping Time	Pumping Hours	Units of Power Consumed (KWh)	Supply Reservoir		Flowmeter		Total Water Pumped (MLD)
						Level(M)		Reading(m³)		
						Initial	Final	Initial	Final	
1										
2										
3										
4										
5										
6										
7										

Signature of Contractor

### 3) Chemical Stock & Dosing

Name of Project:

S. No.	Date	Income/ Opening balance			Usage			Balance			Remarks
		Alum (In Kg)	PAC (30%) in Kg	Chlorine tonner (In Kg)	Alum (In Kg)	PAC (30%) in Kg	Chlorine tonner (In Kg)	Alum (In Kg)	PAC (30%) in Kg	Chlorine tonner (In Kg)	
1											
2											
3											
4											
5											
6											
7											

Signature of Contractor

#### 4) Stores

##### 4.1 Material Entry Register

Name of Project:

Date	Name of material	Material Code	Received from	Invoice Number	Quantity Received	Receiver's Name & Signature

##### 4.1 Material Issue Register

Name of Project:

Date	Name of material	Material Code	Issued from	Invoice Number	Quantity Issued	Issuer's Name & Signature	Receiver's Name & Signature

##### 4.1 Material Stock Register

- Agency has to maintain ledger for all materials including opening balance, issued in the month, closing balance



### 5) Grievance Register

Name of Project:

Registration Number	Date of Complaint	Detail of Complainant (Name, Mobile number,)	Description of Complaint	Complaint location (Village/ town/ hamlet)	Action taken	Resolution Date

Signature of Contractor

## 6) Visitor's Register

Name of Project:

Date	Visitor's Name	Comments/ Suggestions during visit	Visitor's sign	Action taken	Agency representative's sign

**7) Preventive & Curative Maintenance register**

**Name of Project:**

**Report of maintenance work – Preventive & Curative Maintenance (separate registers to be maintained)**

<b>Sr. No.</b>	<b>Date</b>	<b>Nature of work attended</b>	<b>Remarks</b>
<b>1</b>			
<b>2</b>			
<b>3</b>			
<b>4</b>			
<b>5</b>			
<b>6</b>			
<b>7</b>			
<b>8</b>			
<b>9</b>			

**Signature of Contractor**

## 7.1 Calibration of Instruments register

Name of Project:

### Report of calibration of Instruments installed

Sr. No.	Name of Instrument (Pressure Gauge, Flow meter, Relay, Voltmeter, Ammeter etc.)	Instrument No. (if any)	Qty.	Date of calibration	Remarks
1					
2					
3					
4					
5					
6					
7					
8					

Signature of Contractor

Note:

- a) Calibration report shall be submitted along with calibration certificate.
- b) This register is to be maintained at the site office and is separate from the calibration log to be pasted near the equipment

# 8) Daily Habitation wise Water Supply Report

Name of Project:

Date	Village/ Town / hamlet Name	Water received from Reg. WSS				Details of Residual Chlorine in Water	Signature of Contractor's Engineer etc.	Remarks
		In Qty	In Hrs.					
			From	To	Total Hrs.			

Signature of Contractor

## 9) Leak Repair Register

Name of Project:

Date	Name of Section	Details of Existing Pipeline			Chainage / Location of Leakage	Details of Material Consumed	Repairing Status Date & Time		Remarks
		Type	Class	Dia			Repaired	Un-Repaired	

Signature of Contractor

## ANNEXURE-IX ASSET LIST & STATUS

Electromechanical						
Sr No	Equipment	Headwork	Location/ section	Make/ Brand	Specifications/ Capacity	Equipment status ((O) Operational, (R) Minor repairs, (D) Defunct
1	List of pump sets					
2	List of panels, circuit breakers, starters					
3	Transformer					
4	DG set					
5	Dewatering sets					
6	Any other					
7						
8						
9						
10						

Electromechanical items will include all electrical and mechanical equipment such as, motors, pumps, panels, starters, breakers, dosing device, lifting devices, Clariflocculatorbridge, transformer, valves, gates etc.

Civil						
Sr No	Component	Headwork	Location	Make/ Material	Dimensions (length, area)	Remarks (condition)
1	e.g. Rapid sand filter plant					
2						
3						
4						
5						
6						
7						
8						
9						
10						

Civil structures will include

- Intake/ offtake/ tube well etc. source structures
- Rising main
- H/W and PS structures
- Filter plant
- Sumps, HGLR, ESR and other storage structures
- Mention section details
- Distribution network

The baseline assessment as part of asset and inventory survey conducted has been placed below for reference.

[illegible]

Name &amp; Signature of EE, Date



**ANNEXURE-X CITIZEN GRIEVANCE LOGS**

<b>Sl. No.</b>	<b>Village Name</b>	<b>Taluka</b>	<b>Nature of Complaint</b>	<b>Sub-nature of complaint</b>	<b>Total count</b>
	<b>Total</b>				<b>(sum)</b>

## **ANNEXURE-XI INSURANCE**

### **Insurance against Injury to Persons and Damage to Property;**

The Contractor shall insure against each liability for any loss, damage, death or bodily injury which may occur to any physical property (mechanical, electrical, automation work, all civil works, Storage etc. excluding pipe line) or to any person which may arise out of the Contractor's performance of his obligations under these Conditions during the O&M Period.

This insurance shall be for a limit of per occurrence of not less than the amount of Rs. 5 Lacs, with no limit on the number of occurrences.

### **Insurance for Contractor's Personnel;**

The Contractor shall affect and maintain insurance against liability for arising from injury, sickness, disease or death of any person employed by the Contractor or any other of the Contractor's Personnel.

The Employer shall also be indemnified under the policy of insurance, except that this insurance may exclude losses and claims to the extent that they arise from any act or neglect of the Employer or of the Employer's Personnel.

Contractor shall have to take insurance for Electrical, Mechanical and instrumentation equipment under these packages and whereas the insurance of other components like sump, pump house, pipeline will be optional. This General Insurance for the work will be in the name of GWSSB. The depreciated value is considered \_\_\_\_\_ for the purpose of insurance for respective year. The insurance for skilled, semi- skilled and unskilled labour is compulsory. The same should be taken by agency as per labour act laws in force.

<b>Sr. No.</b>	<b>Name of Component</b>	<b>Cost of Component</b>	<b>Sum to be insured</b>

## **ANNEXURE-XII SAFETY CONSIDERATIONS**

### **SAFETY ABSTRACT FROM CPHEEO**

#### **Storage and Handling of Chlorine cylinders**

Chlorine is stored in special grade steel containers. As per IS:4379-1967, the colour of Chlorine container should be 'golden yellow'. Further, during O&M the agency shall ensure following safety precautions. This is not an exhaustive list and the agency's scope shall not be limited to the activities mentioned below.

#### **Maintenance of chlorine storage area**

1. Obtain storage licence from controller of explosives under Gas Cylinder Rules 1981 if the quantity of Cl<sub>2</sub> containers to be stored is more than 5 Nos.
2. Storage area should be cool, dry, well ventilated, and clean of trash and protected from external heat sources. Please refer to Manual on "Water Supply and Treatment", (1999 Edition), for further details.
3. Ventilation must be sufficient to prevent accumulation of vapour pockets. The exhaust should be located either near the floor or duct be provided extending to the floor. All fan switches should be outside the storage area.
4. Do not store container directly under the sun.
5. Weather cock should be installed near the storage to determine wind direction.
6. Ensure adequate egress (exit) paths (at least two)
7. Neutralization system should be provided.
8. Continuous monitoring of chlorine leak detection equipment with alarm should be installed in the storage area.
9. The area should be free and remote from elevators, gangways or ventilating system to avoid dangerous concentration of Chlorine during leak.
10. Two portable foam type fire extinguishers should be provided in the premises.
11. Corrosive substances shall not be stored nearby which react violently with each other.
12. Unauthorized person should not be allowed to enter into the storage area.
13. Ensure that all containers are properly fitted with safety caps or hooks.

#### **Loading/Unloading of Containers**

1. The handling of containers should be done under the supervision of trained and competent person.
2. It should be done carefully with a crane, hoist or slanted ramp. Do not use magnet or sharp object for lifting the containers.
3. Small cylinders should not be lifted by means of valve caps as these are not designed to carry the weight.
4. The containers should not be allowed to strike against each other or against any hard object.
5. Vehicles should be braked and isolated against any movement.
6. After loading, the containers should be secured properly with the help of wooden wedges, rope or sling wire so that they do not roll away.
7. The containers should never be dropped directly to the ground or on the tyre from the vehicle.
8. There should be no sharp projection in the vehicle.
9. Containers must have valve caps and plugs fitted properly.
10. Check containers for leakage before loading/unloading.

#### **Transportation of Containers**

1. The name of the chemical along with diamond pictorial sign denoting the dangerous goods should be marked on the vehicle.

2. The name of the transporter, his address and telephone number should be clearly written on the vehicle.
3. The vehicle should not be used to transport any material other than what is written on it.
4. Only trained drivers and cleaners should transport hazardous chemical.
5. The driver should not transport any leaking cylinder.
6. The cylinder should not project outside the vehicle.
7. The transporter must ensure that every vehicle driver must carry "Trem Card" (Transport Emergency Card) and 'Instructions in writing booklet' and follow them.
8. Every driver must carry safety appliances with him, viz; Emergency kit, breathing apparatus etc.
9. The vehicles must be driven carefully, especially in crowded localities and on bumpy roads. Do not apply sudden brakes.
10. Check for the leakage from time to time.
11. In the case of uncontrollable leakage, the vehicle should be taken to an open area where there is less population.

### **Personal Protective Equipment**

#### **1. Breathing Apparatus**

Various types of respirators and their suitability are as follows:

##### **i. Self-contained breathing apparatus**

This apparatus is equipped with a cylinder containing compressed oxygen or air which can be strapped on to the body of the user or with a canister which produces oxygen chemically when the reaction is triggered. This type of equipment is suitable for high concentration of chlorine in an oxygen deficient atmosphere.

##### **ii. Air-line respirator: Air-line length 90 m. (max.)**

It is suitable for high concentrations of chlorine provided conditions permit safe escape if air supply fails. This device is suitable in any atmosphere, regardless of the degree of contamination or oxygen deficiency, provided that clean, breathable air can be reached.

##### **iii. Industrial Canister Type Mask: Duration: 30 min. for 1% Cl<sub>2</sub>**

It is suitable for moderate concentration of chlorine provided sufficient oxygen is present. The mask should be used for a relatively short exposure period only. If the actual chlorine concentration exceeds 1% by volume or oxygen is less than 16% by volume, it is not useful. The wearer in such cases must leave the place on detection of chlorine or experiencing dizziness or breathing difficulty.

### **Protective Clothing**

Rubber, or PVC clothing is useful in massive exposure which otherwise creates mild skin burns due to formation of acid on the body.

### **Maintenance of Protective Equipment**

1. Clean with alkali after every use.
2. Keep in polythene bag at easily accessible place.
3. Check them periodically about their suitability. Many times, the seal ring of face mask gets hardened.

### **Employees Training**

It is essential to impart training to the employees who have to face emergency.

This training should include following:

- a) Instructions in the action to be taken in an emergency.
- b) Use of emergency kit.
- c) Handling of containers.
- d) First aid.

- e) Use of protective equipment.
- f) Knowledge of Chlorine hazards.
- g) Firefighting.
- h) Use of safety showers and eye fountains.
- i) Crash shut down procedure for valves and switches.
- j) Communication system.
- k) Study of plant layout with diagram.
- l) Mock drills.

**List of safety systems at chlorination plant**

- 1. Breathing apparatus.
- 2. Emergency kit.
- 3. Leak detectors.
- 4. Neutralisation tank.
- 5. Scrubber system.
- 6. Siren system.
- 7. Display of boards in local language for public cautioning, first aid and list of different authorities with phone numbers.
- 8. Communication system.
- 9. Tagging system for equipment.
- 10. First aid including tablets and cough mixtures.
- 11. Exhaust fans.
- 12. Testing of pressure vessels, chlorine lines etc. every year as per factory act.
- 13. Training & mock drill.
- 14. Safety showers.
- 15. Eye fountain.
- 16. Personal protective equipment.
- 17. Protecting hoods for ton-containers.
- 18. Fire extinguishers.
- 19. Wind cock.

### **Safety aspects for electrical components**

Following safety precautions should be observed while working in a pump house.

- i. No electric live part shall be kept exposed. Particular care should be taken not to keep the motor terminals, starter door, panel door etc. in open condition.
- ii. Guard for pump – motor coupling and for extended shaft shall be provided.
- iii. Top cover of the VHS (vertical hollow shaft) motor shall not be unnecessarily kept in dismantled condition.
- iv. Helmet, gumboots, hand gloves, torch and emergency lamp etc. shall be provided to the workers.
- v. Shock proof rubber matting shall be kept in front of panel and starters.
- vi. Discharging devices shall also be provided to work safely on HT side of transformer.
- vii. Fire fighting equipment suitable for electrical fire shall be provided. The fire extinguisher shall be thoroughly checked and recharged once in a year.
- viii. Damaged wooden flooring, damaged grating etc. shall be repaired on priority.
- ix. Safety railing shall be provided above all openings, unwallled edges of flooring and all such places vulnerable for falling or slipping of staff.
- x. First aid box shall be kept at visible and accessible place. The first aid box shall be checked once in a month and all used items shall be replenished.
- xi. Staff shall be trained in the following aspects to enhance safety awareness and skills to handle safety aspects.
  - Fire fighting
  - Safety procedures and practices in electrical work
  - First aid (general)
  - First aid for electric shock.

Following Indian Standards (IS) detail comprehensive guidelines for safety in electrical installation.

IS 5216 (Part I) – General

IS 5216 (Part II) – Life Saving Technique

IS 5216 (Part III) – Safety Posters

IS 5216 (Part IV) – Special guidance for safety in electrical work in hazardous areas.

### **Working at Height**

- Guard every floor hole into which a worker can accidentally walk (using a railing and toe-board or a floor hole cover).
- Provide a guard rail and toe-board around every elevated open sided platform, floor.
- Regardless of height, if a worker can fall into or onto dangerous machines or equipment (such as well, tanks etc.) employers must provide guardrails and toe-boards to prevent workers from falling and getting injured.
- Other means of fall protection that may be required on certain jobs include safety harness and line, safety nets, stair railings and handrails.

### **Safety consideration during painting**

The following considerations must be kept in mind:

- When working with toxic paints i.e. containing lead, zinc or organics, be sure to clean your hands before eating or handling food.
- Avoid exposing your skin to solvent and thinners and try not to use compounds such as carbon tetrachloride.
- When spray painting, use a respirator to avoid inhaling fumes.
- No smoking or open flames of any kind should be allowed around the area being painted.
- When painting or cleaning the spraying equipment avoid closed containers where heat is involved. At a certain temperature called the flash point, spray or vapours could ignite and burn the operator or start fires. Always clean the spray equipment in an area with sufficient ventilation.
- Be very careful when using scaffolding or ladders. They must be strong and in good repair.
- **Rags containing paint or oil should be placed in a closed container to avoid fires.**

## **ANNEXURE-XIII UNIFORMS FOR OPERATOR'S STAFF**

The uniform must have O&M agency's logo and company name. Uniform specifications for different categories of staff are as follows:

### **i. Full body coveralls and PPEs for all operators and field staff**

**Applicable to: Operators (Filter plant/ pump/ chlorination plant), Electrician, Fitters, Helpers, Sweepers**

- Full body protective clothing: Durable coveralls or jumpsuits or shirt and trouser made from a water-resistant or water-repellent material to protect the operators and staff from potential splashes or spills of water or chemicals. It should be suitable for welding and other mechanical works. Full sleeves with brass zippers and at least 200 GSM. Colour shall be sky blue or navy blue.

Other accessories (PPE):

- Safety shoes: Sturdy, slip-resistant safety shoes conforming IS 15298 (2011).
- Chemical Resistant Gloves: made from appropriate materials such as nitrile or neoprene to protect hands during tasks involving the handling of chemicals.
- Cut Resistant Gloves: for activities involving grinders, cutters, material lifting and handling
- Safety goggles: Encourage the use of safety goggles to protect the eyes from potential splashes, chemical, or other hazards.

### **ii. Office formals**

**Applicable to: Manager, Engineer, SCADA Operator, Lab in-charge and Data entry operator**

- Formal full sleeves shirt: Light blue (sky blue) coloured (Male)
- Formal Trousers: Navy blue coloured (Male)
- Sky blue/ Navy blue formal attire for female(Saree or shirt & trousers or skirt)
- When on field or site visit, the personnel must wear appropriate personal protective equipment as per the requirements such as safety shoes, safety helmet etc.

### **iii. Laboratory personnel**

**Applicable to: Chemist and Lab helper**

- In addition to the formal uniform, the Lab in-charge and laboratory helper must have a laboratory apron (white coloured, 200+ GSM) when working in the laboratory.

### **iv. Business casuals**

**Applicable to: Outdoor campus maintainer, valve man**

- Collared T-shirt or Shirt(Male or Female) or Saree (for females): Light blue (sky blue coloured)
- Trouser: (Navy blue coloured)



## ANNEXURE-XIV IDENTITY CARD FOR AGENCY'S STAFF

<i>Company logo</i>	<b>Company Name</b>	
	<i>Company's Address</i>	
	<i>Project Name:</i>	
<i>Photograph of personnel</i>	Name	<staff name>
	Designation	
	Date of Birth	
	Blood Group	
<hr/> <i>Signature and Name of Authorized representative of contractor</i>		

## ANNEXURE-XV OPERATING PROCEDURES

### TROUBLESHOOTING

#### Short circuiting in flocculator

Under such circumstances very inferior settled water is produced. Short circuiting in flocculation basins is characterized by currents which move rapidly through and continue into the settling tanks. The floc removal problem is compounded with incomplete flocculation and currents introduced into the settling process inhibit removal. Properly operated entrance, curtain baffles and exit weirs and launders can significantly improve settling.

