VALSAD NAGARPALIKA

Providing, Laying, Jointing, Testing of Rising mains from Abhrama Headwork to Kalyanbaug Sump and from Kalyanbaug Sump to ESR at Tithal Road including connection pipeline from Tithal Road ESR to existing network. Designing, Constructing, Testing & Commissioning of Elevated Service Reservoir (ESR). Design, Supply, Installation, Testing and Commissioning of Instrumentation & SCADA system for all the head works and House Service Connections for Valsad including all allied works complete and post completion operation & maintenance for five years

PROJECT FUNDED UNDER AMRUT SCHEME

VOLUME – IV

PRICE BID

Milestone Dates	
Online Downloading of Technical Bid & Price Bid	AS Per Volume I
Pre – Bid Conference	AS Per Volume I
Last Date of Online Submission of Technical Bid & Price Bid	AS Per Volume I
Last Date for Physical Submission of Tender Fee, EMD and other Documents	AS Per Volume I
Online Opening of the Technical Bid	AS Per Volume I

CONSULTANT:

TATA Consulting Engineers Ltd.
1st Floor, Office No 106-109
"B"Atria Complex,
KH-O, Sargasan Cross road,
Gandhinagar - 382427

CLIENT:

Chief Officer
Valsad Nagarpalika,
Azad Chowk,
Valsad 396 001
Ph no. 02632-242702, 242605
E-mail: 'np_Valsad@yahoo.co.in'

Bid Documents for Valsad Water Supply Scheme

INDEX

A. BID FORM

Bidders are required to fill up all the blank spaces in this Bid Form.

To:

Chief Officer

Valsad Nagarapalika

Dear Sir,

SUB: Bid Documents for **"Providing, Laying, Jointing, Testing of Rising mains from Abhrama Headwork to Kalyanbaug Sump and from Kalyanbaug Sump to ESR at Tithal Road including connection pipeline from Tithal Road ESR to existing network. Designing, Constructing, Testing & Commissioning of Elevated Service Reservoir (ESR). Design, Supply, Installation, Testing and Commissioning of Instrumentation & SCADA system for all the head works and House Service Connections for Valsad including all allied works complete and post completion operation & maintenance for five years."** Having visited the site and examined the Bid Documents, Drawings, Conditions of Contract, Specifications, Schedules, Annexure, Preamble to Price Schedules, Price Schedules etc. including Addenda/Amendments to the above, for the execution of the above Contract, we the undersigned offer to design, Engineer, procure, construct, complete, commission including defects liability period as given in Conditions of Contract and in conformity with the drawings, conditions of Contract, specifications, Preamble to Price Schedules, Annexure, Bidding Documents, including Addenda Nos._____

2. I/We agree that

(a) if we fail to provide required facilities to the Employer's representative or any other person/Agency by the Employer to perform on his behalf for carrying out the inspection and testing of materials and workmanship.

or

(b) if we incorporate into the Works, materials before they are tested and approved by the Engineer's representative

or

(c) if we fail to deliver pure water of required quantity according to the conditions/stipulations of the Contract, the Engineer will be at liberty to take any action including termination of Contract and impose at his absolute discretion any penalties, and/or reject the work.

3. We undertake, if our Bid is accepted, to complete and deliver the works in accordance with the Contract within stipulated time as shown in detail tender notice, from the date or receipt of Letter of Acceptance issued to us by you.
4. We agree to abide by this Bid for a period as mentioned in NIT from the last date of submission of the bid and it shall remain binding upon us and may be accepted at any time before the expiry of that period.
5. In the event of our Bid being accepted, we agree to enter into a formal Contract Agreement with you incorporating the conditions of Contract there to annexed but until such agreement is prepared this Bid together with your written acceptance thereof shall constitute a binding Contract between us.
6. We agree, if our Bid is accepted, to furnish performance /Security in the forms and of value specified in Volume-II(A), General Conditions of Contract.
7. We have independently considered the amounts of liquidated damages mentioned in the bidding documents and agree that they represent a fair estimate of the damages likely to be suffered by you in the event of the work not being completed by us in time.
8. We understand that you are not bound to accept the lowest or any Bid you may receive.

Dated this _____ day of _____ 2018

_____
(Signature)

_____
(Name of the Person)

Company Seal

_____
(Name of Firm)

Duly authorized to sign Bid for and on behalf of (fill in block capitals)

_____

Witness Signature _____

Name _____

Address _____

B. PREAMBLE TO PRICE SCHEDULES

This Bid is for **"Providing, Laying, Jointing, Testing of Rising mains from Abhrama Headwork to Kalyanbaug Sump and from Kalyanbaug Sump to ESR at Tithal Road including connection pipeline from Tithal Road ESR to existing network. Designing, Constructing, Testing & Commissioning of Elevated Service Reservoir (ESR). Design, Supply, Installation, Testing and Commissioning of Instrumentation & SCADA system for all the head works and House Service Connections for Valsad including all allied works complete and post completion operation & maintenance for five years."**

1. The bidder shall quote his firm and fixed price for the entire work under this Contract, defined in more details in various sections of this bid document.