#### **Coagulation-flocculation process, trouble shooting.**

Problems	Operator Actions	Possible process changes
<b>Source water Quality changes</b>		
Turbidity	<ol style="list-style-type: none"> <li>1. Perform necessary analyses to determine extent of change</li> <li>2. Evaluate overall process performance</li> <li>3. Perform jar tests.</li> <li>4. Make appropriate process changes (see right hand column possible process changes)</li> <li>5. Increase frequency of process monitoring</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust coagulant dosage.</li> <li>2. Adjust flash mixer/flocculator mixing intensity.</li> <li>3. Add coagulant aid or filter aid.</li> <li>4. Adjust alkalinity or pH.</li> <li>5. Change coagulant(s)</li> </ol>
<b>Coagulation process Effluent quality changes</b>		
Turbidity Alkalinity pH	<ol style="list-style-type: none"> <li>1. Evaluate source water quality</li> <li>2. Perform jar tests.</li> <li>3. Verify process performance:               <ol style="list-style-type: none"> <li>a. Coagulant feed rate(s)</li> <li>b. Flash mixer operation.</li> </ol> </li> <li>4. Make appropriate process changes</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust coagulant dosage.</li> <li>2. Adjust flash mixer intensity (if possible)</li> <li>3. Adjust alkalinity or pH</li> <li>4. Change coagulant(s)</li> </ol>
<b>Flocculation Basic Floc Quality Changes</b>		
Floc Formation	<ol style="list-style-type: none"> <li>1. Observe floc condition in basin:               <ol style="list-style-type: none"> <li>a. Dispersion.</li> <li>b. Size and</li> <li>c. Floc strength (break up)</li> </ol> </li> <li>2. Evaluate overall process performance.</li> <li>3. Perform jar tests.               <ol style="list-style-type: none"> <li>a. Evaluate floc size setting rate and strength.</li> <li>b. Evaluate quality of supernatant: Clarity (turbidity) ph. And colour</li> </ol> </li> <li>4. Make appropriate process changes.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust coagulant dosage</li> <li>2. Adjust flash mixer/flocculator mixing intensity.</li> <li>3. Add coagulant aid.</li> <li>4. Adjust alkalinity or ph.</li> <li>5. Change Coagulant(s)</li> </ol>

#### **Sedimentation process, trouble shooting.**

Problems	Operator Actions	Possible process changes
<b>Source water Quality changes</b>		

Problems	Operator Actions	Possible process changes
Turbidity temperature Alkalinity pH Colour	<ol style="list-style-type: none"> <li>1. Perform necessary analysis to determine extent of change.</li> <li>2. Evaluate overall process performance.</li> <li>3. Perform jar tests.</li> <li>4. Make appropriate process changes (next column)</li> <li>5. Increase frequency of process monitoring</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust coagulant dosage.</li> <li>2. Adjust flash mixer/flocculator mixing intensity.</li> <li>3. Change frequency of sludge removal (increase or decrease)</li> <li>4. Increase alkalinity by adding lime, caustic soda or soda ash.</li> <li>5. Change coagulant.</li> </ol>
<b>Flocculation process Effluent quality changes</b>		
Turbidity Alkalinity pH	<ol style="list-style-type: none"> <li>1. Evaluate overall process performance.</li> <li>2. Perform jar tests.</li> <li>3. Verify performance of coagulation flocculation process.</li> <li>4. Make appropriate process changes (next column)</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust coagulant dosage</li> <li>2. Adjust flash mixer/flocculator mixing intensity.</li> <li>3. Adjust improperly working chemical leader.</li> <li>4. Change coagulant.</li> </ol>
<b>Sedimentation Basic Changes</b>		
Floc settling  Rising or floating sludge	<ol style="list-style-type: none"> <li>1. Observe floc settling characteristics:               <ol style="list-style-type: none"> <li>a. Dispersion</li> <li>b. Size</li> <li>c. Settling rate</li> </ol> </li> <li>2. Evaluate overall process performance.</li> <li>3. Perform jar tests.               <ol style="list-style-type: none"> <li>a. Assess floc size and settling rate.</li> <li>b. Assess quality of settled water (clarity and colour)</li> </ol> </li> <li>4. Make appropriate process changes (next column)</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust coagulant dosage.</li> <li>2. Adjust flash mixer/flocculator mixing intensity.</li> <li>3. Change frequency of sludge removal (increase or decrease)</li> <li>4. Remove sludge from basic.</li> <li>5. Repair broken sludge rakes.</li> <li>6. Change coagulant.</li> </ol>
<b>Sedimentation Process Effluent Quality Changes</b>		
Turbidity Colour	<ol style="list-style-type: none"> <li>1. Evaluate overall process performance.</li> <li>2. Perform jar test.</li> <li>3. Verify process performance. Coagulation-flocculation process.</li> <li>4. Make appropriate process changes (next column)</li> </ol>	<ol style="list-style-type: none"> <li>1. Change coagulant.</li> <li>2. Adjust coagulant dosage</li> <li>3. Adjust flash mixer/flocculator mixing intensity.</li> <li>4. Change frequency of sludge removal (increase or decrease)</li> </ol>
<b>Up low clarifier process Effluent Quality changes.</b>		
Turbidity Turbidity caused by sludge Blanket coming to Top due to Rainfall on Watershed.	<ol style="list-style-type: none"> <li>1. Sec.4 above.</li> <li>2. Open main drain valve of clarifier.</li> </ol>	<ol style="list-style-type: none"> <li>1. See 4 above (sedimentation process)</li> <li>2. Drop entire water level of clarifier to bring the sludge blanket down.</li> </ol>

**Filtration process, trouble shooting.**

Problems	Operator Actions	Possible process changes
<b>Source water Quality changes</b>		
Turbidity Temperature Alkalinity pH Colour Chlorine Demand	<ol style="list-style-type: none"> <li>1. Perform necessary analysis to determine extent of change.</li> <li>2. Assess overall process performance</li> <li>3. Perform a jar test.</li> <li>4. Make appropriate process changes.</li> <li>5. Increase frequency of process monitoring.</li> <li>6. Verify response to process changes (be sure to allow enough time for change to take effect)</li> <li>7. Add lime or caustic soda if alkalinity is low.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust coagulant dosage.</li> <li>2. Adjust flash mixer/ flocculator mixing intensity.</li> <li>3. Change frequency of sludge removal (increase or decrease)</li> <li>4. Adjust backwash cycle (rate, duration)</li> <li>5. Change filtration rate (add or delete Filters)</li> <li>6. Start filter aid feed.</li> <li>7. Change coagulant.</li> </ol>
<b>Sedimentation process Effluent quality changes</b>		
Turbidity or floc carry over	<ol style="list-style-type: none"> <li>1. Assess overall process performance.</li> <li>2. Perform jar tests.</li> <li>3. Make appropriate process changes.</li> </ol>	Same as source water quality changes.
<b>Filtration process change/ problems.</b>		
<ul style="list-style-type: none"> <li>• Head loss increase</li> <li>• Short filter runs</li> <li>• media surface sealing</li> <li>• Mud balls</li> <li>• Filter media cracks, shrinkage</li> <li>• Filter not clean</li> <li>• Medical bolts</li> <li>• Media loss</li> <li>• Excessive head loss.</li> </ul>	<ol style="list-style-type: none"> <li>1. Assess overall process performance.</li> <li>2. Perform jar tests.</li> <li>3. Make appropriate process changes.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust coagulant dosage.</li> <li>2. Adjust flash mixer/ flocculator mixing intensity.</li> <li>3. Change frequency of sludge removal (increase or decrease)</li> <li>4. Adjust backwash cycle (rate, duration)</li> <li>5. Manually remove mud balls.</li> <li>6. Decrease filtration rate (add more filters)</li> <li>7. Decrease or terminate filter aid.</li> <li>8. Replenish lost media</li> <li>9. Clear under drain openings of media, corrosion or chemical deposits, check head loss.</li> <li>10. Change coagulant.</li> </ol>
<b>Filter Effluent Quality changes</b>		
Turbidity Breakthrough Colour pH Chlorine	<ol style="list-style-type: none"> <li>1. Assess overall process performance.</li> <li>2. Perform Jar tests.</li> <li>3. Verify process performance:               <ol style="list-style-type: none"> <li>a. Coagulation and Flocculation</li> <li>b. Sedimentation process.</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust coagulant dosage.</li> <li>2. Adjust flash mixer/ flocculator mixing intensity.</li> <li>3. Change frequency of sludge removal</li> <li>4. Start filter aid feed.</li> <li>5. Decrease filtration rate (add more filters)</li> </ol>

Problems	Operator Actions	Possible process changes
	c. Filtration process. 4. Make appropriate process changed.	6. Change chlorine dosage 7. Change coagulant.

## Transmission

Procedure to follow in case of leakage found in pipeline

1. First, agency has to report to the competent authority immediately by phone.
2. Visit the site of leakage and ascertain manpower and machineries required;
3. Stop the butterfly valves on the both side of the leakage;
4. Drain the pipe in between two butterfly valves with the help of scour valves available;
5. On receipt of excavator, start the excavation on the leakage site and detect the leakage;
6. If required, start dewatering the pipeline and trench by deploying dewatering set. If required, necessary trench shall be excavated up to nearby nalas or low-lying area or if nalas are not available nearby then, dewatering shall be done through line (LDPE) up to the safe area of disposal;
7. If work is to be prolonged in night, necessary lightening arrangement shall also be done;
8. Based on the leakage in pipeline i.e. DI/MS/PVC/HDPE, the required materials for repairing of the leakages shall be arranged immediately;
9. If leakage has occurred in MS pipeline then, mobilize DG set, welding equipment, pipe piece and specials of required dia. & size, grinding equipment, welding electrodes etc. shall be arranged immediately;
10. If leakages in found in PVC/HDPE pipeline, then mobilize pipe cutting equipment, piece of pipes, solvent, suitable clamps, specials nut bolts etc. shall be arranged immediately;
11. If leakage is found in DI pipes, then, mobilize piece of pipe, cutting equipment, necessary suitable MJ Collar joint, specials, rubber rings, nut bolts etc. shall be arranged immediately.
12. Leakage repairing in MS/PVC/DI/HDPE shall be done with the best practices and the directives of the Engineer in charge.
13. After completion of the leakages, excavated trench shall be refilled to the level of the surrounding ground;
14. After completion of the leakage water supply shall be started with super-chlorination
15. Water supply shall be started with controlled flow and if leakage is found rectify satisfactorily then water supply shall be increased gradually to the normal level by increasing the number of pumps as per requirement.
16. If major leakages are found, it requires more than 24 hours, then alternate arrangement of water supply shall be done by deploying tankers to the affected habitations.
17. On successful completion the leakage and normal supply is achieved in affected habitations, then water tanker shall be taken off immediately;
18. Record of deployment of tanker shall be kept & reported to the competent authority;

## START-UP AND SHUTDOWN PROCEDURES

These procedures generally happen when the plant is shut down for maintenance. However, on some rare instances, shut down may be required due to a major equipment failure.

### Coagulation-flocculation

#### Start-up procedures

Step	Procedures
1.	Check the condition of all mechanical equipment i.e. gear box, flash mixing equipment's, motors & rotating assembly, for proper lubrication and operational status.

Step	Procedures
2.	Make sure all chemical feeders are ready. There should be plenty of chemicals available in the tanks and ready to be fed to the raw water.
3.	Collect a sample of raw water and immediately run a jar test using fresh chemicals from the supply of chemicals to the feeders.
4.	Determine the settings for the chemical feeders and set the feed rates on the equipment.
5.	Open the inlet gate or valve to start the raw water flowing.
6.	Immediately start the selected chemical feed systems.
7.	Open valves to start feeding coagulant chemicals and dilution make-up water.
8.	Check flow measurement at inlet.
9.	Start chemical feeders.
10.	Adjust chemical feeders as necessary.
11.	Turn on the flash mixer at the appropriate time. You may have to wait until the Tank or channel is full before turning on the flash mixer. Follow the manufacturer's instructions.
12.	Start the sample pumps as soon as there is water at each sampling location. Allow sufficient flushing time before collecting any samples.
13.	Start the flocculators as soon as the first basin is full of water.
14.	Inspect mixing chamber and flocculation basin. Observe formation of floc and make necessary changes.
15.	Remove any debris floating on the water surface.
16.	Perform water quality analysis and make process adjustments as necessary.
17.	Calibrate chemical feeders.
18.	Note: Do not allow any untreated water to flow through the plant.

### **Shut down procedures**

Step	Procedures
1.	Close raw water gate to flash-mix chamber or channel.
2.	Shut down the chemical feed systems.
3.	Turn off chemical feeders. Shut off appropriate valves.
4.	Flush or clean chemical feed lines if necessary.
5.	Shut down flash mixer and flocculates as water leaves each process.
6.	Shut down sample pumps before water leaves sampling location
7.	Waste any water that has not been properly treated.
8.	Lock out and tag appropriate electrical switches.
9.	Dewater basins, if necessary. Waste any water that has not been properly treated.

Step	Procedures
	(Note: Do not dewater below-ground basins without checking groundwater levels. Be careful that the basin may float or collapse depending on ground water, soil or other conditions.)
10.	Close basin isolation gates or install stop-logs.
11.	Open basin drains valves

## **Sedimentation**

### **Start-up Procedure**

- 1) Check operational status and mode of operation of equipment and physical facilities.
  - a. Check that basin valves are closed.
  - b. Check that basin isolation gates are closed.
  - c. Check that launder weir plates are set at equal elevations.
  - d. Check to ensure that all trash, debris and tools have been removed from basin.
- 2) Test sludge removal equipment.
  - a. Check that mechanical equipment is properly lubricated and ready for operation.
  - b. Observe operation of sludge removal equipment.
- 3) Fill sedimentation basin with water.
  - a. Observe proper depth of water in basin.
  - b. Remove floating debris from basin water surface.
- 4) Start sample pumps.
- 5) Perform water quality analyses.
- 6) Operate sludge removal equipment. Be sure that all valves are in the proper position.

### **Shut Down Procedures**

- 1) Stop flow to sedimentation basin. Install basin isolation gates.
- 2) Turn off sample pump.
- 3) Turn off sludge removal equipment.
  - a. Shut off mechanical equipment and disconnect where appropriate.
  - b. Check that valves are in proper position.
- 4) Lock out electrical switches and equipment.
- 5) Dewater basin if necessary.
  - a. Be sure that the water table is not high enough to float the empty basin.
  - b. Open basin drains valves.
- 6) Grease and lubricate all gears, sprockets and mechanical moving parts which have been submerged immediately following dewatering to avoid seize up.

## **Filtration**

### **Start-up Procedures**

- Start filter
- Slowly open influent valve.
- When proper elevation of water is reached on top of filter, filter effluent valve should be gradually opened. This effluent control valve should be adjusted itself to maintain a constant level of water over the filter media.
- Waste some of the initial filtered water if such a provision exists.
- Perform turbidity analysis of filtered water and make process adjustments as necessary.

### **Shutdown Procedures**

- Remove filter from service by closing influent valve and closing effluent valve
- Backwash filter.
- If filter is to be out of service for a prolonged period, drain water from filter to avoid algal growth.
- Note status of filter in operations log.



## Pumping

### Start up

#### a) Centrifugal Pump (of low and medium specific speed)

- i. To start a centrifugal pump, the suction pipes and the pump should be fully primed irrespective of the fact whether the pump is with positive (flooded) suction or suction lift. The centrifugal pump with positive suction can be primed by opening valve on suction side and letting out air from the casing by opening air vent. Centrifugal pump on suction lift necessitates close attention to prime the pump fully. To achieve this, the suction pipe and the pump casing must be filled with water and entire air in suction piping and the pump must be removed. If vacuum pump is provided, the pump can be primed by operating vacuum pump till steady stream of water is let out from delivery of vacuum pump. In absence of vacuum pump, priming can be done by pouring water in casing and evacuating air through air vent or by admitting water from pumping main by opening bypass of reflux valve and delivery valve. Check all joints in the suction pipe and fittings.
- ii. Close the delivery valve and then loosen slightly.
- iii. Switch on the motor, check that direction of rotation is correct. If the pump does not rotate, it should be switched off immediately.
- iv. Check vacuum gauge if the pump operates on suction lift. If the pointer on gauge gradually rises and becomes steady the priming is proper.
- v. Pressure gauge should be observed after starting the pump. If the pump is working correctly the delivery pressure gauge should rise steadily to shut off head.
- vi. When the motor attains steady speed and pressure gauge becomes steady, the delivery valve should be gradually opened in steps to ensure that the head does not drop below recommended limit. (in the absence of recommendations, the limit shall be about 85% of duty head for centrifugal pump).
- vii. Check that ammeter reading is less than rated motor current.
- viii. Check for undue vibration and noise.
- ix. When in operation for about 10-15 minutes, check the bearing temperature, stuffing box packing, and leakage through mechanical seal and observe vibrations, if any.
- x. Voltage should be checked every half an hour and should be within limit.

#### b) Vertical Turbine Pump

- i. Close delivery valve, and then loosen slightly.
- ii. If pump is oil-lubricated, check the oil in the oil tank and open the cock to ensure that oil is flowing at the rate of 2-4 drops per minute. If the pump is self water-lubricated and length of column assembly is long (15 m or above), external water shall be admitted to wet and lubricate the line shaft bearings before starting the pump. If the pump is external clear water lubricated, the clear water lubricating pump should be started before starting main pump.
- iii. Open the air vent in discharge/delivery pipe.
- iv. Switch on the motor and check correctness of direction of rotation. If the pump does not rotate, it should be switched off immediately.
- v. Check that oil is flowing into the pump through the sight glass tube. The number of drops/min. should be as per manufacturer's recommendations (normally 2-4 drops/minute). For clear water lubricated pump, check that lubricating clear water is passing into the column assembly.
- vi. Check pressure gauge reading to ensure that pump has built up the required shut off head.
- vii. When the motor attains steady speed and pressure gauge becomes steady, the delivery valve should be gradually opened in steps to ensure that the head does not drop below recommended limit. (In absence of recommendation, the limit shall about 75% of duty head for VT & submersible pump).
- viii. If steady water stream is let out through air vent, close the air vent.
- ix. Check that ammeter reading is less than rated motor current.
- x. Check for undue vibration and noise.