2. The rates and prices shall be submitted in the electronic formats given by n-procure which is called Schedule-B, rates and prices received in any other formats will be rejected and the Bids will be disqualified.

3. It will be entirely at the discretion of the Employer to accept or reject the bidder's proposal, without giving any reasons whatsoever and the bidder shall not be permitted to withdraw his bid on this account.

4. Price **Schedule-A** gives the Schedule showing approximately the Survey and design work to be completed by contractor.

5. In **Schedule-B,** the Bidder shall quote prices for the items on lump sum / unit rate as called for against the BOQ item.

6. The Bidder shall quote his prices for Operation & Maintenance in **Schedule-C**. The total shall be carried forward for comparison and evaluation.

7. Wherever for a particular item the quantities have been specified payment shall be on unit rate basis and unit variation in quantity will be paid with pro rata basis.

8. Each item is to be individually priced online and the amounts shall be added up to arrive at the "Total of each Price Schedule". No column in the Schedules of prices shall be left blank except where the item description requires the item to be priced on "as applicable" basis. The item shall not be priced if it is "not

applicable" to the bidder's design, in which case the bidder shall add the words "Not Applicable". The wording in the item description is for subject matter guidance only; clause references are indicative only and all other relevant clauses shall also be referred to. The prices shall allow for all the works covered under the bid and all liabilities and contractual obligations whether separately specified or not. Items against which no prices are quoted shall not be separately paid for and the bidder shall be deemed to have covered the cost of execution of such items (according to the requirements of the bid document) in the prices quoted for other items.

9. Items not specifically listed in his Price Schedules, but required to be executed for satisfactory working/safety of the system as specified, will not be separately paid for by the Employer when executed and shall be deemed to be already covered by other items and rates listed in the price sheets No extra payment shall be given for any item which is required to complete and perform the project.

10. The total of the item prices in Price Schedule B shall be equal to the price quoted by the bidder in Price Schedule B and shall be firm and fixed, during the pendency of the Contract. In case of any discrepancy noted in the various price schedules, those in Schedule B will be considered and binding on the Contractor. The prices in Price Schedule Schedule B of the successful bidder shall be corrected accordingly. Only Price Schedule–B after carried over and arithmetic corrections if any will be considered for financial evaluation of the bid.

11. Schedule-D gives the basis of interim payment for construction of civil works.

12. The bidder shall be deemed to have allowed in his price for provision, maintenance and final removal of all temporary works of whatsoever nature required for construction including temporary bunds, diverting water, pumping, de-watering etc. for the proper execution of works. The rates shall also be deemed to include any works and setting out that may be required to be carried out for laying out of all the works involved.

13. Prices shall be filled online only.

14. The Price Schedules are to be read in conjunction with the conditions of Contract, the Specifications and other sections of these bid documents and these documents are to be taken as mutually explanatory of one another.

15. The bidder shall interpret the data furnished and carry out any additional survey work, or investigation work required at his own cost .

16. The prices quoted shall also include the cost of materials utilized for testing.

17. The bidder should acquaint himself with the site conditions including the access to Work site. The successful bidder shall have to make suitable access to work sites at his own cost. These accesses will be used by the other contractors working for Valsad Nagarpalika.

18. The item descriptions in price schedule are for subject matter guidance only and the prices shall include all the equipments / materials / accessories and services required as per the specifications. The bidder shall fill in the price schedule furnished.

19. 1% of the value of work will be deducted from the Running bill against labour cess, which shall be non refundable.

20. Third Party Inspection/CSC agency will be deployed by Valsad Nagarpalika and charges of the same will be borne by Valsad Nagarpalika

21. Any expenditure incurred by inspection/ CSC agency for the work misinformed by the contractor and charges of inspection/ CSC agency without any work due to misinformation shall be recovered from the contractor.

22. **The prices shall be quoted inclusive of all taxes (including GST), royalties and duties prevailing at the time of submission of the bids. Statutory variation if any during the currency of contract shall have to borne by the Contractor which shall not be reimbursed by the Valsad Nagarpalika**

23. **The rates should be quoted inclusive of GST and all other applicable**

taxes.