- xi. When in operation for about 10-15 minutes, check bearing temperature, stuffing box packing and observe vibration if any.
- xii. Voltage should be checked every half an hour and should be within limit.
- c) Submersible Pumps  
Starting of a submersible pump is similar to vertical turbine pump except that steps ii, v, and xi are not applicable and since motor is not visible, correctness of direction of rotation is judged from pressure gauge reading which should indicate correct shut off head.
- d) Jet Pump  
The procedure for starting jet pumps is similar to centrifugal pump except that priming by vacuum pump is not possible. Priming needs to be done by filling the pump casing and suction line from external source or by pouring water.
- e) Vacuum Pump  
The procedure for starting vacuum pump is similar to centrifugal pump except that priming is not necessary and valves on both suction & delivery side of vacuum pump should be fully open.
- f) Reciprocating Pump  
The steps stipulated for centrifugal pump are equally applicable for reciprocating pump. However, exceptions as follows are applicable.
  - The pump should be started against partially open delivery valve.
  - The pump should never be started or operated against closed delivery valve.

### **Shutdown**

- a) Stopping the pump under normal conditions  
Steps to be followed for stopping a pump of low and medium specific speed are as follows:
  - i. Close the delivery valve gradually (sudden or fast closing should not be resorted to, which can give rise to water hammer pressures).
  - ii. Switch off the motor.
  - iii. Open the air vent in case of V.T. and submersible pump.
  - iv. Stop lubricating oil or clear water supply in case of oil lubricated or clear water lubricated VT pump as applicable.
- b) Stopping the pump after power failure/ Tripping  
If power supply to the pumping station fails or trips, actions stated below should be immediately taken to ensure that the pumps do not restart automatically on resumption of power supply. Though no-volt release or under volt relay is provided in starter and breaker, possibility of its malfunctioning and failure to open the circuit cannot be ruled out. In such eventuality, if the pumps start automatically on resumption of power supply, there will be sudden increase in flow velocity in the pumping main causing sudden rise in pressure due to water hammer which may prove disastrous to the pumping main. Secondly, due to sudden acceleration of flow in the pumping main from no-flow situation, acceleration head will be very high, and the pumps shall operate near shut off region during acceleration period which may last for few minutes for long pumping main and cause overheating of the pump. Restarting of all pumps simultaneously shall also cause overloading of electrical system.  
  
Hence, precautions are necessary to prevent auto-restarting on resumption on power. Following procedure should be followed.
  - i. Close all delivery valves on delivery piping of pumps if necessary, manually as actuators cannot be operated due to non-availability of power.
  - ii. Check and ensure that all breakers and starters are in open condition i.e. off-position.
  - iii. All switches and breakers shall be operated to open i.e. off-position
  - iv. Open air vent in case of V.T. or submersible pump and close lubricating oil or clear water supply in case of oil lubricated or clear water lubricated V.T. pump.

- v. Information about power failure should be given to all concerned, particularly to upstream pumping station to stop pumping so as to prevent overflow.

## ANNEXURE-XVI TRAINING PROGRAM FOR AGENCY'S STAFF

Agency shall undertake training program for its staff on the topics mentioned below. Training records, attendance sheet shall be maintained as evidence. The below topics are not exhaustive, agency may add more topics as deemed necessary.

Training Topic	Target Audience	Frequency	Indicative Contents of Training Module
Basic Technical Training	New operators	Initial training, periodic refresher training as needed	<ul style="list-style-type: none"> <li>▶ Understanding the water cycle and water sources</li> <li>▶ Water treatment processes and methods</li> <li>▶ Distribution system components and layout</li> <li>▶ Water storage management</li> <li>▶ Water quality standards and regulations</li> </ul>
Health and Safety Training	All operators	Annual, or as needed to keep up to date	<ul style="list-style-type: none"> <li>▶ Hazardous materials handling and storage</li> <li>▶ Personal protective equipment (PPE) selection and usage</li> <li>▶ Chemical spill response procedures</li> <li>▶ Electrical safety protocols</li> <li>▶ Emergency response planning and protocols</li> </ul>
Water Quality Monitoring	All operators, Lab technicians	Annual, or as needed to keep up to date	<ul style="list-style-type: none"> <li>▶ Sampling techniques and protocols</li> <li>▶ Water quality parameters and measurement methods</li> <li>▶ Analytical laboratory methods and interpretation of results Reporting requirements and data management</li> <li>▶ Troubleshooting common water quality issues</li> </ul>
System Maintenance and Repair	All operators	Annual, or as needed to keep up to date	<ul style="list-style-type: none"> <li>▶ Maintenance and inspection schedules and procedures</li> <li>▶ Pump and valve maintenance and repair</li> <li>▶ Chlorination and disinfection equipment maintenance</li> <li>▶ Leak detection and repair</li> <li>▶ Hydraulic principles and calculations</li> </ul>
Beneficiary & Community orientation	All operators	Annual, or as needed to keep up to date	<ul style="list-style-type: none"> <li>▶ Complaint handling and resolution strategies</li> <li>▶ Billing and payment processes and procedures</li> <li>▶ Community engagement, awareness and outreach</li> </ul>
Emergency Response Training	All operators	Annual, or as needed to keep up to date	<ul style="list-style-type: none"> <li>▶ Emergency response planning and protocols</li> <li>▶ Disaster preparedness and response</li> <li>▶ Water supply disruption response</li> <li>▶ Coordination with local authorities and emergency services</li> </ul>

Training Topic	Target Audience	Frequency	Indicative Contents of Training Module
			<ul style="list-style-type: none"> <li>▶ Incident reporting and documentation</li> </ul>
Health, Safety and Environment	All staff	Annual, or as needed to keep up to date	<ul style="list-style-type: none"> <li>▶ Hazard identification and risk assessment</li> <li>▶ Personal protective equipment (PPE) usage and maintenance</li> <li>▶ Emergency response and evacuation procedures</li> <li>▶ Occupational health and hygiene practices</li> <li>▶ Environmental impact awareness and mitigation measures</li> </ul>
Continuing Education	All operators	Periodic, based on availability of new information and resources	<ul style="list-style-type: none"> <li>▶ Water supply system upgrades and innovations</li> <li>▶ Regulatory updates and compliance</li> <li>▶ Water conservation and sustainability practices</li> <li>▶ Energy efficiency and cost-saving measures</li> <li>▶ Emerging technologies and water treatment processes</li> </ul>

**ANNEXURE-XVII COMMUNICATION OR REPORTING MATRIX**

Sl. No.	Designation	Office Address	Contact details
1	Chief Engineer Zone -6, Surat	3rd floor, Jal Bhavan, Near Adajan water tank, Adajan Road, Surat, Dist: Surat, 395009	9978406836 cezonesurat@gmail.com
2	Superintendent Engineer P. H. Circle, Valsad	2 <sup>nd</sup> Floor, Jalbhavan, Opp. Kusum Vidhyalay, Tithal Road, Bhagadavada, Valsad, Dist.: Valsad, 396001.	9978405476 se2valsad@gmail.com
3	Executive Engineer P.H. Works Division, Ahwa-Dang	Ahwa Jalbhavan, Saputara Road, Ahwa, Dist. Dang– 394710	9638653436 gwssbdang@gmail.com
4	Deputy Executive Engineer PHS Subdivision, Ahwa	Ahwa Jal bhavan, 1 <sup>st</sup> Floor, Saputara Road, Ahwa, Dist. Dang– 394710	9727799260 phs1ahwa@gmail.com

## ANNEXURE-XVIII TOOLS & TACKLES

Provide and maintain location wise tools and tackles in the given quantity

Location: \_\_\_\_\_

Sl. No.	Item	Quantity	Unit
1	For spanner set size 6mm to 22mm		Set
2	Fix spanner set size 6mm to 52mm		Set
3	Ring spanner set size 6mm to 22mm		Set
4	Ring spanner set size 7mm to 52mm		Set
5	Box spanner set size 6mm to 38mm		Set
6	Pipe wrench size 36"		Set
7	Pipe wrench size 24"		Nos
8	Screw driver size 6", 9", 12" (2 no of each size)		Nos
9	Insulated plier size 12"		Nos
10	Long-nose plier set 8"		Nos
11	Adjustable screw spanner size 12"		Nos
12	Hammer 1 LB x 2 LB		Nos
13	Electric Tester		Nos
14	Chisel 12" x 6" (2Nos. of each size)		Nos
15	Hack saw frame		Packets
16	Hack saw blade		Pairs
17	Hand gloves suitable for 33 KV		Nos
18	Spade (Phawada)		Nos
19	Ghamela		Nos
20	Pickaxe (Tikam)		Nos
21	Lawn mower (For gardening)		Nos
22	File (12" & 18")		Nos
23	Plastic bucket 10 liters		Nos
24	Rope ½"		Meter
25	Torch & Batteries		Nos
26	Safety PPEs (personal protective equipment)		Set
27	Dewatering pump and hose		Set

## **Section III: Conditions of Contract**



## 5. GENERAL CONDITIONS OF CONTRACT

### (1) SECURITY DEPOSIT

- 1.1 Security Deposit is required to be furnished by the contractor as guarantee money for performance of the contract and observance of Contractor Conditions. The person/persons whose tender is accepted (hereinafter called the "Contractor") which expression shall, unless excluded by, or repugnant to the context include his Legal heirs, executors, administrators and assignees shall pay the total amount of Security Deposit equal to 10(ten) percent of the estimated cost or contract value (Part A & B of price bid) whichever is higher for the work put to tender.
- a) The contractor shall **pay first five percent of Security Deposit** in form of bank guarantee (out of 10% as mentioned in 1.1) within 10 days from the date of receipt of acceptance letter of his offer and
  - b) the remaining five percent, shall be deducted as retention money from the running bills of the contractor.
  - c) The contractor shall submit an additional security deposit in form of performance bank guarantee equivalent to 10% of the 'works' component value, if any. This value shall be as per the Volume II- Price Bid Part C. Moreover, if there is a major replacement in asset spares or asset itself, then the agency will have to submit security deposit for the same.
- 1.2 The work-order to commence the work shall be issued only after the security deposit as per Para 1.2 is paid / furnished by the bidder. If the bidder fails to produce the security deposit as above the earnest money paid by him shall be forfeited and his registration shall be held in abeyance for three years from the date of such default.
- 1.3 All compensation, penalties due for payment or other sums or money payable by the contractor to Government under the terms of this contract shall be deducted from or recouped by the realisation of a sufficient part of his security deposit, or from the interest arising there from or performance bond or from any sums which may due or may become due by Government to the Contractor on any account whatsoever and whether in respect of this contract, any other contract, or otherwise. In the event of his security deposit being reduced by reason of any such deduction or recoupment as aforesaid the contractor shall within ten days thereafter, make good in cash or in Government securities transferred as aforesaid any sum or sums required to make good the shortfall in the amount of the security deposit.
- 1.4 The security deposit submitted in form of performance bond/ guarantee (as per 1.1 (a)) shall be valid for a period of 60 (sixty) days beyond the date of completion of all contractual obligations of the contractor. Such deposit bond shall be released within fifteen days after the issue of final completion certificate for O&M or issue of "Taking Over Certificate".
- 1.5 After satisfactory handing over the operation to new contractor/ department, if there is recovery of any dues and any other obligation shall be adjusted towards retention money (1.1 (b)) being held by the authority. Balance amount shall be refunded within two months (60 days from the taking over date).
- 1.6 Security deposit submitted as per 1.1 (c), shall be valid up to 60 days beyond the defect liability period or warranty period. It will be released subject to completion of such defect liability period within 30 days.

### 2. MEASURES FOR PREVENTION OF FIRE:

The Contractor shall not set fire to any standing jungle, tree, bush wood or grass without a written permit from the Engineer-in-Charge, When such permit is given, and also in all cases when

destroying cut or dug up trees, bush wood, grass etc. by fire, the contractor shall take necessary measures to prevent such fire spreading to or other-wise damages surrounding property.

### **3. LIABILITY OF CONTRACTORS FOR ANY DAMAGES DONE IN OR OUTSIDE WORK AREA:**

Compensation for all damage done intentionally or unintentionally by Contractor's labourers whether in or beyond limits of Government property, including any damage caused by the spreading of fire mentioned in the clause 22, shall be estimated by the Engineer-in-Charge, or such other Officer as he may appoint and the estimates of the Engineer-in-Charge, subject to the decision of the Superintending Engineer, on appeal, shall be final and the Contractor shall be bound to pay the amount of the assessed compensation on demand, failing which the same will be recovered from the Contractor as damages in the manner prescribed in clause 1 or deducted by the Engineer-in-Charge from any sums that may be due or become due from Government to the Contractor under this contract or otherwise.

### **4. SUBLETTING WORK**

Work **not be sublet: No works of this contract is allowed to be Sublet.**

### **5. CHANGES IN THE CONSTITUTION OF FIRM**

**Changes in the constitution of firm to be notified:** In the case of a tender by partners, any changes in the constitution of a firm shall be forth with notified by the Contractor to Engineer-in-Charge for his information.

### **6. DISPUTES**

- 1) The disputes relating to this contract, so far as they relate to any of the following matters, whether such disputes arise during the progress of the work or after the completion or abandonment thereof, shall be as per the provisions of The Arbitration and Conciliation Act, 1996, along with its rules, as amended from time to time.
- 2) Subject to the jurisdiction of the court at Ahmedabad, Gujarat
- 3) The provision of Arbitration Act., Shall in so far as they are in consistent with the provision of this act. cease of to apply to any dispute arising from a works contract and all arbitration proceeding in relation to such dispute before an arbitrator, court of authority shall stand transferred to the tribunal.
- 4) The awards declared by the arbitrator should be speaking award, giving reasons and calculations for every item of claims. The decision will have to be implemented by all the departments of the State Government and Public sector Enterprises of Gujarat. (Resolution F.D. No. PB/1088/735/KT/Sachivalaya Gandhinagar dated 5<sup>th</sup> October 1988)
- 5) In case of dispute leading to the contractor or Government of Gujarat approaching on Court of Law. It shall be within those jurisdictions the site of work is situated.

### **7. ARBITRATION**

**The reference to arbitration proceeding under this clause shall not:**

- i. affect the right of the Engineer-in-charge under clause 5 to take possession of all or any tools, plant, materials and stores in or upon the works of site thereof belonging to the contractor of procured by him and intended to be used for the execution of the work or any part thereof.

- ii. Preclude the Engineer-in-charge from utilising the materials purchased by the contractor in any work or from removing such materials to other places, during the period the work is stopped or suspended in pursuance of notice given to the contractor under clause 15.
- iii. Entitle the contractor to stop the progress of the work or the carrying out the additional or altered work in accordance with the provisions of clause 14 or as the case may be, of clause 33.

## **8. WORKER'S COMPENSATION**

**Compensation under the Workmen's Compensation Act:** The Contractor shall be responsible for and shall pay any compensation to his workman payable under the Workmen's Compensation Act, 1923 (VIII of 1923) here in after called the said Act for injuries caused to the workmen. If such compensation is paid by Government as principal under subsection (i) of section 12 of the said Act. On behalf of the contractor, it shall be recoverable by the Government from the Contractor under sub-section (2) of the said section. Such compensation shall be recovered in the manner laid down in clause 1 above.

## **9. EXPENSES OF PROVIDING MEDICAL AID**

The Contractor shall be responsible for and shall pay the expenses of providing medical aid to any workmen who may suffer a bodily injury as a result of an accident. If such Expenses are incurred by Government, the same shall be recoverable from the Contractor forthwith and be deducted, without prejudice to any other remedy of Government, from any amount due or that may become due to the Contractor.

## **10. SAFETY**

The Contractor shall provide all necessary personal safety equipment and first-aid apparatus available for the use of the persons employed on the site and shall maintain the same in suitable condition for immediate use at any time and shall comply with the following regulations in connection therewith:

- (a) The workers shall be required to use the equipment so provided by the Contractor and the Contractor shall take adequate steps to ensure proper use of the equipment by those concerned
- (b) When work is carried out in proximity to any place where there is a risk of drawing, all necessary steps shall be taken for the prompt rescue of any person in danger.
- (c) Adequate provision shall be made for prompt first-aid treatment of all injuries likely to be sustained during the course of the work.

### **10.1 EMERGENCIES**

In the event of an emergency endangering life or property, the Contractor shall immediately take action as may be necessary to prevent, avoid or mitigate injury, damage or loss and shall, as soon as possible, report any such incidents, including his response thereto to the Employer.

### **10.2 CONTRACTOR ACTION:**

The Contractor shall utilize his personnel to take such action as may be necessary in accordance with Good Operating Practices in the event of an emergency. Notwithstanding anything to the contrary herein, the Contractor may incur any expenditure or take any other operating actions as the Contractor deems to be necessary (in accordance with Good operating practices) in the case of emergencies affecting the Facilities or the operation of the Facilities to counteract the effects where the Contractor considers immediate action is required to safeguard lives or property. In case

such emergency was caused due to an Employer's Risk then the Employer shall reimburse such reasonable expenses that might have been incurred by the Contractor in relation thereto acting in accordance with Good Industry Practices.

#### **10.2NOTIFICATION:**

10.2.1 In the event of an emergency the Contractor shall forthwith notify the Employer of the emergency, the expenditures made, and the operating actions taken.

10.2.2 If the Employer considers that an emergency has arisen in relation to the Facilities, the Employer may give written notice to the Contractor specifying the nature of the emergency which it has identified and the manner in which it requests such emergency to be rectified. The Contractor shall rectify such defect with all due diligence. If such emergency is on account of an Employer's Risk, then the Contractor shall be reimbursed all costs and expenses reasonably incurred by the Contractor for any actions taken by it pursuant to such direction or notice. If the Contractor fails to comply with such direction or notice promptly, the Employer shall be entitled to procure that it or any third party takes such actions as may be necessary to remedy such breach by the Contractor. Any costs that may be incurred by the Employer in this regard shall be reimbursed to him in full by the Contractor and shall be a debt due to him from the Contractor.

#### **11. MINIMUM AGE**

**Minimum age of person employed:** No Contractor shall employ any person who is under the age of 15 years.

#### **12. FAIR WAGES TO LABOURER**

If a Contractor fails to pay within "7" (seven) days to the labourer (s)worker(s) the minimum wages prescribed by the Government under the Minimum Wages Act. 1948 as in force from time to time, the Engineer-in-charge shall be at liberty to deduct the amount payable to the labourer(s) worker(s) from his (Contractor's) bills or deposit(s)payable by the Contractor after making due inquiries and establishing the claims) of the labourer(s)worker(s). The Contractor shall not be entitled to any payment or compensation on account of any loss that the Contractor may have to incur on account of the action as aforesaid. Before the action as aforesaid, is enforced, a notice in writing to the Contractor shall be issued by the Engineer-in-charge to pay the wages as per Minimum Wages Act in force at the relevant time. If Contractor does not act as aforesaid within seven days, then the action contemplated as above shall be taken against him.