24. The Contractor shall have to borne all taxes, duties, cess of Central and State Government. If any tax, if payable shall have to be paid by Contractor including statutory variation if any during the currency of contract shall have to borne by the Contractor which shall be not reimbursed by the Valsad Nagarpalika.
25. Royalties: The contractor shall be liable to pay the royalty of the quarried materials/ minerals used in the construction of works at the rates specified in the Narmada Water Resources, Water Supply & Kalpsar Dept. Resolution No. GEN-2010-595- (6)-M.I.Cell (K-1) Dt. 29-4-2012 (Gujarati Version Copy enclosed) and the quoted rates are inclusive of such royalty charges.The contractor shall furnish the statement showing the quantity of quarried materials / minerals from whom purchased (with full address of the seller) and copies of the bills for purchase to the Executive Engineer of the in charge of the work. The contractor shall also furnish such additional information as regards royalty payment to the competent authority.
26. The Contractor shall have to take Insurance policy and intimate to Valsad Nagarpalika along with the evidence within time limit. In case of non compliance entire responsibility shall be rest with the agency and required amount shall be recovered from any due amount of the agency.
27. Valsad Nagarpalika can recover penalty amount from the Contractor for not taking the insurance. Though the penalty amount is recovered, responsibility of the Contractor for taking insurance shall be continued and will not be escaped from the responsibility.
28. Apart from the items mentioned in price bid (Schedule) if there will be any extra item necessary to execute will be paid as per GWSSB/PWD SOR of relevant year.
29. Any surplus material which could not be laid/ installed will be handed over to the Employer. For such material 90% of the quoted rate will be paid to Contractor.
30. 5% of the contract value shall be retain unpaid to cover the defect liabilities period for 36 (thirty six) months after the completion of work with all respect.
31. Prices shall be inclusive of all the taxes and duties prevailing at the time of tender submission, salutatory variation if any will be on account of Contractor.
32. Minimum clear cover for pipe line laying should be 1.00 Mtr.

33. After Supplying the material, the responsibility of that material will be on contractors in terms of loss/damages etc.
34. If the quantity of item exceed more than estimated quantity in that case, payment will be made as per quoted rate by the contractor in schedule "B".
35. The prices shall have to be quoted firm and fix including all the taxes and duties without any price variation.

Signature of Contractor

Chief Officer
Valsad Nagarpalika
Valsad

D. PAYMENT-SCHEDULE

BREAK UP FOR INTERIM PAYMENTS

Item	Description of Items	Percentage Payment to be released
1	**Pipeline**	
1.1	On receipt of materials at project site	65 % of Quoted rate
1.2	On Lowering, laying and Jointing	20 % of Quoted rate
1.3	On Hydraulic testing	5 % of Quoted rate
1.4	On refilling and disposal of surplus stuff	5 % of Quoted rate
1.5	After commissioning	5 % of Quoted rate
2	**Elevated Service Reservoir**	
2.1	On completion of topographical survey, Geotechnical Investigations and approval of structural designs	1.5 % of Quoted rate
2.2	After excavation and casting of leveling course complete	5 % of Quoted rate
2.3	After Foundation including column upto Ground Level.	8.5 % of Quoted rate
2.4	After Casting 50 % R.C.C. Staging	15 % of Quoted rate
2.5	After Full Staging complete	15 % of Quoted rate
2.6	After Ring Beam and Bottom Dome, Conical Wall	10 % of Quoted rate
2.7	After Casting Vertical Wall and internal columns of Tank upto Ring Beam, Top slab complete	17 % of Quoted rate
2.8	After Completion of RCC Staircase, all G. I. Railing work, Top Dome, Ventilating Shaft, C. I. Ventilators, C. I. Manhole Frame & Cover, Aluminum Ladder, Epoxy Painting from inside Complete.	10 % of Quoted rate
2.9	Supply of All Pipes, Specials, Valves, Erecting, Lowering, Laying, Jointing & Testing including M. H. Chambers and Drainage Pipe Line complete	10 % of Quoted rate
2.10	After G. L. Plinth Protection Work, Providing and Fixing M.S.gate, Water Level Indicator, Lighting Arrester Complete in all respect.	3 % of Quoted rate

2.11	After Testing, Finishing, Completion of work and issuing taking over certificate.	5 % of Quoted rate
3	**All other items**	
3.1	Monthly Running Bill	
4	**Operation and Maintenance**	
4.1	Every month in equal instalment based on quoted prices of O & M will be paid	

Signature of Contractor :

Name :
Company's Seal :
Date :

Chief Officer

Valsad Nagarpalika
Valsad
Date:

"Providing, Laying, Jointing, Testing of Rising mains from Abhrama Headwork to Kalyanbaug Sump and from Kalyanbaug Sump to ESR at Tithal Road including connection pipeline from Tithal Road ESR to existing network. Designing, Constructing, Testing & Commissioning of Elevated Service Reservoir (ESR). Design, Supply, Installation, Testing and Commissioning of Instrumentation & SCADA system for all the head works and House Service Connections for Valsad including all allied works complete and post completion operation & maintenance for five years."		
Schedule-B		
Sr No.	**Item Description**	**Amount (In Rs.)**
SCHEDULE-B1	Rising Main from Abhrama HW to Kalyanbaug Sump	
SCHEDULE-B2	Rising Main from Kalyanbaug Sump to ESR at Tithal road	
SCHEDULE-B3	Pipeline from ESR at Tithal road to connect existing network	
SCHEDULE-B4	Construction of Elevated Service Reservoir (ESR) at Tithal Road	
SCHEDULE-B5	House service connections (9000 nos)	
AUTOMATION AND SCADA		
SCHEDULE-B6	SITC for Instrumentation ,Automation & SCADA works for Abrama Head Works	
SCHEDULE-B7	SITC for Instrumentation ,Automation & SCADA works for Abrama Valiya Works	
SCHEDULE-B8	SITC for Instrumentation ,Automation & SCADA works for Kalyan Baug Works	
SCHEDULE-B9	SITC of Conversion of manual operated valves into electrically operated valves	
	Total For Construction Works	
SCHEDULE-C	Operation & Maintanance (For 5 Years)	
	Total For O&M Works	
	Rebate on above tendered amount (if any) ……. %	
	Net Amount considering rebate	
Note : Rate includes completing the work and 3 (Three) Months for Trial run		

Schedule B1					
Rising Main from Abrama HW to Kalyanbaug ESR					
Sr. No.	**Description**	**Quantity**	**Rate**	**Unit**	**Amount**
1.)	Providing and supplying D. I. K-9 grade pipes for following Nominal bore diameter with internal cement mortar lining including all taxes, insurance, transportation, freight charges, octroi, inspection charges, loading, unloading, conveyance to departmental stores, stacking etc. complete. (IS 8329- 2000).				
	450 mm dia Pipe	7140.00		Rmt	
2.)	D.I. Specials D.I. Specials plain and socket ends				
	above 300	15864.19		Kg	
3.)	Providing & supplying ISI mark D/F Sluice Valves of following class and diameter including all taxes, incurance, transportation, freight charges, octroi, inspection charges, loading, unloading, conveyance to departmental stores, stacking etc comp.				
	P.N. 1.0 with hand wheel/cap operated (PD Type Short Body)				
	300 mm Dia	2		No	
4.)	Providing and supplying C.I Air Valves of approved make & quality of following class and diameter, including all taxes, insurance, transportation, freight charges, octroi, inspection charges, loading, unloading, conveyance to departmental stores, stacking etc. complete Air valves Double ball Flanged / screwed type				
	Air Valve Double Acting (DS2)				
	100 mm Air Valve	2		No	
5.)	Excavation for pipe line trenches incl. all safety provisions using site rails and stacking excavated stuff up to a lead of 90 mts. cleaning the site etc. complete for lifts and strata as specified.				
*	Up to 1.5 mt depth				
	In all sorts of soil & soft murrum (Taking quantity of 40 % in 0-1.5 m Depth)	4572.00		Cu.Mt.	
	In hard murrum,boulders incl.macdam road.(Taking quantity of 30 % in 0-1.5 m Depth)	3429.00		Cu.Mt.	
	In soft rock and/or masonry in CM or L M or Lime Concrete.(Taking quantity of 15 % in 0-1.5 m Depth)	1715.00		Cu.Mt.	
	In Hard rock.(Taking quantity of 15 % in 0-1.5 m	1715.00		Cu.Mt.	

	Depth)				
*	1.5 mt to 3 mt depth				
	In all sorts of soil & soft murrum (Taking quantity of 40 % in 0-1.5 m Depth)	1738.00		Cu.Mt.	
	In hard murrum,boulders incl.macdam road.(Taking quantity of 30 % in 0-1.5 m Depth)	1303.00		Cu.Mt.	
	In soft rock and/or masonry in CM or L M or Lime Concrete.(Taking quantity of 15 % in 0-1.5 m Depth)	652.00		Cu.Mt.	
	In Hard rock.(Taking quantity of 15 % in 0-1.5 m Depth)	652.00		Cu.Mt.	
6.)	Lowering and jointing DI pipes suitable for tyton joints / Mortarlined D. I. K-7 pipes of various classes with D. I. specials of following diameters in proper position grade and alignment as directed by engineer-in-charge including conveyance.				
*	D.I. Pipe (Tyton Joint)				
	450 mm dia Pipe	7140.00		Rmt	
7.)	Lowering, laying and jointing in position following Sluice valves and Air valves including cost of all labour, jointing material, including nut bolts and giving satisfactory hydraulic testing, etc. complete				
a)	Sluice Valve				
	300 mm Dia	2		No	
b)	Air Valve				
	100 mm Air Valve	10		No	
8.)	Construction of valves chambers in brick masonary, locally available in C. M. 1:6 foundation concrete 150 mm thick in C.C. 1:4:8 of trap metal size 25 mm to 40 mm thick, inside cement plaster in C. M. 1:3 and cement pointing outside in C. M. 1:3 and top cover of precast RCC slab 100mm thick (with keyhole in two parts,each with handles or MS bar etc.complete as given size) upto 1 mt depth from G.L to pipe invert level incl. complete civil works but excl.cost of excavation and refilling With cast in situ RCC slab in one single piece with fixing of CI-MH Frame and Cover (excl. cost of CI-MH Frame and Cover) with 23 mm thick Brick masonary wall in C:M. 1:6				
	1.30 x 1.30 up to 1.0 m depth	12.00		No.	
	Up To 1.50 mt. Depth	6.00		Rmt	
9.)	Refilling pipeline trenches incl. ramming, watering, consolidating disposal of surplus stuff as directed within a radius of 3 km.	14529.00		Cum	

10.)	Providing and casting in situ C.C. in grade M-15 (porportions as per mixdesign or as per Table 9 of IS456 2000 in masses by weigh batching) using granite, quartzite trap metal of size 6 mm to 20 mm for RCC work, including scaffolding centering, form work, needle vibrated consolidation, curing comp. up to 6 meter depth or height (excluding cost of reinforcement and neat finishing) with centering and shuttering etc. comp. for structure for other than water retaining.				
	Bedding for Pipe	492.00		Cum	
11.)	Providing and casting in situ C.C in grade M-20 (propertions as per mix design or as per table no. 9 of IS 456 2000 in masses by weigh batching) using granite, quartzite trap metal of size 6mm to 12mm for RCC work including scafolding, centring, form work, needle vibrated consolidation, curing complete up to 6m depth or height (excluding cost of reinforcement & neat finishing) with centering and shittering etc.complete.For thrust block, anchor block, saddle support etc..	15.00		Cum	
12.)	Supplying, cutting, bending, binding and placing in position steel as per plan and design and as per IS 2502 including cost of steel and binding wire for reservoirs / structures including lift up to 6m or depth below GL for all diameters. TMT bars -FE 415	0.60		MT	
13.)	M S Spring loaded pressure reliese valve up class PN-10 ,Avg. Size 75 mm	1.00		No.	
14.)	Full Bore Electromagnetic Flow Meter				
	Supply of Battery operated, IP-68, factory calibrated full bore electromagnetic flow meter with flanged connection, flow sensor, indicator, transmitter and totaliser with all accessories viz. Power and control cables, cabinets, hardwares, etc Flow Sensor: Neoprene/Polyurethene lining, DC pulsed, SS 316 electrods, CS/SS 316 flanges, Fully welded / SS304 sensor construction & housing. Flow transmitter / converter: Microprocessor based / Modular design/ HART type, 2 line back lit LCD for indication of actual flow rate, forward, reverse, sum totaliser display, one current (4- 20 mA) / one scalable pulse / one status output, Dia cast alluminium with PU finish and glass window encloser, 10 meter length sensor cable				
	450 mm NB	1.00		No.	

15)	Drilling of 900mm dia Horizontal borehole for wastwwater main pipeline under the railway tracks incl strata with required length incl fixing of 800mm dia M.S. casing pipe with welding pushing etc complete various size of pipe for 467.2mm dia water main incl providing & fixing of required size of G.I/M.S pipe for railway premises as per instruction of Railway authority & under supervision of Railway authority incl Providing &supplying fixing of ISI make sluice valve of required size at both side of railway boundary with construction of brick age pavement incl C;C; 1:3:6 encasing of pipe at both side Providing & fixing of M.S/Iron Manhole frame with cover for valve chamber with locking arrangement etc. complet with all material labour fabrication, hydralic testing of pipe & valve etc complete (45 mt Length)467.2 mm dia water main.				
	Without water main (only casing pipe)	1		no	
16)	Drilling of 900mm dia Horizontal borehole for wastwwater main pipeline crossing under the road incl in all strata with required length incl fixing of 800mm dia M.S/RCC casing pipe with pushing etc complete various size of pipe for 406.4 to 508mm dia wastewater main (for 45 Mtr. Length)				
	For NH crossing	1		no	
17)	Road Restoration works	0.35		km	
18)	Surge protection devices			LoT	
				Total Cost =	
				Total Cost for Schedule B 1	

Total Amount in Figures Rs. _____

Total Amount in Words Rs. _____ Only

Signature of Contractor.