The Contractor shall not show any discrimination between Harijan and other class of labourers/workers employed to carry out the Government work.

#### **13. LIABILITY OF CONTRACTOR IN CASE OF ACCIDENTS, PERSONNEL INJURY OR FATALITY**

The contractor shall be responsible for and shall pay compensation to his workman payable under the Workmen's Compensation Act. 1923(VIII of 1923) here in after called the said Act) for injuries caused to the workmen. If such compensation is paid by Government as principal under sub-section 12(1) of the said Act on behalf of the Contractor, it shall be recoverable by Government from the contractor under sub-section12(2) of the said section.

The contractor shall be responsible for and shall pay the expenses of providing medical aid to any workmen who may suffer a bodily injury as a result of an accident. If such expenses are incurred by Government, the same shall be recoverable from the contractor for with and be deducted, without prejudice to any other remedy of Government from amount due or that may become due to the contractor.

Responsibilities and liabilities of the contractor under Workmen's Compensation Act in addition to the above, shall also include the following:

- a) On the occurrence of an accident, which results, in death of workmen employed by the Contractor or which is as serious as is likely to result in death of any such workmen, the Contractor, shall within 24 hours of happening of such accident(s) intimate, in writing, to the Engineer-in-charge the fact of such accident(s). The Contractor shall indemnify Government against all loss or damage sustained by the Government's failure to give notice under the Workmen's Compensation Act or otherwise to conform to the provisions of the said Act in regard to such accident(s).
- b) In the case of an accident, in respect of which compensation may become payable under Workmen's Compensation Act, Whether by the Contractor or by the Government as principal Employer, it shall be lawful for the Engineer-in-charge to retain out of money due and payable to the contractor, such sum or sum of money as may, in the opinion of the Engineer-in-charge be sufficient to meet such a liability. The opinion of the Engineer-in-charge shall be final in regard to all matters arising under this clause.

#### **14. INSURANCE:**

The contractor shall be responsible to arrange for insurance of all labourers, skilled and unskilled, workers supervisors etc., employed by him as per labour regulations of the State.

##### **14.1 GENERAL CONDITIONS:**

- 14.1.1 Without limiting the Contractor's obligations, responsibilities and liabilities under these Conditions, the Contractor shall be required to provide and maintain in full force and effect, at his expense the insurance coverages specified in Annexure VIII throughout the O&M Period. Any deductibles on the insurance shall be to the account of the Contractor.
- 14.1.2 Maintenance of insurance shall not relieve the obligation of the Contractor to remedy or repair any damage to the Facility in case such damage is caused due to the fraud, negligence, wilful misconduct or breach of any obligations of the Contractor under these Conditions (including failure to perform the O & M Services in accordance with Good Operating Practices) at the Contractor's cost promptly and regardless of the extent of settlement of claims by the underwriters or the time taken for settlement of claims. Any amounts not insured or not recovered from the insurers shall be borne by the Contractor to the extent any such liability or damage is caused due to any breach of any obligations of these Conditions (including failure of the Contractor to perform the O & M Services in accordance with the Good Operating Practices) by the Contractor or any wilful misconduct, negligence on the part of the Contractor.
- 14.1.3 The terms of the Insurance shall be approved by the Employer.
- 14.1.4 The Contractor within the 14 days from work order shall submit to the Employer evidence that the insurances required under Annexure VII of these Conditions has been obtained as approved by the Employer.
- 14.1.5 The Contractor shall not make any alteration to the terms of any insurance without the prior approval of the Employer. If the Contractor fails to effect and keep in force any of the insurance it is required to effect and maintain under these Conditions, or fails to provide satisfactory evidence and copies of policies in accordance with this Sub-Clause, the Employer may effect insurance for the relevant coverage and pay the premiums due and may claim the same from the Contractor.
- 14.1.6 The insurances
  - a) shall be in the name of the Employer and the Employer shall be the sole loss payee,

- b) shall be extended to cover liability for all loss and damage to the Employer's property arising out of the Contractor's performance of his obligations or failure to do so under these Conditions and any fraud, gross negligence or wilful misconduct on his part, and

**If the Contractor fails to effect and keep in force insurance which is required to be maintained under these Conditions, and the Employer neither approves the omission nor effects insurance for the coverage relevant to this default, any moneys which would have been recoverable pursuant to such insurance shall be paid by the Contractor.**

14.1.7 The insurance shall cover all the electrical items, mechanical items, Instrumentation & automation items, all civil works, Storage structures etc. The insurance for the work of transmission main is optional. Since the responsibility of safety of all work lies with contractor, contractor may prefer to take the insurance of optional item also if deemed fit.

14.1.8 The natural calamity & fire etc. (standard perils) insurance shall be limited to Electrical & Mechanical equipment / assets of the pumping station installed indoor and / or outdoor. The beneficiary shall be GWSSB on A/c of bidder and "Standard Workman Compensation Policy" of manpower engaged for the work by the bidder should be on Account of the bidder c/o GWSSB. In short the bidder has to take adequate insurance cover for electro mechanical equipment (value shall not be less than estimated and / or accepted value) and man power engaged for O & M work as per rates / monthly amount as per prevailing minimum wages act without fail. It would be contractor's sole responsibility to see that insurance policies are bought & renewed in time. Failure to comply with this condition the contractor shall be entirely responsible for any litigation & financial liabilities.

## **15. CONTRACT LABOUR LICENCE**

Before starting the work the contractor will have to obtain the licence from the District Assistant Commissioner under the Contract Labour (Regulation and Abolition) Gujarat Rules 1972 after paying necessary fees and deposit on the basis of the number of labourers to be employed on the work and will have to supply two true copies of the said licence to the Deputy Engineer before the work is state.

### **15.1 COMMENCEMENT AND DURATION OF O & M CONTRACT:**

15.1.1 The O & M Period shall commence from the date of issue of work order and shall continue for a period of 5 years there from.

### **15.2 APPLICABLE LAW:**

15.2.1 The Contractor shall comply with all Applicable Law relevant to the Contractor's Personnel, including Applicable Law relating to their employment, health, safety, welfare, immigration and emigration, and shall allow them all their legal rights.

15.2.2 The Contractor shall require his employees to obey all Applicable Laws, including those concerning safety at work.

15.2.3 In the event Employer becomes liable to any Employers Personnel, any governmental authority (including but not limited to any fines or penalties levied by or payable to such authority) or any other third party under the provisions of any Applicable Law resulting from Contractor's failure to comply with such Applicable Law, Contractor shall reimburse Employer for all payments required to be made by Employer to such Employers Personnel, governmental authority or any other third party, plus the actual expenses that Employer may incur in investigating, settling or defending any litigation or threatened litigation.



## **16. PAYMENT:**

### **16.1BILLS TO BE SUBMITTED MONTHLY**

A bill shall be submitted by the contractor each month on or before the date fixed by the Engineer-in-charge for all Operation and Maintenance works executed in the previous month and Engineer-in-charge shall take cause to be taken the requisite measurement for the purpose of having the same verified and the claim, so far as it is admissible, shall be adjusted, if possible, within ten days from the presentation of the bill,. If the contractor does not submit the bill within the time fixed as aforesaid, the Engineer-in-charge may depute a subordinate to measure up the said work in the presence of the contractor or his duly authorized agent whose countersignature to the measurement list shall be sufficient warrant and the Engineer-in-charge may prepare a bill from such list which shall be binding on the contractor all respects. Delayed submission of bills will attract penalty.

The contractor shall submit all the bills on the printed forms to be had on application at the office of the Engineer-in-charge. The charges to be made in the bills shall always be entered at the rates specified in the agreement or at the partly reduced rates subject to the approval by the Engineer-in-charge. In the case of Items not completed/executed as per agreements or in the case of any extra work ordered in pursuance of these conditions and not mentioned or provided for in the tender, at the rate here in after provided for such work.

### **16.2RETENTION MONEY**

**5% (five)** of the lumpsum fees shall be held back from each payment, as **Retention money** as per Clause 1 of General Conditions of Contract.

### **16.3RATES TO BE EXCLUSIVE OF GST BUT INCLUSIVE OF ALL OTHER TAXES**

The rates to be quoted by the Contractor must be exclusive of GST but inclusive of all other taxes. GST should be paid extra on the admissible payment as per the approved tender rates and condition of price variation; GST should be paid as per prevailing rates at the time of payment.

## **17. INCOME TAX**

Deduction will be made at source on the contractor's bill towards Income tax by the employers as per prevailing rules of the Income tax authority.

## **18. BUILDING AND OTHER CONSTRUCTION WORKS WELFARE CESS (LABOUR CESS)**

As per Building and other construction works welfare cess act and the provision under Rule No.5 of the rules of 1998 of Gujarat State, the 1% cess shall be recovered from the running account bill of the contractor.

## **19. FORCE MAJEURE**

In this Clause, "Force Majeure" means an event or circumstance, which materially and adversely affects the ability of the affected Party to perform its obligations.

- i. Which is beyond a Party's control,
- ii. which such Party could not reasonably have provided against before entering into the O & M part of Contract;
- iii. which, having arisen, such Party could not reasonably have avoided or overcome, and
- iv. which is not attributable to the other Party, Force Majeure may include, but is not limited to, exceptional events or circumstances of the kind listed below, so long as conditions (a) to (d) above are satisfied:
- v. war, hostilities (whether war be declared or not), invasion, act of foreign enemies)

- vi. rebellion, terrorism, revolution, insurrection, military or usurped power, or civil war,
- vii. riot, commotion, disorder, strike or lockout by persons other than the Contractor's Personnel and other employees of the Contractor;
- viii. As result of war, explosive materials, harmful radiation or contamination by radioactivity, except as may be attributable to the Contractor's use of such munitions, explosives, radiation or radio- activity, and
- ix. Natural catastrophes such as earthquake, hurricane, typhoon or volcanic activity. Heavy rainfall, cyclone, strike and lockout.

#### **19.1 NOTICE OF FORCE MAJEURE**

- 19.1.1 If a Party is or will be prevented from performing any of its obligations under these Conditions by Force Majeure, then it shall give notice to the other Party of the event or circumstances constituting Force Majeure and shall specify the obligations, the performance of which is or will be prevented. The notice shall be given within 7 days after the Party became aware, or should have become aware, of the relevant event or circumstance constituting Force Majeure.
- 19.1.2 The Party shall, having given notice, be excused performance of such obligations for so long as such Force Majeure prevents it from performing them.
- 19.1.3 Notwithstanding any other provision of this Clause, Force Majeure shall not apply to obligations of either Party to make payments to the other Party under the Contract.

#### **19.2 DUTY TO MINIMIZE DELAY:**

- 19.2.1 Each Party shall at all times use all reasonable endeavours to minimize any delay in the performance of the Contract as a result of Force Majeure.
- 19.2.2 A Party shall give notice to the other Party when it ceases to be affected by the Force Majeure.
- 19.2.3 Notwithstanding anything else herein contained the Employer may terminate the O & M Contract if the Force Majeure event continues for more than a period of 90 days.

### **20. TERMINATION**

Termination shall mean the termination of the O&M Contract by the Employer or the Contractor in accordance with this clause 18.

#### **20.1 TERMINATION BY EMPLOYER**

The Employer may terminate the O & M Contract by a notice on:

- i. the dissolution or insolvency of the Contractor, pursuant to an order of a court or the bankruptcy of the Contractor; or;
- ii. if 30 days having passed since the Contractor is in material breach of his obligations under these Conditions, or
- iii. if the Contractor ceases to carry on its business; or
- iv. abandonment; or
- v. The subsisting Force Majeure event as provided in Clause 17.2.3 above or
- vi. If the Employer comes to the decision that the contractor's performance in providing O & M services is not up to the desired level and satisfactory & if the contractor does not materially improve the standard (s) of services offered & result in disruption in water supply of the system, the Employer may discontinue the contract after a performance review at the end of one year. The decision of the competent authority of the Employer shall be final & binding to the contractor (s);



- vii. If the contractor is in breach of the termination conditions mentioned in the penalties section.
- viii. Notwithstanding anything stated hereinabove, the Authority may terminate this Agreement for convenience. The termination shall take effect 30 (thirty) days from the date of notice provided to the Contractor.

## **20.2 Foreclosure by the authority**

- 20.2.1 Without prejudice to any provision of this Agreement, the Authority may foreclose this Agreement in circumstances which does not constitute either party's default without any liability or consequential future liability for either party.
- 20.2.2 Should the authority intend to foreclose this Agreement, the authority shall issue a notice to the contractor, giving at least 30 days' time and informing the intention of authority to cause foreclosure.
- 20.2.3 Any attempt or endeavour for foreclosure shall not stop either of the Parties from discharging their contractual obligations under this Agreement till foreclosure date.
- 20.2.4 For the avoidance of doubt, it is clarified that such foreclosure will be without prejudice to the Contractor and shall not affect the Contractor in any way if it wishes to bid in future projects of the Authority

## **20.3 PAYMENTS UPON TERMINATION**

- 20.3.1 In case, the entire contract is terminated, for default by the contractor, the amount of security deposit and performance bond if any together with the value of the work done but not paid for, shall stand forfeited to the Government.
- 20.3.2 For default by the contractor, registration of the contractor shall be kept in abeyance for three years from the date as fixed in all such cases.
- 20.3.3 Termination of the contract in whole shall be an adequate authority for the Engineer in charge to demand discharge of the obligations from the guarantors of the security for the performance
- 20.3.4 Upon termination or as soon as practicable thereafter an account shall be taken of the net amount owing from the Employer to the Contractor or from the Contractor to the Employer (as the case may be). The Employer shall forthwith pay to the Contractor (if the balance is due to the Contractor) all moneys due to the Contractor. If the account shows a balance due to the Employer from the Contractor, the Contractor shall forthwith pay any such balance to the Employer.

## **20.4 SUCCESSOR TO THE CONTRACTOR UPON TERMINATION**

- 20.4.1 The Contractor shall use all endeavours to facilitate the appointment and commencement of duties of any person to be appointed by the Employer to operate and maintain the facilities (the "Successor Contractor") so as not to disrupt the normal Operation & Maintenance of the facilities and shall provide full access to the Facilities and to all relevant information, data and records relating thereto by the Successor Contractor and its representatives and accede to all reasonable requests made by such persons in connection with preparing for taking over the Operation & Maintenance of the Facilities;
- 20.4.2 Promptly after Termination, the Contractor, shall deliver to (and shall, with effect from Termination, hold on trust for and to the order of) the Employer or (if so required by the Employer by written notice) to the Successor Contractor all property in its possession or under its control owned by the Employer or leased or licensed to the Employer;

- 20.4.3 The Contractor shall transfer to the Successor Contractor, as from the date of Termination, its rights as the Contractor under all contracts entered into by it in the performance of its obligations under these Conditions or relating to the Operation & Maintenance of the Facilities. Pending such transfer, the Contractor shall hold its rights and interests there under for the account and to the order of the Successor Contractor.
- 20.4.4 The Employer shall be reimbursed any cost and expenses incurred by the Employer due to default of the Contractor in discharging its obligations under this Clause [18].
- 20.4.5 The Contractor shall, upon Termination of the O&M part of Contract, co-operate with the Employer and the Successor Contractor and comply with all reasonable requests thereof, including the execution of documents etc.
- 20.4.6 Upon Termination of the O&M Contract on expiry of the terms of the O&M Contract, the Parties agree that:-
- i. The Contractor will use reasonable efforts to ensure a transition to the next Contractor that will avoid operating difficulties for the Facilities.
  - ii. Notwithstanding anything else herein contained the Employer shall be entitled to terminate the O & M Contract, at any time at the Employer's convenience, by giving notice of such termination to the Contractor. The termination shall take effect 30 days after issuance of the notice of termination.
  - iii. On the expiry of the O & M Contract or Termination of the O & M Contract, all the installations, works and equipment placed under the Contractor's responsibility shall be handed over to the Employer, at no cost, in good working order, except for normal wear and tear. The Employer may perform any inspections; tests or expert appraisals he shall consider necessary with a view to checking that the property is in good working order. The Contractor shall also hand over any unutilized spares, consumables etc. Purchased for the Facilities.
- 20.4.7 Vacate and handover the Site within 30 (thirty) days of contract termination

## **20.5 SURVIVAL OF RIGHTS**

Notwithstanding anything to the contrary contained in this Agreement, Termination owing to foreclosure by Authority, shall be without prejudice to the accrued rights of either Party including its right to claim and recover money damages, insurance proceeds, security deposits, and other rights and remedies, which it may have in law or Agreement. All rights and obligations of either Party under this Agreement, including Termination Payments, shall survive the Termination to the extent such survival is necessary for giving effect to such rights and obligations.

## **21. RISK & COST**

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

- 21.1.1 If the Contractor having been given by the Engineer-in-charge, a notice in writing to rectify, reconstruct or replace any defective work or that the work is being performed in any inefficient or otherwise improper or un-workman like manner shall omit to comply with the requirements of such notice for a period of seven days, thereafter, or if the Contractor shall

delay or suspend the execution of the work so that either in the judgment of the Engineer-in-charge (which shall be final and binding) he will be unable to secure completion of the work by the date for completion or he has already failed to complete the work by that date,

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

21.1.3 If the contractor commits breach of any of the terms and conditions of this Contract,

21.1.4 If the contractor commits any acts in violation of the contract conditions. When the Contractor has made himself liable for action under any of the cases aforesaid, the Engineer-in charge on behalf of the Governor of Gujarat shall have powers: -

- a. To determine or rescind the contract, as aforesaid (of which determination or rescission notice in writing to the Contractor under the hand of the Engineer-in- charge shall be conclusive evidence), upon such determination or rescission, the earnest money, full security deposit of the contract shall be liable to be forfeited and shall be absolutely at the disposal of Government.
- b. To employ labour paid by the Department and to supply materials to carry out the work or any part of the work, debiting the Contractor with the cost of the labour and the price of the materials (of the amount of which cost and price certified by the Engineer-in-charge shall be final and conclusive against the contractor) and crediting him with the value of the work done in all respects in the same manner and at the same rates, as if it had been carried out by the Contractor under the terms of this Contract. The certificate of the Engineer-in-charge, as to the value of the work done, shall be final and conclusive evidence against the Contractor provided always that action under the sub-clause shall only be taken after giving notice in writing to the Contractor. Provided also that; if the expenses incurred by the Department are less than the amount payable to the Contractor at his agreement rates, the difference shall not be paid to the Contractor.
- c. After giving notice to the contractor to measure up the work of the contractor and to take such part thereof, as shall be unexecuted out of his hands, and to give it to another contractor to complete, in which case any expenses which may be incurred in excess of the sum which would have been paid to the original contractor, if the whole work had been executed by him (of the amount of which excess, the certificate in writing of the Engineer-in-charge shall be final and conclusive) shall be borne and paid by the original Contractor and may be deducted from any money due to him by Government under this contract or on any other account whatsoever, or from his Earnest Money, Security Deposit, Enlistment Security or the proceeds of sales thereof, or a sufficient part thereof, as the case may be. In the event of any one or more of the above courses being adopted by the Engineer-in-charge, the Contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials or entered into any engagements or made any advances on account or with a view to the execution of the work or the performance of contract. And, in case action is taken under any of provisions aforesaid, the Contractor shall not be entitled to recover or be paid, any sum for any work thereof or actually performed under this contract unless and until the Engineer-in-charge has certified, in writing, the performance of such work and the value payable in respect thereof, and he shall only be entitled to be paid the value so certified. No interest shall be payable to the Contractor on any payment due or awarded by any authority.

## **22. RECOVERY FROM CONTRACTORS**

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

- a. Appropriating, in part or whole of the Performance Guarantee and/or Security Deposit and / or any sums payable under the contract to the contractor.
- b. If the amount recovered in accordance with (a) above is not sufficient, the balance sum may be recovered from any payment due to the contractor under any other contract of the department, including the securities which become due for release.

The department shall, further have an additional right to effect recoveries as arrears of land revenue under the Gujarat Land Revenue Code.

## **23. INSPECTION**

### **23.1 GENERAL PROVISIONS**

23.1.1 The Employer may check the operation of the Facilities or designate an organization of his choice to carry out inspections regularly. The Employer or the organization appointed by him shall check that the Contractor is performing the tasks for which he is responsible with due diligence. The Contractor shall at his cost provide all the assistance the Employer requires to complete these inspections.

23.1.2 Before any inspection, the Employer shall give prior notice to the Contractor, indicating the name(s) of the person(s) empowered to carry out such inspection in the name of the Employer.

### **23.2 MEASUREMENT & ANALYSIS**

23.2.1 The Employer has the right to perform any analysis or inspection he deems necessary. Before any inspection, the Employer shall give a prior written notice to the Contractor.

23.2.2 The water quantity, for any such test, analysis or inspection shall be measured by flow-meters installed at the Facility, which are acceptable to the Employer.

23.2.3 The flow-meters shall be inspected and certified upon their availability by the Employer and the Contractor. Thereafter, the said meters shall be tested and their accuracy verified once in every six (6) months by the Employer and the Contractor. After each inspection, the flow-meters shall both be sealed in the presence of representatives of the Employer and the Contractor in a manner that is adequate to prevent the tampering of said meters by any person.

23.2.4 The Contractor shall be responsible for the security and protection of flow-meters at the designated point. If there is any malfunctioning of the meters, it should be repaired at the Contractor's cost.

## **CONDITIONS APPLICABLE FOR PART C**

### **(CLAUSE-1) Security Deposit:**

Within ten days from the date of issue of the letter accepting his Tender, the successful Bidder shall furnish the required Security Deposit for performance and attend the office of the Engineer In-Charge for execution of the Contract documents. If he fails to furnish the Security Deposit for performance or to execute the Contract for the work offered to him, his EMD shall be forfeited and the Bidder may be disqualified from tendering for further works.

The successful bidder shall have to pay initial performance security deposit in the form of an unequivocal bank guarantee equivalent to 5.00% of the contract value issued by any nationalized bank or as per list mentioned in GR of .Finance Department, GR.No: EMD/04/2023/0057/DMO Date: 21.04.2023 (Enclosed), Further amount equivalent to 5.00% shall be deducted from the running bill as retention money so that total performance security deposit turns out to be 10.00% of the contract value.

The contractor will be permitted to give an unequivocal composite bank guarantee from any nationalized bank or as per list mentioned in GR of. Finance Department, ,GR.No: EMD/04/2023/0057/DMO Date: 21.04.2023 (Enclosed), to cover the performance security and the retention money. In case if the contractor does not give a composite bank guarantee, and if he so desires, the employer shall allow conversion of the money recovered from running bills towards retention money into an unequivocal bank guarantee from any nationalized bank or as per list mentioned in GR of. Finance Department, , GR.No: EMD/04/2023/0057/DMO Date: 21.04.2023 Without limitation to the provisions of the preceding paragraph, whenever the Employer's representative determines an addition to the Contract price as a result of a change in cost and/or legislation or as a result of variation amounting to more than 25 percent of the portion of the Contract Price payable in a specific currency, the Contractor, at the Employer's representative's written request, shall promptly increase the value of the performance security in that currency by an equal percentage.

The successful bidder shall have to pay performance security deposit for O&M works in the form of an unequivocal bank guarantee equivalent to 10% of the O&M contract value issued by any nationalized bank.

The performance security for the works shall be valid beyond 30 days from the date of issue of the Taking-over-certificate at the end of defect liability period and performance security for the O&M works shall be valid 30 days beyond the date of completion of the O&M period.

5% performance security and 5 % retention money recovered from each running bills till successful completion of the work (Total 10 % of contract value) shall be released as mentioned below:

- (i) 50% of total security amount shall be released after 30 days from the date of successful commissioning subject to the receipt of 10% amount of the O&M contract value (Total of Schedule –C) as O&M security deposit from contractor.
- (ii) Remaining 50% of total security deposit shall be released after 30 days from the date of successful completion of the defect liability period i.e., 3 year from the date of successful completion.
- (iii) The overall security deposit for O&M works shall be limited to 10% of the O&M contract value (Total of Schedule –C) and shall be valid up to 30 days from the date of successful completion of the O&M works.
- (iv) On successful completion of O&M and settlement of all dues recoverable from contractor the 10 % SD for O&M period shall be released within 30 days from the date of successful completion of O&M works.

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

**(CLAUSE-2) Liquidated damages for delay:**

2.1 Overall Physical Progress of work :

- a) The schedule of completion of the work shall be as under:-

<b>Time</b>	<b>Percentage of work (Physical)</b>	<b>MODE OF DEDUCTION AT EACH MILE STONE</b>
25%	15%	DEPOSIT
35%	25%	DEPOSIT
50%	40%	DEPOSIT
60%	50%	DEPOSIT
75%	75%	DEPOSIT
<b>100%</b>	<b>100%</b>	<b>LD Deduction</b>

- b) However if the contractor fails to meet any of the milestone both in time (e.g. 25 % for first milestone) and corresponding Physical progress (e.g. 15 % for first milestone) as mentioned above, amount to be retained at the rate of 0.1 percentage of that milestone value per day till said designated part (s) is completed. In case, if the contractor executes and meet the subsequent milestone criteria, then the earlier retained amount shall be released. However, such retention / release for the slippage of subsequent / other milestones shall be applicable in the similar manner.

- c) However, if the contractor meets any of the next milestones of physical completion of work within the corresponding time limit as per the table above, the amount kept as deposit as per para (b) above, shall be returned to the contractor after completing that milestone.
- d) If the contractor does not complete the entire work under the scope on the date of Completion, (i.e., 100% of the physical progress at the end of 100% of the time of completion), Liquidated damages at the rate of 0.1% of contract value per day of delay shall be recovered from the contractor. In such case, the amount retained as deposit shall be converted into liquidated damages.

1.1 In case the time limit for completing the work is extended under any circumstances by GWSSB the milestone for completing the works will get changed according to the table as specified in Clause (a) above. Subsequently in event of any amount deposited as per Clause (b) above shall be released to the contractor. But in case, the work is not completed within the extended time limit and no further time extension to be granted, the liquidated damages shall be payable as 0.1% of the total contract value per day subjected to the maximum amount of 10% of the total contract value.

## 2.2 Pipeline Crossing Works :

- a) The contractor must complete the pipeline crossing works requiring permissions of following authorities, within stipulated time limit as mention below. The contractor is required to plan and frame his project execution schedule accordingly.

NO.	AUTHORITY	TIME LIMIT IN MONTHS
a.	Railway	6 months from the date of receiving the work permit or 2 months from the date of receiving caution order from Railway or 6 months from the date of issue of LOI, whichever is later (While calculating the total time limit for completion of the structures of Railway, the relevant rules of the railway authority should also be taken into account.)
b.	National Highway	6 months from the date of receiving the permission from Concerned Authority or from the date of issue of LOI, whichever is later
c.	State Highway	6 months from the date of receiving the permission from Concerned Authority or from the date of issue of LOI, whichever is later



d.	Major Crossing Canal	6 months from the date of receiving the permission from Concerned Authority or from the date of issue of LOI, whichever is later
e.	Minor Crossing Canal	3 months from the date of receiving the permission from Concerned Authority or from the date of issue of LOI, whichever is later
f.	Gas / Oil / Petroleum Pipeline	6 months from the date of receiving the permission from Concerned Authority or from the date of issue of LOI, whichever is later
g.	Forest	6 months from the date of receiving the permission from Concerned Authority.

- b) If contractor fails to execute the works as in (a) above within stipulated time limit as mention above, he shall attract compensation at 0.1% cost of respective work per day of delay, calculated on the basis of BOQ, and it will have cumulative effect till the actual date of completion of the delayed work. The compensation recovered under this clause will be of permanent nature and will remain non-refundable under any circumstances.

### 2.3 Supply of Pipes :

- a) The contractor shall pay specific attention to timely supply of pipes under the project. The contractor is bound to supply pipes as per the specification laid within the time period stipulated in work plan approved by EIC. For ensuring the same, the contractor has to upfront declare at the time of bidding, their method of procurement of pipes i.e. (i) Through cash (if yes, this has to be reflected in their cash flow / fund flow plan to be submitted by contractor within one month from the date of signing of contract agreement) (ii) Through credit (iii) Through Letter of Credit (LOC); etc. In case of LOC, the contractor will enter into/ open LOC with the approved vendor within one month from the date of approval of QAP of pipes matching with delivery schedule. The maximum ceiling for number of times for opening of LOC is four, however the date of opening of last LOC with approved vendor for supply of pipes will be 4 months prior to stipulated end date for supply of pipes as per approved work plan.
- b) The event of non-supply of pipes, as per approved work plan / delivery schedule shall attract compensation at the rate 0.25% of cost of pipes, calculated on the basis of BOQ, to be supplied per month, per day of delay and will be having cumulative effect till the date of actual supply of pipe. The compensation levied under this clause shall be of permanent nature and is non-refundable under any circumstances. However, the maximum ceiling limit



of 10% of Contract Price as specified above shall also apply to liquidate damage deducted under this clause.

#### 2.4 Deleted

2.5 The aggregate maximum amount of liquidated damages recoverable under this Clause-2 "LIQUIDATED DAMAGES "shall be subject to ten percent of the total estimated contract value or contract amount whichever is high.

2.6 The reasons requiring recovery of liquidate damages of ten percent of the contract value for performance shall be sufficient cause for termination of contract and for forfeiture of security deposit including amount of performance bond/security and registration of the contractor shall also be kept in abeyance for three years from the date as fixed in all cases.

#### **(CLAUSE-3) Default by Contractor:**

If the Contractor shall neglect or fail to proceed with the work with due diligence or if he violates any of the provision of the Contract, the Engineer -in-Charge shall give the Contractor a notice, identifying deficiencies in performance and demanding corrective action, Such notice shall clearly state that it is given under the provision of this clause. After service of such notice, the contractor shall not remove any plant; equipment and material from the site. The Government shall have a lien on all such plant; equipment and material from the date of such notice till the, said deficiencies have been corrected as mentioned in the said notice.

If the contractor fails to take satisfactory corrective action within ten day after receipt of such notice, the Engineer In-charge on behalf of Governor of Gujarat shall terminate the contract in whole. In case, the entire contract is terminated, the amount of security deposit and performance bond if any together with the value of the work done but not paid for, shall stand forfeited to the Government. The plants, equipment and materials, held under this clause shall then be at the disposal of the Government to recover the amount equivalent to the liquidated damages and registration of the contractor shall be kept in abeyance for three years from the date as fixed in all such cases.

The Engineer In-charge if necessary shall direct that a part of the whole of such plant, equipment and material be removed from the site within a stipulated period, if the Contractor fails to do so, the Engineer- in-charge shall cause them or any part of them to be sold holding the net proceeds of such sale to the credit of the Contractor. After settlement of accounts, the lien by the Government of the contractor's remaining plant equipment and balances of materials shall be released.

Termination of the contract in whole shall be an adequate authority for the Engineer In-charge to demand discharge of the obligations from the guarantors of the security for the obligations from the guarantors of the security for the performance.

**(CLAUSE-4) Actions when the progress of any particular portion of the work is unsatisfactory.**

If the progress of any particular portion of the work under Contract is unsatisfactory, the Engineer-in-charge shall, notwithstanding that the general progress of the work is satisfactory, in accordance with Clause-2 be entitled to take necessary action under Clause-3, after giving the Contractor ten days' notice in writing and the contractor shall have no claim whatsoever for any compensation for any loss caused to him due to such action.

**(CLAUSE-5) Non exercise of power under Clause-3 not a waiver.**

In any case in which any of powers conferred upon the Engineer -in-charge by Clause 3 hereof shall have become exercisable and the same shall not have been exercised, the non-exercise thereof shall not constitute a waiver of any of the conditions hereof and such powers shall notwithstanding be exercisable at any future date.

**(CLASE-5A) Powers to seize tools, plants, machineries, materials and stores of the contractor on invocation of clause 3**

In the event of the Engineer- in charge taking action under clause 3, he may, if so desire, take possession of all or any tools, plants, machineries, materials and store in or upon the work or the site thereof or belonging to the contractor or procured by him and intended to be used for upon the work of the site thereof or belonging to the contractor or procured by him and intended to be used for the execution of the work or any part thereof, by paying or allowing for the same in account at the contract rate or in case of contract rates not being applicable at such reasonable rates, as may be comparable to current market rates where ascertainable of similar articles and comparable condition, to be certified by the Engineer-in-charge. In the alternative the alternative the Engineer-in-charge may by notice in writing to the contractor or his clerk of the works foreman or other authorized agent require him to remove such tools, plants, machineries, materials or store form the premises within a time to be specified in such notice and in the event of the contractor failing to comply with any such requisition, the Engineer- in- charge may remove them at the contractor's expense or shall remove them by auction or private sale at the risk and cost of the contractor in all respects, and the certificate of the Engineer-in -charge as to the expenses of any such removal and the amount of the proceeds and expenses of any such removal shall be final and conclusive against the contractor.

**(CLASE-6 ): Extension of time limit: -**

If the contractor shall desire an extension of the time for completion of the work on the ground of his having been unavoidably hindered in its execution or any other ground he shall apply in writing to the Engineer -in- charge before the expiration of the period stipulated in the tender or before the expiration of 30 days from the date on which he was hindered whichever is earlier and the Engineer-in-charge may, if in his opinion, believe that there are reasonable grounds for granting an

extension, grant such extension, as he thinks necessary or proper. The decision of the competent authority of GWSSB in this matter shall be final.

**(CLASE-7 ): Final measurement and final bill on completion of work:**

As soon as the work is completed, the contractor shall give a notice of such completion to the Engineer-in-charge and on receipt of such notice the Engineer-in-charge shall inspect the work and if he is satisfied that the work is completed in all respects then Engineer In-charge shall take final measurements: -

No certificate of completion shall be issued not shall the work be considered to be complete till the contractor shall have removed from the premises, on which the work has been executed, all scaffoldings, sheds and surplus materials, except such, as are required for rectification of defects; rubbish and all huts and sanitary arrangements required for his workmen on the site in connection with the execution of the work, as shall have been erected by the contractor for the workmen and cleared all dirt from all parts of building(s) in, upon or around which the work has been executed or of which he may have possession for the purpose of the execution thereof and cleared floors, gutters and drains, cased doors and sashes, oiled locks and fastening labelled keys clearly and handed them over to the Engineer- in- charge or his representative and made the whole premises fit for immediate occupation or use to the satisfaction of the Engineer-in-charge. if the contractor shall fail to comply with any of the requirements of these conditions as aforesaid, on or before the date of completion of the works, the Engineer-in-charge may, at the expense of the contractor, fulfil such requirements and dispose of the scaffolding, or surplus materials and rubbish etc. as he thinks fit and the contractor shall have no claim in respect of any such scaffolding or surplus materials except for any sum actually released by the sale thereof less the Cost of fulfilling the requirements and any other amount that may be due from the contractor. If the expenses of fulfilling such requirements are more than the amount realised such disposal as aforesaid the contractor shall forthwith, on demand, pay such excess. The Engineer- in-charge shall also have the rights to adjust the amount of excess against any amounts that may be payable to the contractor.

**(CLAUSE-8 ): Intermediate and final payments:** No payments shall be made for any work, estimated to cost less than rupees one thousand till after the whole of the said work shall have been completed and a certificate of completion given. But in the case of works estimated to cost more than rupees one thousand, the contractor shall on submitting a monthly bill therefore, be entitled to receive payment proportionate to the part of the work then approved and passed by the Engineer- in-charge, whose certificate of such approval and passing of the sum so payable shall be final and conclusive against the contractor. All such intermediate payments shall be regarded as payments by way of advance against the final payments only on not as payments for work actually done and completed and shall not preclude the Engineer- in-charge from requiring bad, unsound, imperfect or unskilled work to be removed and taken away and reconstructed, or re-erected, nor shall any such payment be considered as an admission of the due performance of the contractor or

any part therefore in any respect or the accruing of any claims, nor shall it conclude, determine, or affect in any way the power of the Engineer-in-charge as to the final settlement and adjustment of the account or otherwise or in any other way vary or effect the contract. The final bill shall be submitted by the contractor within one month of the completion of the work, otherwise the Engineer-in-charge's certificate of the measurements and of the total amount payable for the work shall be final and binding on all parties. In respect of work costing more than 50 lac amount put to tender, the final measurement shall be recorded within 75 days from the date of physical completion of work and the final bill shall be prepared within 75 days from the date of recording final measurement subject to the contractor fulfilling his obligation as provided in the tender contract and subject to the work being completed in all respects.