Schedule B2					
Rising Main from Kalyanbaug Sump to Tithal ESR					
Sr. No.	**Description**	**Quantity**	**Unit**	**Rate**	**Amount**
1.)	Providing and supplying D. I. K-9 grade pipes for following Nominal bore diameter with internal cement mortar lining including all taxes, insurance, transportation, freight charges, octroi, inspection charges, loading, unloading, conveyance to departmental stores, stacking etc. complete. (IS 8329-2000).				
	300 mm dia Pipe	1640.00	Rmt		
2.)	D.I. Specials D.I. Specials plain and socket ends				
	80 to 300mm dia.	2101.41	Kg		
3.)	Providing & supplying ISI mark D/F Sluice Valves of following class and diameter including all taxes, incurance, transportation, freight charges, octroi, inspection charges, loading, unloading, conveyance to departmental stores, stacking etc comp.				
	P.N. 1.0 with hand wheel/cap operated (PD Type Short Body)				
	300 mm Dia	2	No		
4.)	Providing and supplying C.I Air Valves of approved make & quality of following class and diameter, including all taxes, insurance, transportation, freight charges, octroi, inspection charges, loading, unloading, conveyance to departmental stores, stacking etc. complete Air valves Double ball Flanged / screwed type				
	Air Valve Double Acting (DS2)				
	100 mm Air Valve	2	No		
5.)	Excavation for pipe line trenches incl. all safety provisions using site rails and stacking excavated stuff up to a lead of 90 mts. cleaning the site etc. complete for lifts and strata as specified.				
*	**Up to 1.5 mt depth**				
	In all sorts of soil & soft murrum (Taking quantity of 40 % in 0-1.5 m Depth)	900.00	Cu.Mt.		
	In hard murrum,boulders incl.macdam road.(Taking quantity of 30 % in 0-1.5 m Depth)	675.00	Cu.Mt.		
	In soft rock and/or masonry in CM or L M or Lime Concrete.(Taking quantity of 15 % in 0-1.5 m Depth)	338.00	Cu.Mt.		
	In Hard rock.(Taking quantity of 15 % in 0-1.5 m Depth)	338.00	Cu.Mt.		

6.)	Lowering and jointing DI pipes suitable for tyton joints / Mortarlined D. I. K-7 pipes of various classes with D. I. specials of following diameters in proper position grade and alignment as directed by engineer-in-charge including conveyance.				
*	D.I. Pipe (Tyton Joint)				
	300 mm dia Pipe	1640.00	Rmt		
7.)	Lowering, laying and jointing in position following Sluice valves and Air valves including cost of all labour, jointing material, including nut bolts and giving satisfactory hydraulic testing, etc. complete				
a)	Sluice Valve				
	300 mm Dia	2	No		
b)	Air Valve				
	100 mm Air Valve	2	No		
8.)	Construction of valves chambers in brick masonary, locally available in C. M. 1:6 foundation concrete 150 mm thick in C.C. 1:4:8 of trap metal size 25 mm to 40 mm thick, inside cement plaster in C. M. 1:3 and cement pointing outside in C. M. 1:3 and top cover of precast RCC slab 100mm thick (with keyhole in two parts,each with handles or MS bar etc.complete as given size) upto 1 mt depth from G.L to pipe invert level incl. complete civil works but excl.cost of excavation and refilling With cast in situ RCC slab in one single piece with fixing of CI-MH Frame and Cover (excl. cost of CI-MH Frame and Cover) with 23 mm thick Brick masonary wall in C:M. 1:6				
	1.30 x 1.30 up to 1.0 m depth	4.00	No.		
	Up To 1.50 mt. Depth	2.00	Rmt		
9.)	Refilling pipeline trenches incl. ramming, watering, consolidating disposal of surplus stuff as directed within a radius of 3 km.	2116.00	Cum		
10.)	Providing and casting in situ C.C. in grade M-15 (porportions as per mixdesign or as per Table 9 of IS456 2000 in masses by weigh batching) using granite, quartzite trap metal of size 6 mm to 20 mm for RCC work, including scaffolding centering, form work, needle vibrated consolidation, curing comp. up to 6 meter depth or height (excluding cost of reinforcement and neat finishing) with centering and shuttering etc. comp. for structure for other than water retaining.				
	Bedding for Pipe	86.00	Cum		

11.)	Providing and casting in situ C.C in grade M-20 (propertions as per mix design or as per table no. 9 of IS 456 2000 in masses by weigh batching) using granite, quartzite trap metal of size 6mm to 12mm for RCC work including scafolding, centring, form work, needle vibrated consolidation, curing complete up to 6m depth or height (excluding cost of reinforcement & neat finishing) with centering and shittering etc.complete. For thrust block, anchor block, saddle support etc..	10.00	Cum		
12.)	Supplying, cutting, bending, binding and placing in position steel as per plan and design and as per IS 2502 including cost of steel and binding wire for reservoirs / structures including lift up to 6m or depth below GL for all diameters. TMT bars -FE 415	0.40	MT		
13)	Road Restoration works	0.08	km		
				Total Cost =	
				Total Cost for Schedule B 2 =	

Total Amount in Figures Rs. _____

Total Amount in Words Rs. _____ Only

Signature of Contractor.