**(CLAUSE-9): Payment at reduced rates:**

The rates for items of works shall be valid only when the items concerned are accepted as having been completed fully in accordance with the sanctioned specifications. In cases where the items of work are accepted as not so completed, the Engineer In-charge can make payments at reduced rates, duly with justification of giving reduced rate.

**(CLAUSE-10): Bill to be submitted monthly**

A bill shall be submitted by the contractor each month on or before the date fixed by the engineer-in-charge for all works executed in the previous month and engineer-in-charge shall take or cause to be taken the requisite measurement for the purpose of having the same verified and the claim, so far as it is admissible, shall be adjusted, if possible, within ten days from the presentation of the bill. If the contractor does not submit the bill within the time fixed as aforesaid, the Engineer-in-charge may depute a subordinate to measure up the said work in the presence of the contractor or his duly authorized agent whose countersignature to the measurement list shall be sufficient warrant and the Engineer-in-charge may prepare a bill from such list which shall be binding on the contractor in all respects.

**(CLAUSE-11): Bills and rates payable**

The contractor shall submit all the bills on the printed forms at the office of the Engineer-in-charge. The charges to be made in the bills shall always be entered at the rates specified in the agreement or at the partly reduced rates subject to the approval of the Engineer-in-charge in the case of items not completed/executed as per agreements or in the case of any extra work ordered in pursuance of these conditions and not mentioned or provided for in the tender, at the rate hereinafter provided for such work.

**(CLAUSE-12): Materials to be supplied by the department**

If the specification of the work provides for the use of any special description of materials to be supplied from the Department Store or if it is required that the contractor shall use certain stores to be provided by the Engineer-in-charge (Such materials and stores and the prices to be charged therefore as hereinafter mentioned being so far as practicable for the convenience of the

contractor but not so as in any way to control the meaning or effect of this contract specified in the schedule or memorandum hereto annexed) the contractor shall be supplied with materials and stores as may be required from time to time to be used by him for the purpose of the contract only, and the value of the full quantity of materials and stores so supplied shall be set off or deducted from any sum then deposited, or the proceeds of sale thereof, if the deposit is held in govt. securities, the same or a sufficient portion thereof shall, in that case be sold for the purpose. All materials supplied to the contractor shall remain the absolute property of Govt. and shall on account be removed from the site of the work and shall at all times, be open to inspection by the Engineer-in-charge. Any such materials, unused and in perfectly good condition at the time of completion or termination of the contract, shall be returned to the Departmental store if the Engineer-in-charge so requires by a notice in Writing given under his hand, but the contractor shall not be entitled to return any such materials except with the consent in writing of the Engineer-in-charge and he shall have no claim for compensation on account of any such material except with the consent in writing of the Engineer-in-charge and he shall have no claim for compensation on account of any such material supplied to him as aforesaid but remaining unused by him or for any wastage in or damage thereto.

For materials provided in Schedule-A and consumed in excess quantities, the rates provided in Schedule A shall be increased/ decreased corresponding to the increased/ decreases in the new rate payable for excess quantity as compared to date of issue of such quantity of materials.

**(CLAUSE-12A): Consumption and return of materials supplied by the department.**

The contractor shall be entitled to use the material supplied by the Department only to the extent of quantities of such materials required for execution of the work as per theoretical calculation. The Engineer-in-charge may however, on being satisfied that a large quantity of such materials is required for the execution of the work permit the contractor to use such large quantity of the materials. Such permission shall be given in writing.

The contractor is bound to return in good condition such materials issued in excess of the requirements so worked out or in excess of the quantities so permitted to be used by the Engineer-in-charge. If the contractor fails to return such extra materials within a period of 15 days from the date of the demand in writing of such materials being made by the Engineer-in-charge, he shall be charged for the excess materials at double the issue rate for materials specified in Schedule A of contract Agreement.

**(CLAUSE-12B):-Safe custody of materials supplied by the department**

All stores and materials supplied by the department shall be in safe custody. The store shall be accessible to the Engineer-in-charge or his agent at all times, no materials shall be allowed to be removed from the site of the work and any material required for the execution of the work shall be taken out from the store only in the presence of a duly authorized agent of the Engineer-in-charge.

**(CLAUSE-13): Drawings, designs, instructions of the engineer-in-charge and specifications, order of precedence in case of discrepancies**

(1) The contractor shall execute the whole and every part of the work in the most substantial and workmen-like manner and both as regards materials and in other respects in strict accordance with specifications.

The contractor shall also conform exactly, full and faithfully to the design, drawings and instructions in writing for the work signed by the Engineer-in-charge. The design and the drawings shall be lodged in the office of the site engineer-in-charge to which the contractor shall be entitled to have access or the purpose of inspection at such office during office hours.

Where the instructions referred to above are not contained in separate letters addressed to the contractor the same shall be recorded in the work order book, which shall be maintained and kept on the site of the work. The contractor shall be required to sign such entries in the work -order book in token of having noted the instruction. However, if the contractor fails to sign the work- order book for any reason whatsoever, the entry of the instructions in the work order book shall be deemed to be the due notice to him of the said instructors. The work-order book shall be open for inspections to the contractor on the site or the work during office hours.

(2) The contractor will be entitled to receive one copy of the accepted tender along with the work order free of cost.

(3) The several documents forming the contract are essential parts of the contract and requirements' occurring in one is binding as through occurring in all. They are intended to be mutually explanatory and complimentary and to describe and provide for a complete work.

In the event of any discrepancy in the several documents forming the contract or in any one document, the following order of precedence should apply:

(a) Dimension and quantities: (i) Drawings (ii) Schedule-B of the Tender form (iii) specifications.

On drawings, figures dimensions, unless obviously incorrect, will be followed in preference to scaled dimensions.

((b) Description: (i) Schedule-B of the Tender form: (ii) Drawings (iii) specifications.

In the case of defective description or ambiguity, the Engineer-in-charge is entitled to issue further instructions directing in what manner the work is to be carried out. The contractor cannot take any advantage of any apparent error or omission in drawings or specification and the Engineer-in-charge shall be entitled to makes corrections and interpretations as necessary to fulfil the plans and specifications.

**(CLAUSE-14)Excess over Tender Quantities, Extra Items and Variations**

The Engineer-in-charge 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 instructions in this connection which may be given to him in writing signed by the Engineer-in-charge 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 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.

**(14.1) Except that when the quantity of any item exceeds the quantity as in the tender by more than 10 % the contractor will be paid for the quantity in excess of 10 % at the rate entered in the S.O.R. of the year during which the excess in quantity is first executed or tender rate whichever is less.**

(14.2) if the additional or altered work includes any class or work for work of which no rate is specified in this contract, then such class of work shall be carried out.

(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 is more than one comparable item, 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 board shall be final and binding to 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 GWSSB/R & B 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 GWSSB/R & B 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 "Schedule of 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, instead of the rate stipulated in Schedule 'A'.

(iii) If it is not possible to arrive at the rate from (i) and (ii) above, such class or 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.

(14.3) If the additional or altered work, for which no rate is entered in the "Schedule of Rates" of GWSSB 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 be intimated in writing be at liberty to cancel his order to carry out such class of work and arrange to carry 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 of 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 the proportion that the increase in the cost occasioned by alternations bears to the cost of the original contract work and the certificate of the engineer-in-charge as to such proportion shall be final and conclusive.

**(CLAUSE-15) No. Claim to any payment or compensation for alterations or for restrictions of work**

If at any time after the execution of the contract documents the Engineer-in-charge shall for any reason whatsoever, require the whole or part of the work, as specified in the tender, be stopped for any period or shall not require the whole or part of the work to be carried out at work, as specified in the tender, be stopped for any period of shall not require the whole or part of the work to be carried out at all or to be carried out by the contractor he shall give notice in writing, stating the fact to the Contractor who shall thereupon suspend or stop the work totally or partially, as the case may be. In any such case, except as provided hereunder, the Contractor shall have no claim to any payment or compensation whatsoever except as provided hereunder on account of any profit or advantage which he might have derived from the execution of the work in full but which he did not so derive in consequence of the full amount of the work not having been out, or on account of any loss that he may be put to on account of materials purchased or agreed to be purchased or unemployment of labour required by him, He shall not have also any claim for compensation by reason of any alterations having been made in the original specifications, drawings, designs and instructions which may involve any curtailment of the work as originally contemplated.

The Contractor shall not be entitled for loss of any expected profit of such work.

**(CLAUSE 16 :) Claims under the contract**

Time limit for unforeseen claims: The contractor shall not be entitled to any compensation from Government on any account unless were allowed by the conditions of this contract.



**(CLAUSE-17) Remedies for inferior or bad work, materials of workmanship and maintenance clause:**

If, at any time before the expiry of Defects Liability period as detailed in Clause 17-A. It shall appear to the Engineer-in-charge or his sub-ordinate in charge of the work that/any work has been executed unsound, imperfect or unskilled workmanship or with materials or inferior quality or that any materials or articles provided by him for the execution of the work are unsound, or of a quality inferior to that contracted for or are otherwise not in accordance with the contract, it shall be lawful for the Engineer-in-Charge to intimate this fact in writing to the contractor and then notwithstanding the fact that the work, materials or articles complained of may have been passed, certified and paid or the contractor shall be bound forthwith to rectify, or remove and reconstruct the work so specified in whole or in part as the case may require, or if so required, shall remove the materials or articles so specified in whole or in part and provide other proper and suitable materials or articles at his own charge and cost, and in the event of his failing to do so within a period to be specified by the Engineer-in-charge in the written intimation aforesaid, the contractor shall be liable to pay compensation at the rate or percent on the amount of the estimate of the rectification for every day not exceeding ten days during which the failure so continues, and in the event of any such failure as aforesaid continuing beyond ten days, the Engineer-in-charge may rectify or remove, and re-execute the work or remove and replace the materials complained of as the case may be at the risk and expense in all respects of the contractor. Should the Engineer -in-charge consider that any such inferior work or materials as described above may be accepted or made use of, it shall be within his discretion to accept the same at such reduced rates as he may fix therefore.

However, the contractor shall be responsible for normal maintenance of the work till the final bill for the work is prepared by the Departmental Officer.

**(CLAUSE-17A) Defect liability clause:**

The contractor shall be responsible to make good and remedy at his own expense any defect in works (Items) carried out by the contractor including surface worn out which may develop or may be noticed 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 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 Defect Liability Period shall be three year from the certified date of completion of work.

**(CLAUSE-18) Work to be open to inspections- Contractor or responsible agent to be present:**

All works under or in course of execution or executed in pursuance of the contract shall, at all times be open to the inspection and supervision of the Engineer-in-Charge and his subordinates and the Contractor shall, at all times during the usual working hours, and all other times for which reasonable notice of the intimation of the Engineer -in-charge or his subordinate to visit the works shall have been given to the contractor, either himself be present to receive orders and instruction or have a responsible agent duly accredited in writing present for the present for the purpose. Orders given to the contractor's duly authorized agent shall be considered to have the same force and effect as if they had been given to the contractor himself.

**Employment of a qualified site Engineer by the Contract.** As per tender document clause 3.0 of qualifying criteria

**(CLAUSE-19) Notice to be given before work is covered up:**

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

**(CLAUSE-20) Damage to contract work- in- progress and damages to surrounding properties.**

If the contractor or workmen, or servants shall break, deface, injure or destroy any part of the building or the work in question in/on which they may be working or any building, road, fence, enclosure or grass- land or cultivated ground contiguous to the premises on which the work or any part thereof is being executed or if any damage shall be done to the work from any cause whatever before damage occurred /caused due to normal flood or rain or if any imperfections become apparent in it within three months from the grant of a certificate of completion, final or otherwise by the Engineer-in-charge, the contractor shall make good the same at own expenses or in default, the Engineer-in-charge may cause the same to be made good by other contractor, and deduct the expenses (of which the certificate of the Engineer-in-charge shall be final) from any sums that may thereafter become due to the contractor or from his security deposit or the proceeds of sale thereof or a sufficient portion thereof of a sufficient portion thereof,

**(CLAUSE-20-A) Damages due to acts of God and unprecedented floods.**

Neither party shall be liable. to the other for any loss of damage occasioned by or arising out of acts of God, such as unprecedented flood, Volcanic eruption, earthquake or other convulsion of nature and other acts such as but not restricted to general strike, invasion, the acts of foreign countries, hostilities, or war like operations before or after declaration or war, rebellion, military or

Usurped power which prevent performance of the contract and which could not have been foreseen or avoided by a prudent person.

**Note:** "Unprecedented flood" means the flood crossing the High Flood Level of the past 10 year(s) which is on the available record.

(Modified Vide R.& B.D.G.R. No. TNC- TNC-1096-IB-143-(16)-C dated 11-1-99)

**(CLAUSE-21) Contractor to supply plant, ladders, Scaffolding etc. and is liable for damage arising from non- provision of lights, fencing etc:-**

The contractor shall supply at his own cost all material (except such special materials if any, as may, in accordance with the contract to be supplied from the Public Works Department Store), plant, tools, appliances, implements, ladders, cordage, tackle, scaffolding, and any temporary works which may be required for the proper execution of the work whether in the original, altered or substituted form and whether included in the specifications. or other documents forming part of the contract or referred to in these conditions of not and which may be necessary for the purpose of satisfying or complying with requirements of the Engineer-in-charge as to any matter or to which under these conditions he is entitled to be satisfied or which he is entitled to require together with carriage therefore to and from the work. The contractor shall also supply without charge the requisite number of persons with the means and materials necessary for the purpose of setting out works and counting, weighing and assisting in the measurement of examination at any time and from time to time, of the work or the materials, failing this, the same may be provided by the Engineer -in-charge at the expense of the Contractor and the expenses may be deducted from any money due to the Contractor under the contract or from his security deposit, or proceeds of sale thereof or of a sufficient portion thereof. The contractor shall provide all necessary fencing and lights required to protect the public from accident and shall also be bound to bear expenses of defences of every suit, action or other legal proceeding at law that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay any damages and costs which may be awarded in any such suit, action or proceedings to any such person, or which may, with consent of the Contractor, be paid in compromising any claim by any such person.

**(CLAUSE-21A) Regulations for scaffolds, working platforms, gangways and stairways**

The Contractor shall provide suitable scaffolds and working platforms. Gangways and stairways, and shall comply with the following regulations in connection therewith,

- (a) Suitable scaffolds shall be provided for workmen for all works that cannot be safely done from a ladder or by other means.
- (b) A scaffold shall not be constructed, taken down or substantially altered except-
  - (i) Under the supervision of a competent and responsible person.

- (ii) Appointed by contractor and by competent workers possessing adequate experience in this kind of work.
- (c) All scaffolds and appliances connected therewith and all ladders shall-
  - (i) Be of sound material
  - (ii) Be of adequate strength having regard to the loads and strains to which they will be subjected, and,
  - (iii) Be maintained proper condition.
- (d) Scaffolds shall be so constructed that on part thereof can be displaced in consequence of normal use.
- (e) Scaffolds shall not be overloaded and so far as practicable the load shall be evenly distributed.
- (f) Before installing the lifting gear on scaffolds, special precaution shall be taken to ensure the strength and stability of the scaffolds.
- (g) Scaffolds shall be periodically inspected by a competent person.
- (h) Before allowing a scaffold to be used by his workmen, the Contractor shall, whether the scaffold has been erected by his workmen or not, take steps to ensure that it complies fully with the regulation herein specified.
  - (i) Working platforms, gangways shall be so constructed that no part thereof can sag unduly or unequally.
  - (ii) Be so constructed and maintained having regard to the prevailing conditions as to reduce as far as practicable risks of persons tripping or slipping and-
  - (iii) Be kept free from any unnecessary obstruction.
- (i) In the case of working platforms, gangways working places and stairways at a height exceeding 2.00 metre (to be specified)
  - (i) Every working platform and every gangway shall be closely boarded unless other adequate measures are taken to ensure safety.
  - (ii) Every working platform, gangway, working place and stairway shall be suitably fenced.
- (k) Every opening in the floor of a building or in a working platform shall, except for the time and to the extent required to allow the access of person or the transport or shifting of materials be provided with suitable means to prevent the fall of persons or material.
- (l) When persons are employed on a roof where there is danger of falling from a height exceeding 3.00 (to be specified) meters suitable precaution shall be taken to prevent the fall of persons or material.

(m) Suitable precautions shall be taken to prevent persons being struck by articles which might fall from scaffold or other working places.

(n) Safe means of access shall be provided to all working platform and other working places.

**(CLAUSE-21B) Regulations for hoisting appliance**

The contractor shall comply with the following regulations as regards the hoisting appliances to be used by him-

(a) Hoisting Machines and tackle including their attachments, anchorages and supports shall-

(i) Be of good mechanical construction sound material and adequate strength and free from patent defect, and

(ii) Be kept in good repair and in working order.

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

(c) Hoisting machines and tackles shall be examined and adequately tested after erection on the site and before use and be re-examined in position at intervals to be prescribed by Engineer-in-charge.

(d) Every chain, ring, hook, shackle, swivel and pulley block used in hoisting or lowering materials or as a means of suspension shall be periodically examined.

(e) Every crane driver or hoisting- appliance operator shall be properly qualified.

(f) No. person who is below age of 15years shall be in control of any hoisting machine, including any scaffolds, nor shall give signals to the operator.

(g) In the case of every hoisting machine and of every chain, ring hook, shackle, swivel and pulley block used in hoisting or lowering or as a means of suspension the safe working load shall be ascertained by adequate means.

(h) Every hoisting machine and all gears referred to in preceding regulation shall be plainly marked with the safe working load.

(i) In the case of hoisting machine having a variable safe working load, each safe working load and conditions under which it is applicable shall be clearly indicated.

(j) No part of any hoisting machine or gear referred to in regulation 'g' above shall be loaded beyond the safe working load except for the purpose of testing.

(k) Motors, gears, transmissions, electric wiring and other dangerous parts of hoisting appliances shall be provided with sufficient safeguards.

(l) Hoisting appliances shall be provided with such means as will reduce to a minimum the risk of the accidental descent of the load.

- (m) Adequate precautions shall be taken to reduce to minimum the risk or any part of a suspended load becoming accidentally displaced.

(CLAUSE-22) Deleted

(CLAUSE-23) Liability of contractors for damages done in or outside work area:

Compensation for all damage done intentionally or unintentionally by Contractor's labourers whether in or beyond limits of Government property including any damages caused by the spreading of fire mentioned in the clause 22, shall be estimated by the Engineer-in-charge, or such other Officer as he may appoint and the estimates of the Engineer-in-charge, subject to the decision of the Superintending Engineer, on appeal, shall and the contractor shall be bound to pay the amount of the assessed compensation on demand, failing which the same will be recovered from the Contractor as damages in the manner prescribed in clause 1 or deducted by the Engineer-in-charge from any sums that may be due or become due from Government to the contractor under this contract or otherwise.

The Contractor shall bear the expenses of defending any action or other legal proceeding that may be brought by any person for injury sustained by him owing to neglect of precautions to prevent the spread of the fire and he shall also pay the damages and cost that may be awarded by the court in consequence.

(CLAUSE 24) Risk & Cost

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

- (i) If the Contractor having been given by the Engineer-in-charge, a notice in writing to rectify, reconstruct or replace any defective work or that the work is being performed in any inefficient or otherwise improper or un-workman like manner shall omit to comply with the requirements of such notice for a period of seven days, thereafter, or if the Contractor shall delay or suspend the execution of the work so that either in the judgment of the Engineer-in-charge (which shall be final and binding) he will be unable to secure completion of the work by the date for completion or he has already failed to complete the work by that date,
- (ii) If the Contractor, being a company, shall pass a resolution or the court shall make an order that the company shall be wound up or if a receiver or a manager, on behalf of a creditor, shall be appointed or if circumstances shall arise, which entitle the court or creditor to appoint a receiver or a manager or which entitle the court to make a winding up order,
- (iii) If the contractor commits breach of any of the terms and conditions of this Contract,

- (iv) If the contractor commits any acts mentioned in, clause 26 thereof. When the Contractor has made himself liable for action under any of the cases aforesaid, the Engineer-in charge on behalf of the Governor of Gujarat shall have powers: -
  - a) To determine or rescind the contract, as aforesaid (of which determination or rescission notice in writing to the Contractor under the hand of the Engineer-in-charge shall be conclusive evidence), upon such determination or rescission, the earnest money, full security deposit of the contract shall be liable to be forfeited and shall be absolutely at the disposal of Government.
  - b) To employ labour paid by the Department and to supply materials to carry out the work or any part of the work, debiting the Contractor with the cost of the labour and the price of the materials (of the amount of which cost and price certified by the Engineer-in-charge shall be final and conclusive against the contractor) and crediting him with the value of the work done in all respects in the same manner and at the same rates, as if it had been carried out by the Contractor under the terms of this Contract. The certificate of the Engineer-in-charge, as to the value of the work done, shall be final and conclusive evidence against the Contractor provided always that action under the sub-clause shall only be taken after giving notice in writing to the Contractor. Provided also that; if the expenses incurred by the Department are less than the amount payable to the Contractor at his agreement rates, the difference shall not be paid to the Contractor.
  - c) After giving notice to the contractor to measure up the work of the contractor and to take such part thereof, as shall be unexecuted out of his hands, and to give it to another contractor to complete, in which case any expenses which may be incurred in excess of the sum which would have been paid to the original contractor, if the whole work had been executed by him (of the amount of which excess, the certificate in writing of the Engineer-in-charge shall be final and conclusive) shall be borne and paid by the original Contractor and may be deducted from any money due to him by Government under this contract or on any other account whatsoever, or from his Earnest Money, Security Deposit, Enlistment Security or the proceeds of sales thereof, or a sufficient part thereof, as the case may be. In the event of any one or more of the above courses being adopted by the Engineer-in-charge, the Contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials or entered into any engagements or made any advances on account or with a view to the execution of the work or the performance of contract. And, in case action is taken under any of provisions aforesaid, the Contractor shall not be entitled to recover or be paid, any sum for any work thereof or actually performed under this contract unless and until the Engineer-in-charge has certified, in writing, the performance of such work and the value payable in respect thereof, and he shall only be entitled to be paid the value so certified. No interest shall be payable to the Contractor on any payment due or awarded by any authority.

**(CLAUSE 25) Recovery from Contractors**

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

- a) Appropriating, in part or whole of the Performance Guarantee and/or Security Deposit and / or any sums payable under the contract to the contractor.
- b) If the amount recovered in accordance with (a) above is not sufficient, the balance sum may be recovered from any payment due to the contractor under any other contract of the department, including the securities which become due for release.

The department shall, further have an additional right to effect recoveries as arrears of land revenue under the Gujarat Land Revenue Code.

**(CLAUSE 26) Work not to be sublet; consequences for unauthorised subletting, bribing and becoming insolvent.**

The Contractor shall not sublet the entire work under the contract or any part thereof under any circumstances, except the specialised work which is permitted as described in following clauses.

The contractor shall be permitted to sublet the specialised work of Railway Crossings, by the Box Pushing technique. The contractor to which the subletting is proposed to be done, shall be an experienced contractor, who has successfully carried out similar crossing works in the Western Railway region. The contractor shall propose the name of specialised agency to the Engineer In Charge, along with the details of work completed by the specialised agency, proposed time schedule, equipment to be deployed for the proposed crossing works, arrangement for seeking approval from Railway authorities etc, to the Engineer In Charge for his approval to the agency.

The actual work on site shall start only on approval from the Engineer in Charge. The extent of the work allocated to the specialised agency shall be only for the Box structure to be pushed under the railway track. All the approaches, pipe laying and other auxiliary works related to the crossing shall be responsibility of the Contractor.

The contractor shall be responsible for the safety of work and labour and other laws for the sublet work to be carried out by the specialised agency. All the safety, insurance and legal requirement of this contract shall be applicable mutatis mutandis to the work sublet to the specialised agency.

The payments to such approved specialised agency shall be directly made by the Contractor. However, GWSSB will have a right to recover from any amount due to the Contractor, any amount payable by the contractor to the engaged specialised agency. A tripartite agreement shall be signed between the Contractor, Specialised Agency and GWSSB to that effect.



For Comprehensive O and M of RWSS in which Chlorination item included bidder must have registration eligible level and must have hazardous chemical handling certificate issued by state/central authority or MOU for these work with hazardous chemical handling certificate holder or undertaking on Affidavit on Rs. 300 Stamp paper clearly stating that on award of contract he/she/they will get hazardous chemical handling certificate issued by state/central authority if work awarded to them.

Contract may be rescinded and security deposit forfeited for subletting the work without approval or for bribing a public officer or if contractor becomes insolvent.

**(CLAUSE-27 to CLAUSE- 35) Deleted**

**(CLAUSE-36) Compensation under the workmen's compensation Act:**

The contractor shall be responsible for and shall pay compensation to his workman payable under the Workmen's Compensation Act. 1923 (VII of 1923) hereinafter called the said Act) for injuries caused to the workmen. If such compensation is paid by Government as principal under sub- section 12(1) of the said Act on behalf of the Contractor it shall be recoverable by Government from the contractor under sub-section 12(2) of the said section. Such compensation shall be recovered in the manner laid down in clause-1 above.

**(CLAUSE-36A) Liability of the contractor in case of accidents**

The contractor shall be responsible for and shall pay the expenses of providing medical aid to any workmen who may suffer a bodily injury as a result of an accident. If such expenses are incurred by Government, the same shall be recoverable from the contractor for with and be deducted, without prejudice to any other remedy of Government from amount due or that may become due to the contractor.

**(CLAUSE-36B) Arrangements for personal safety requirements and first aid**

The contractor shall provide all necessary personal safety equipment and first aid apparatus available for the use of the person employed on the site and shall maintain the same in suitable condition for immediate use at any time and shall comply with the following regulations in connection therewith.

- (a) The workers shall be required to use the equipment so provide be the Contractor and Contractor shall take adequate steps to ensure proper use of the equipment by those concerned.
- (b) When work is carried on in approximately to any place where there is a risk of drowning all necessary equipment shall be provided and kept for use and all necessary steps shall be taken for the prompt rescue of any person, in danger.
- (c) Adequate provision shall be made for prompt first aid treatment of all injuries to be sustained during the course of the work.

**(CLAUSE-37 to CLAUSE- 44) Deleted**

**(CLAUSE -45) Termination by Engineer in Charge**

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

- 45.1. The Engineer in Charge shall be entitled to terminate the Contract if the Contractor:
- a. abandons the Works or otherwise plainly demonstrates the intention not to continue performance of his obligations under the Contract,
  - b. the Contractor is declared as bankrupt or goes into liquidation other than for approved reconstruction or amalgamation;
  - c. Without reasonable excuse fails to comply with the notice to correct a particular defect within a reasonable period of time as specified in Clause-3, Clause 20, Clause 21 and Clause 23.
  - d. the Contractor does not maintain a valid instrument of financial security as prescribed;
  - e. the Contractor has delayed the completion of the Works by such duration for which the maximum amount of liquidated damages is recoverable;
  - f. If the Contractor fails to deploy machinery and equipment or personnel or set up a field laboratory as specified in the contract document.
  - g. If the contractor, in the judgment of the Engineer in charge has engaged in corrupt or fraudulent practices in competing for or in executing the contract as specified in clause 26.
  - h. Any other fundamental breaches as specified in the Contract.
- 45.2. In any of these events or circumstances, the Engineer in Charge may, upon giving 14 days' notice to the Contractor, terminate the Contract and expel the Contractor from the Site. However, in the case of sub-paragraph (c) or (g), the Engineer in Charge may terminate the Contract immediately.
- 45.3. Notwithstanding the above, the Engineer-in-Charge may terminate the Contract for convenience by giving notice to the Contractor.

**(CLAUSE -46) Payment upon Termination**

If the contract is terminated under clause 45.2, the Engineer shall issue a certificate for value of the work done less liquidated damages, if any, less recoverable advance payments received up to the date of the issue of the certificate and less the percentage to apply to the value of the work not completed as indicated in the Contract. The amount so arrived at shall be determined by the Engineer-in-Charge and shall be final and binding on both the parties.

- 46.1. Payment on termination under clause 45.3 above -

If the Contract is terminated under clause 44.3 above, the Engineer shall issue a certificate for the value of the work done, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works and less advance payments received up to the date of the certificate, less other recoveries due in terms of the contract and less taxes due to be deducted at source as per applicable law.

- 46.2. If the total amount due to the Employer exceeds any payment due to the Contractor, the difference shall be recovered as per clause 25 above.
- 46.3. The aggregate maximum amount of liquidated damages recoverable "shall be subject to ten percent of the total estimated value or tender value whichever is high. When agency is terminated.

**(CLAUSE -47) Rates are exclusive of GST but inclusive of all other taxes.**

The rates to be quoted by the Contractor must be exclusive of GST but inclusive of all other taxes and applicable Cess levies on such taxes. GST shall be paid extra on the admissible payment as per the approved tender rates and condition of price variation, GST shall be paid as per prevailing rates at the time of payment.

However any subsequent changes in the tax structure by Government after due date of bid submission will be compensated (+) on availability of submission of actual documentation. Contractor has to intimate Engineer in charge regarding changes occurred in the tax structure after bid submission. If 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.

The contractor shall apply fair means of stock maintenance and shall adopt accounting standards as may be prescribed under GST. For arriving at the difference in procurement prices due to introduction of GST, it will be open for the Government to ask for original invoices, LR, weigh bridge slips, payment details and such other documents as may be required for the purpose.

If there is reduction in overall tax burden then proportional benefit of that shall be passed on to the Government.

NOTE: The rates to be quoted by the Contractor must be exclusive of GST but inclusive of all other taxes. GST should be paid extra on the admissible payment as per the approved tender rates and condition of price variation; GST should be paid as per prevailing rates at the time of payment.

**(CLAUSE-47A) Incometax: -**

Deduction will be made at source on the contractor's bill towards Income tax by the employers as per prevailing rules of the Income tax authority.

**(CLAUSE-48 to CLAUSE-58 ) Deleted**

**(CLAUSE-59) Price Variation Clause:**

**a) PRICE VARIATION FOR uPVC PIPES:**

- i. The price variation will be based on Prime Grade 67 GER 01 (Formerly known as A Grade 67 GER 092) announced by RIL from time to time.

For purpose of variation, 900 Kgs of PVC resin will be considered for one tonne of PVC pipes. In the event of any variation, prices will be calculated as:

$$P = 0.90 (A - B) \times C$$

Where:

P	÷	Price Variation per tonne
A	÷	Current Price of PVC resin per tonne fixed by RIL (as published on GWSSB website) (Price without GST) on the date of inspection of pipe offered.
B	÷	Price of PVC resin per tonne as per as published on GWSSB website (Price without GST) on the date of online bid submission (i.e. last date of online submission as per n-procurement website log)
C	÷	Weight of pipe ( In this case value of C= 1 Tonne)
*	=	Means multiplication

**Condition for variation in prices of uPVC PIPES:-**

23.2.4.1 No ceiling for escalation for difference in the cost of uPVC Pipe will be applicable.

23.2.4.2 This clause shall be operative from the date of Signing of Agreement and up to the expiry of original time limit of Tender.

23.2.4.3 The contractor shall have to give undertaking at the time of claiming their bills for price variation as under:-

"We hereby certify that the uPVC resin of the uPVC Pipes for which the bill preferred is not purchased through any Government or Semi Government undertaking at the concession rate"

~~23.2.4.4 — Price Variation (payable/Recoverable) on Extra and Excess Items shall be allowed upto increase of 10% (due to Excess+Extra) of overall total length of respective type of pipelines (PVC or DI or MS or HDPE) mentioned in BOQ of the tender.~~

~~23.2.4.5 — If the time limit is extended without penalty, then in such case price variation (positive/negative) on the pipes shall be applicable restricted to the Bill of Quantities mentioned in tenders plus Excess and Extra Subject to Clause 4 above. For that part of the extended time for completion, wherein delay is attributable to contractor for the quantities procured during such time period, no positive price variation (Extra payable to contractor) shall be admissible but negative price variation (Recovery against quoted price) shall be admissible. For this purpose, days on which penalty is imposed shall be counted backwards from the actual date of completion.~~

~~23.2.4.6 — Price Variation shall be calculated by concern Division office and shall be verified by paying Authority prior to making payment.~~

~~23.2.4.7 — This formula shall be used only for uPVC Pipeline for calculating Price Variation.~~

~~23.2.4.8 — This clause will be applied to the work irrespective of the cost of the work.~~

~~23.2.4.9 — The final amount of variation payable / recoverable shall be calculated only on basis of final publication of resin rate announced by IPCL~~

~~23.2.4.10 — In case of any discrepancy/dispute regarding application of price variation clause, decision of Concerned Chief Engineer shall be final and binding to the contractor.~~

#### **~~b) PRICE VARIATION FOR HDPE PIPES:~~**

~~The price variation will be based on Resin rates Grade 002DP48 (i.e. PE 100) announced by IOCL from time to time as published on GWSSB website time to time.~~

~~For purpose of variation, 1000 Kgs of HDPE resin will be considered for one tonne of HDPE pipes. In event of any variation, prices will be calculated as following:~~

$$P = (A - B) * C$$

~~Where:~~

<del>P</del>	<del>:</del>	<del>Price Variation per tonne</del>
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A	÷	Current Price of PVC resin per tonne fixed by RIL (as published on GWSSB website) (Price without GST) on the date of inspection of pipe offered.
B	÷	Price of PVC resin per tonne as per as published on GWSSB website (Price without GST) on the date of online bid submission (i.e. last date of online submission as per n-procurement website log)
C	÷	Weight of pipe (In this case value of C = 1 Tonne)
*	÷	Means multiplication
Note	÷	Price of HDPE resin per tonne shall be considered after deducting regional subsidy if any declared by the IOCL.

**Condition for variation in prices of HDPE PIPES:-**

1. ~~No ceiling for escalation for difference in the cost of HDPE Pipe will be applicable.~~
2. ~~This clause shall be operative from the date of Signing of Agreement and up to the expiry of original time limit of Tender.~~
3. ~~The contractor shall have to give undertaking at the time of claiming their bills for price variation as under:-~~

~~"We hereby certify that the HDPE resin of the HDPE Pipes for which the bill preferred is not purchased through any Government or Semi Government undertaking at the concession rate"~~

4. ~~Price Variation (payable/Recoverable) on Extra and Excess Items shall be allowed upto increase of 10% (due to Excess+Extra) of overall total length of respective type of pipelines (PVC or DI or MS or HDPE) mentioned in BOQ of the tender.~~
5. ~~If the time limit is extended without penalty, then in such case price variation (positive/negative) on the pipes shall be applicable restricted to the Bill of Quantities mentioned in tenders plus Excess and Extra Subject to Clause 4 above. For that part of the extended time for completion, wherein delay is attributable to contractor for the quantities procured during such time period, no positive price variation (Extra payable to contractor) shall be admissible but negative price variation (Recovery against quoted price) shall be admissible. For this purpose, days on which penalty is imposed shall be counted backwards from the actual date of completion.~~
6. ~~Price Variation shall be calculated by concern Division office and shall be verified by paying Authority prior to making payment.~~
7. ~~This formula shall be used only for HDPE Pipeline for calculating Price Variation.~~

- ~~8. This clause will be applied to the work irrespective of the cost of the work.~~
- ~~9. The final amount of variation payable / recoverable shall be calculated only on basis of final publication of resin rate announced by IOCL,~~
- ~~10. In case of any discrepancy/dispute regarding application of price variation clause, decision of Concerned Chief Engineer shall be final and binding to the contractor.~~

~~Circulars For Part C are to considered attached.~~

**(CLAUSE-60) Payment to Employees / Workers as per Minimum wages guidelines of Labour and Employment Department of Gujarat:**

- > Payment / Salary given by Employer to their employees must be as per Minimum wages guidelines published by Labour and Employment Department of Gujarat.
- > If there is no provision for increment to Establishment Cost, then extra payment will be made to contractor if there is increment in Tender Amount/Bill Amount or any other payment.
- > Salary / Payment given by contractor to his/her workers must be transferred directly to their bank account, receipt of which must be submitted to respective sub division at the time of document submission for bill every month.
- > It would be contractor's responsibility to make sure that his/her workers have bank account. No such account related arguments for not making direct payment to workers bank accounts will be considered. In this case respective sub division & division have all rights to stop bill payment of O&M of that month.
- > No receipt of advance payment to worker will be accepted even if it is on stamp paper of any-kind. It is contractor's willingness if he/she wants lend money to his/her worker when they need. Contractor is bound submit payment receipt of every worker with transferred salary's REFERENCE ID / TRANSACTION ID / ORDER ID as per payment mode.