Schedule B3					
RCC Elevated Service Reservoir at Tithal Road					
Sr. No.	**Description**	**Quantity**	**Unit**	**Rate (Rs.)**	**Amount (Rs.)**
1.)	Designing structurally (and aesthetically) complying provisions of relevant Indian standards and constructing RCC Elevated service Reservoir of the following capacity and height , using data of S.B.R of proposed site , Seismic zone, Wind speed Zone. Including (1) Container shape any suitable type(or as specified), (2) Staging consisting of column brace trestle 1 shaft / combination column- brace trestle and shaft as appropriate(or as specified) and (3) Appropriate foundation system. This includes excavation in all types of soil strata (including hard rock), casting100 mm thick P.C.C. levelling course in M10 , Refilling the pit with proper soil and disposing of the surplus stuff within a lead of 50 meters. (4) This will also include cement plaster In CM 1:2 with approved water proofing compound to inside face of container. (5) All types of labour & material charges of lowering, laying, erecting / hoisting & joining of pipe assembly of Inlet, Outlet overflow, washout and bye pass arrangement as per hydraulic design are including.				
	(6) Providing and fixing accessories(specified) like MS / GI Ladder CI Manhole frame and covers, water level; indicator. lightening conductor. GI Pipe railing around walk way, at roof level, at gallery and around landing of inside shaft, Adequate cowl type ventilators or lantern type ventilator with stainless steel jali. (7) Scope of work includes constructing RCC spiral staircase with adequate tie beams ,staircase footing ,B.B. Masonry chambers for valves. ventilating shaft and ventilators as well as door in shaft .(8) including providing and applying three coats of cement paint/snowcem (as specified) to the whole structure. (9) it also includes satisfactory water tightness test as per relevant I.S, Code and painting name of scheme & capacity on the tank as per direction of engineer in charge.				
	i) ESR at Tithal road(500KL, 20m Staging)				
	Cost of 500000 Liters Capacity	1.00	No.		
				Total =	
				Total Cost =	
				Total Cost for Schedule B 3 =	

Total Amount in Figures Rs. _____

Total Amount in Words Rs. _____ Only

Signature of Contractor.

Schedule B4					
Connecting Line of Tithal ESR to existing network					
Sr. no	**Item Name**	**Qty**	**Unit**	**Rate**	**Amount**
1)	Providing and supplying ISI mark C. I. S & S spun pipes for following nominal bore diameter with rubber gaskets of following class and diameter including all taxes, insurance, transportation, freight charges, octroi, inspection charges, loading, unloading, conveyance to departmental stores, stacking etc. complete. (IS - 1536 / 1989) Rate for CI Pipe based on Wholesale Price Index of Pig Iron as 150.80 for the Month of January-2013.				
	400 mm Dia Pipe	370.00	Rmt		
2B)	Manufacture, supply & delivery of CI specials suitable to CI pipe				
	2% of total amount of CI pipes (above 300 mmDia)	850.00	Kg.		
3)	Providing and supplying ISI mark CI D/F Sluice Valves , Butterfly Valves & Reflux Valves of following class and diameter including all taxes, insurance, transportation, freight charges, octroi, inspection charges, loading, unloading, conveyance to departmental stores, stacking etc. complete.				
	A1) P.N.1 with hand wheel/cap operated(PD type short body)				
*	300 mm Dia	1.00	No.		
5)	Excavation for pipe line trenches incl. all safely provisions using site rails and stacking excavated stuff up to a lead of 90 mts. Cleaning the site etc. complete for lifts and strata as specified				
*	**Up To 1.50 mt. Depth**				
a	In all sorts of soil & soft murrum (Taking quantity of 40 % in 0-1.5 m Depth)	190.00	Cu.Mt.		
b	In hard murrum,boulders incl.macdam road.(Taking quantity of 30 % in 0-1.5 m Depth)	143.00	Cu.Mt.		
c	In soft rock and/or masonry in CM or L M or Lime Concrete.(Taking quantity of 15 % in 0-1.5 m Depth)	72.00	Cu.Mt.		
d	In Hard rock.(Taking quantity of 15 % in 0-1.5 m Depth)	72.00	Cu.Mt.		
6B)	Lowering and jointing CI S&S spun pipes suitable for tyton joints / Mortarlined DI K-7 pipes of various classes with CI / MS specials of following diameters in proper position grade and alignment as directed by engineer- in-charge including hydraulic testing etc. comp.				
	C.I. Pipe				
	400 mm Dia DI	360.00	Rmt.		