## **9.0 DEFINITIONS & INTREPRETATION**

### **9.1 DEFINITION**

In this document the following words and expressions have the meaning hereby assigned to them.

#### **9.1.1 BIDDER / TENDERER / APPLICANT:**

Means individual, proprietary firm, firm in partnership, Limited Company, Corporation applying to become eligible to tender.

#### **9.1.2 ONLINE:**

Any activity that is done on website is referred as 'online' activity for e.g., Submission of Bid online would mean that technical & price Bid must be submitted on website.

**9.1.3 OFFLINE:**

Any activity that is done in conventional route is referred as 'Offline' activity for e.g. "Submission of Tender fee, Earnest Money Deposit, Registration Certificate, Solvency Certificate, etc. in Offline mode" would mean that the tender fee, Earnest Money Deposit, Registration Certificate, Solvency Certificate etc. is to be Submitted to the Office of the concerned Executive Engineer physically.

**9.1.4 E- TENDER:**

Tender in which the bidder can participate online by means of logging in onto the respective website is called E- Tender.

**9.1.5 DIGITAL SIGNATURE:**

Any electronic documents, which contains encrypted message digest using hash algorithm and Tender public key is known as Digitally Signed Documents and the process of generating such document is called digitally signing it.

**9.1.6 SCANNED COPY:**

Electronic Copy of any document generated using a Scanner is called scanned copy.

**9.1.7 SYSTEM:**

Means the computer which hosts the website ([www.gwssb.nprocure.com](http://www.gwssb.nprocure.com)), using which Bidder participates in the tendering process.

**9.1.8 UPLOAD:**

The process of transferring electronic document from Bidder's computer using internet connection to the website ([www.gwssb.nprocure.com](http://www.gwssb.nprocure.com)) is called uploading.

**9.1.9 IT ACT-2000:**

Means Information Technology Act, 2000 of Government of India

**9.1.10 APPROVED / APPROVAL:**

Means approval in writing.

**9.1.11 B.I.S:**

Means Bureau of Indian Standards.

**9.1.12 Deleted**

**9.1.13 CONSTRUCTION PLANT:**

Means all equipment, appliances or things of whatsoever nature required for the execution, completion or maintenance of the primary work or temporary works but does not include materials or other things intended to form or forming part of permanent work.



**9.1.14 CONTRACT:**

Means the instruction and information to bidders, general and special conditions of contract, specifications, drawings, schedules of quantities & tender prices, other parts of the Bid Document, the formal agreement between the employer and contractor and all addenda and attachments related to the above.

**9.1.15 CONTRACTOR:**

Means the bidder with whom the contract has been made for executing the works.

**9.1.16 CONTRACT PRICE / CONTRACT AMOUNT:**

Means the agreed amount stated in the Contract Agreement for O&M of the works for the stipulated period and to remedy of any defects and includes adjustments (if any) in accordance with the Contract.

**9.1.17 CONTRACTOR'S EQUIPMENT:**

Means all equipment, tools, apparatus, machinery, vehicles and other things required for the execution and completion of the works and the remedying of any defects. However, Contractor's Equipment excludes Temporary works, Departmental equipment (if any) or plant, materials and any other things intended to form or forming part of the permanent works.

**9.1.18 COMPLIANCE WITH LAWS:**

The Contractor shall, in performing the Contract, comply with all applicable Laws related to all actions of his obligation as per the contract.

**9.1.19 CONTRACTOR'S OBLIGATIONS:**

Means the obligation to execute the Project in all its entirety and shall, without limitation, include Operation and Maintenance.

**9.1.20 CONTRACTOR'S USE OF EMPLOYER'S DOCUMENTS:**

As between the Parties, the Employer shall retain the copyright and other intellectual property rights in the Employer's requirements and other documents made by (or on behalf of) the employer. The contractor may, at his own cost, copy, use, and obtain communication of these documents for the purposes of the contract. They shall not, without the Employer's consent, be copied, used or communicated to a third party by the Contractor, except as necessary for the purposes of the Contract.

**9.1.21 COUNTRY:**

Means the Country in which the site (or most of it) is located, where the Permanent Works are to be executed.

**9.1.22 DAY:**

Means a day from midnight to midnight.

**9.1.23 DRAWINGS:**

Means the drawings referred to in the specifications, any modifications of such drawings approved in writing by the Executive Engineer, and such other drawings as may from time to time be furnished or approved in writing by the Engineer-in-charge.

**9.1.24 EMPLOYER / OWNER / DEPARTMENT:**

**Gujarat Water Supply & Sewerage Board** Gujarat, or the person named as Employer or Owner in the Contract Agreement and the legal successor in title to this person.

**9.1.25 EMPLOYER'S EQUIPMENT:**

Means the apparatus, machinery and vehicles (if any) made available by the Employer for the use of the Contractor in the execution of the Works, as stated in the Employer's requirements but does not include plant which has not been taken over by the Employer.

**9.1.26 EMPLOYER'S USE OF CONTRACTOR'S DOCUMENT:**

As between the Parties, the Contractor shall retain the copyright and other intellectual property right of the Contractor's Documents and other design documents made by (or on behalf of) the Contractor.

The Contractor shall be deemed by signing the Contract to give the Employer a non-terminable, transferable, non-exclusive royalty-free license to copy, use and communicate the Contractor's Documents, including making and using modifications of them. This license shall:

- Apply throughout the actual or intended working life (whichever is longer) of the relevant parts of the Works.
- Entitle any person in proper possession of the relevant part of the works to copy, use and communicate the Contractor's documents for the purposes of completing, operating, maintaining, altering, adjusting, repairing and demolishing the works, and
- In the case of Contractor's Documents which are in the form of computer programs and other software, permit their use on any computer on the site and other places as envisaged by the Contract, including replacements of an computers supplied by the Contractor. The Contractor's Documents made by (or on behalf of) the Contractor shall not, without the Contractor's consent, be used, copied or communicated to a third party by (or on behalf of) the Employer for purposes other than those permitted under this Sub-Clause.

**9.1.27 ENGINEER-IN-CHARGE:**

Means the Engineer-in-Charge of the works, or in-charge of specified parts of the works under the contract or such other assistants or sub-ordinates to whom the Engineer-in Charge may have delegated certain duties, acting separately within the scope of the particular duties entrusted to them.

The contractor will be given a copy of the GWSSB's authorization designating the Engineer-in-charge by name and delegating him his authority, at the time when contract is signed. It is however, to be distinctly understood that, no delegation of powers shall be made to such assistants or sub-ordinates, except in respect of supervision to ensure compliance of the contract conditions.

9.1.28 Estimated Contract Value / Estimated Cost:

***Estimated cost or Put to Tender Cost at the time of publishing the tender online.***

9.1.29 EXECUTIVE ENGINEER:

Means the Executive Engineer in overall charge of the works i.e. Engineer In- Charge.

9.1.30 FACILITY:

Means the entire system to be designed and constructed in accordance with the provisions hereof, including the equipment's, buildings, structures, ramps, pits, pipes, pipeline appurtenances, fencing, lighting, testing and analysis equipment, tools, computers, software programs, safety equipment, plant machinery, supplies, instruments and inventory incorporated therein, as well as all open areas within the site, and including any additions, modifications, alterations, adjustments, replacements and repairs as may be made thereto from time to time.

9.1.31 GOVERNMENTAL AUTHORITY / GOVERNMENT:

Means any Indian entity, authority or body exercising executive, legislative, judicial, regulatory or administrative functions, including, without limitation, any Government authority, agency, department, board, commission or instrumentality of Indian or any political subdivision thereof, court, tribunal, arbitrator or self-regulatory organisation.

9.1.32 LAWS:

Means and includes all the provisions of all National (or state) legislation, Indian statutes, regulations, ordinances, codes, official or other standards, administrative or other rules, zoning and other plans and restrictions, building and other permits, judgements awards and decrees of, or agreements with any Governmental, semi-Governmental or quasi- Governmental Authority as currently in effect or as may be in effect from time to time and /or as may be amended or supplemented from time to time.

9.1.33 MAINTENANCE STANDARD:

Means the requirements for maintaining, repairing, and renewing the Facility:

- As set forth in the O&M Manual; bidder shall provide this at the time of commissioning of the project.
- Required pursuant to applicable Law;
- As may be necessary for keeping the facility in a satisfactory working condition such that the Facility will continuously comply with the Operation Standard; and
- As may be necessary to ensure that the Facility shall continuously be in an optimum working condition and state in relation with the lifetime of the Facility.

**9.1.34 MATERIALS:**

Means things of all kinds (other than Plant) intended to form or forming part of the Permanent Works, including the supply (only materials if any) to be supplied by the Contractor under the Contract.

**9.1.35 MATERIAL SUPPLIER:**

Means the person who supplies goods or services. A supplier may be distinguished from a contractor or subcontractor, who commonly adds specialized input to deliverables also called vendor.

**9.1.36 MONTH:**

Means from the beginning of a given date of calendar month to the end of preceding date of the next calendar month.

**9.1.37 O & M MANUAL:**

Means the final Manual for the Operation and Maintenance of the Facility to be prepared in accordance with the requirements of Bid Documents.

**9.1.38 OPERATION AND MAINTENANCE OBLIGATIONS:**

Mean the obligation of the Contractor pursuant to the agreement to operate and maintain the facility on and from the start date of O&M until the date of completion of this Agreement.

**9.1.39 OPERATION STANDARD: Means**

The Performance Guarantees;

All applicable Laws;

All of the requirements, policies and procedures set forth in the O & M Manual

All other operational requirements set forth in this Agreement.

**9.1.40 PERFORMANCE GUARANTEES:**

Means the List of Guarantees offered / provided by the Contractor in his Bid Submission pursuant of the Bid Documents.

**9.1.41 RUPEE:**

Means Indian National Rupees (INR)

**9.1.42 SITE:**

Means the specific areas / lands and other places on, under, in or through which, the works are to be executed or carried out and any other lands or places provided by the owner for the purposes of the contract together with such other places as may be specifically designated in the Contract or subsequently approved as forming part of the site.

**9.1.43 TAKING OVER:**

Means, the Owner shall take over the project after contractual completion of the O&M period and meeting all contractual obligations, Terms & Conditions as agreed by the contractor.

9.1.44 TEMPORARY WORKS:

Means all temporary works of every kind required for successful execution of the Contract.

9.1.45 TESTS ON COMPLETION:

Means the tests which are specified in the Contract or agreed by both Parties or instructed as a Variation, and which are carried out (Test on Completion) before the works or a section (as the case may be) are taken over by the Employer.

9.1.46 WEEK:

Means seven consecutive days.

9.1.47 WORKS:

Means the works / action to be executed in accordance with the contract.

9.1.48 COMPLETION:

***Means the date of successfully completion of operations and maintenance of the scheme.***

9.1.49 "Applicable Law" means all national (or State) legislation, statutes, ordinances and other Laws and regulations and by laws of any legally constituted public authority.

9.1.50 "Contract" means the contract agreement, these conditions, the employer's requirements, the Tender and the further documents (if any) which are listed in the contract agreement.

9.1.51 "Contractor's Equipment" shall mean all equipment, instruments, tools, machinery and other appliances and things of the Contractor at the Site required for the fulfilment of the obligations of the Contractor under these Conditions.

9.1.52 "Contractor's Personnel" means the contractor's representative and all personal that the contractor utilizes on site, which may include the staff, labour, & other employees of the contractor and of each subcontractor & any other personnel assisting the contractor in the execution of the work.

9.1.53 "Dispute" shall have the meaning given to it in Clause 15 of these Conditions.

9.1.54 "Employer's Risk" shall include the risks mentioned as employer's risks in the General Conditions and shall include any negligence or misconduct on the part of the Employer and also any event of Force Majeure as provided in Clause 12 of these Conditions.

9.1.55 "Employer's Personnel" means the Employer's Representative, the assistants and all other staff, labour and other employees of the employer and of the Employer's representative, and any other personnel notified to the contractor, by the employer or the employer's representative, as employer's personnel.

9.1.56 "Employer's Requirements" means the document entitled employer's requirements, as included in the contract, and any additions and modifications to such document in accordance with the contract. Such document specifies the purpose, scope, and / or design and / or other technical criteria, for the works.

- 9.1.57 “Facility” shall mean the entire system to be designed and constructed including the buildings, structures, ramps, pits, pipes, fencing, lighting, testing and analysis equipment, tools, computers, software programs, safety equipment, plant machinery, supplies, instruments and inventory incorporated therein, as well as all open areas within the Site, and including any additions, modifications, alterations, replacement and repairs as may be made thereto from time to time.
- 9.1.58 “Force Majeure” shall mean those events mentioned in Clause 12 of these Conditions.
- 9.1.59 “General Conditions” shall mean the conditions of tender issued by GWSSB for O&M works of projects.
- 9.1.60 “Good Operating Practices” means the standards, practices, methods and procedures as practiced internationally and in India conforming to all Applicable Law and that degree of skill, diligence, prudence and foresight which would reasonably be expected from a skilled and experienced contractor engaged in India in the same type of undertaking under the same or similar circumstances as the Contractor pursuant to these Conditions.
- 9.1.61 “O & M Contract” shall mean the contract or part of any other contract having scope of operation and maintenance of facilities, entered in between the Employer and the Contractor pursuant to these Conditions.
- 9.1.62 “O & M Completion Certificate” shall mean the certificate to be issued by the Employer on the completion of all the obligations of the Contractor under these Conditions.
- 9.1.63 “O & M Services” shall mean those services specified in Schedule [1] which the Contractor is obligated to perform under these Conditions.
- 9.1.64 “O & M Standard” shall mean the standards:
- a) As set forth in the O & M Manual as accepted by the Employer,
  - b) As required pursuant to Applicable Law;
  - c) Set out in the Performance Guarantee; and
  - d) For the functioning of the Facility as required in accordance with the Contract including such requirements as may be mentioned in the Employer’s Requirements.
  - e) For the functioning of the Facilities set forth in these Conditions.
- 9.1.65 “O & M Manual” shall have the meaning for manual of Operation and Maintenance.
- 9.1.66 “O & M Period” shall have the meaning set out in Clause.
- 9.1.67 “O & M Price” shall mean the amount stated in Price Schedule.
- 9.1.68 “Party” shall mean each of the Contractor and the Employer and Parties shall mean both of them together.
- 9.1.69 “Performance Guarantees shall mean the guarantee that the Facility shall be operated satisfying the minimum performance parameters set out in Schedule.
- 9.1.70 “Successor Contractor” shall have the meaning given to it in Clause.
- 9.1.71 “Site” shall mean that specific area specified in the bid documents & shall include any other places as may be specifically designed by the employer from the time to time as forming part of the site.

9.1.72 "Taking over Date" shall mean the date of issue of the taking over certificate at the end of Operation and Maintenance period.

9.1.73 "Taking Over Certificate" means the certificate to be issued by employer to the contractor at the successful completion of the Operation and Maintenance period.

9.1.74 "Termination" shall have the meaning given to it in Clause [13] of these Conditions.

## **9.2 INTERPRETATION**

In these Conditions, except where the context requires otherwise.

- a) words indicating one gender include all genders,
- b) words indicating the singular also include the plural and words indicating the plural also include the singular,
- c) Provisions including the word "agree", "agreed" or "agreement" require the agreement to be recorded in writing;
- d) "written" or "in writing" means hand-written, type-written, printed or electronically made, and resulting in a permanent record;
- e) The marginal words and other headings shall not be taken into consideration in the interpretation of these Conditions;
- f) The words "include", "includes" and "including" is not limiting;
- g) As used in these Conditions, all defined terms include the plural as well as the singular;
- h) Any agreement, document or drawing defined or referred to in these Conditions shall include amendment, modification and supplement thereto and waiver thereof as maybe come effective from time to time, except where otherwise indicated;
- i) Any reference to any Clause or Sub – Clause shall unless specified otherwise mean Clause or Sub-Clause of these Conditions; and
- j) Any rights of the Employer to make any inspections or to review any document shall not create any obligation on the Employer to conduct such inspections or reviews to detect any errors, inaccuracies, ambiguities or other potential problems. No inspection or approval by or on behalf of the Employer shall operate as a waiver of any provision of these Conditions, any obligation of Contractor under these Conditions, or any of the rights of the Employer hereunder, except as expressly agreed in writing by the Employer.

## **10.0 SPECIAL CONDITIONS OF CONTRACT**

These conditions are applicable for the project activities mentioned in Part C BOQ.

(Applicable for Part C activities)

### **10.1 LIQUIDATED DAMAGES FOR DELAY**

If the contractor does not complete the entire work under the scope on the date of Completion, (i.e. 100% of the physical progress at the end of 100% of the time of completion), Liquidated damages at the rate of 0.1% of contract value per day of delay subjected to the maximum amount of 10% of the Estimated amount put to tender or total contract value whichever is higher, shall be recovered from the contractor. In such case, the amount retained as deposit shall be converted into liquidated damages.

### **10.2 EXTENSION OF TIME LIMIT**

If the contractor shall desire an extension of the time for completion of the work on the ground of his having been unavoidably hindered in its execution or any other ground he shall apply in writing to the Engineer -in- charge before the expiration of the period stipulated in the tender or before the expiration of 30 days from the date on which he was hindered whichever is earlier and the Engineer-in-charge may, if in his opinion, believe that there are reasonable grounds for granting an extension, grant such extension, as he thinks necessary or proper. The decision of the competent authority of GWSSB in this matter shall be final.

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Deputy Executive Engineer  
P.H Mech Sub Division  
Ahwa-Dang.

Deputy Executive Engineer  
P.H.Sani.Sub Division  
Ahwa-Dang.