7)	Lowering, laying and jointing in position following C.I. / D/F Reflux valves, Butterfly valves, Sluice valves and Air valves including cost of all labour, jointing material, including nut bolts and giving satisfactory hydraulic testing, etc. complete				
	Sluice Valve				
	300 mm Dia	1.00	No.		
8)	Construction of valves chambers in brick masonary, locally available in C. M. 1:6 foundation concrete 150 mm thick in C.C. 1:4:8 of trap metal size 25 mm to 40 mm thick, inside cement plaster in C. M. 1:3 and cement pointing outside in C. M. 1:3 and top cover of precast RCC slab 100mm thick (with keyhole in two parts,each with handles or MS bar etc.complete as given size) upto 1 mt depth from G.L to pipe invert level incl. complete civil works but excl.cost of excavation and refilling With cast in situ RCC slab in one single piece with fixing of CI-MH Frame and Cover (excl. cost of CI-MH Frame and Cover) with 23 mm thick Brick masonary wall in C:M. 1:6				
	1.30 x 1.30 up to 1.0 m depth	1.00	No.		
	Additional depth				
	1.30 x 1.30 (1.0 to 1.5 m depth)	1.00	No.		
9)	Refilling the pipeline trenches incl. ramming, watering, consolidating deposal of surplus stuff as directed within a radius of 3 km.	403.00	Cu.Mt.		
10	Providing and casting in situ C.C. in grade M-15 (porportions as per mixdesign or as per Table 9 of IS456 2000 in masses by weigh batching) using granite, quartzite trap metal of size 6 mm to 20 mm for RCC work, including scaffolding centering, form work, needle vibrated consolidation, curing comp. up to 6 meter depth or height (excluding cost of reinforcement and neat finishing) with centering and shuttering etc. comp. for structure for other than water retaining.				
	Bedding for Pipe	23.00	Cu.Mt		
				Total Amount =	
				Total Cost for Schedule B 4 =	

Total Amount in Figures Rs. _____

Total Amount in Words Rs. _____ Only

Signature of Contractor.

Schedule B5					
HOUSE SERVICE CONNECTIONS					
Sr. no	**Item Name**	**Qty**	**Unit**	**Rate**	**Amount**
1)	House connections with MDPE pipe (unit length 10 mtr per HH)				
	Total no of connections of 15 mm pipe =	7200	nos		
	Total no of connections of 20 mm pipe =	1800	nos		
	Rate Analysis				
				Total Amount =	
				Total Cost for Schedule B5 =	

Total Amount in Figures Rs. _____
Total Amount in Words Rs. _____ Only

Signature of Contractor.

Schedule B6					
SITC for Instrumentation ,Automation & SCADA works for Abrama Head Works					
Item No.	**Item Description**	**Unit**	**Quantity**	**Rate (Rs)**	**Amount (Rs)**
A	**11 MLD Old & New Raw Water Pump house**				
1	SITC of Radar Level Transmitter at Intake well location with all necessary hardware and software				
1.1	Range 0- 30 M	Nos	1.00		
2	SITC of PressureTransmitter at common delivery location with all necessary hardware and software				
2.1	Range 0-35 kg/cm2	Nos	1.00		
3	SITC of Full bore type Electromagnetic Flow meter at common delivery header with all necessary hardware and software				
4	SITC of Pressure Gauge with all necessary hardware				
4.1	Range 0-25 kg/cm2	Nos	3.00		
5	SITC of Pressure Switch with all necessary hardware				
5.1	Range 0-25 kg/cm2	Nos	3.00		
6	Cables & Cabling Accessories				
6.1	Single PairX 1 Sqmm. Stranded Cu, Shelded, Armoured,XLPE Instrumentation Cable	Mtr	60.00		
6.2	12 PairX 1 Sqmm. Stranded Cu, Shelded, Armoured,XLPE Instrumentation Cable	Mtr	150.00		
6.3	3C x 1.5 Sqmm. Stranded Cu, Armoured Control Cable	Mtr	60.00		
6.4	3C x 2.5 Sqmm. Stranded Cu, Armoured Control Cable	Mtr	100.00		
6.5	RS-485 Communication Cable	Mtr	20.00		
6.6	6 core Single Mode FO Cable	Mtr	500.00		
6.7	50 X 50, GI Perforated, with Cover Cable Tray	Mtr	50.00		
6.8	50 X 50, GI Perforated, with Cover Cable Tray	Mtr	50.00		
6.9	3 Mtr Long Cu Electrode for Electronoc Earthing	Nos	2.00		
7	Non Redundant, 32 Bit Processor PLC Panel with 10" HMI, UPS System, FO Converter, Ethernet Switch, Panel accessories etc. Basic IO Count DI=79 DO=26 AI=10 AO=7 RTD=24 Modbus Node=5	Lot	1.00		
B	**Old 6.5 MLD Raw Water Pump house**				
1	SITC of Radar Level Transmitter at Intake well location with all necessary hardware and				

	software				
1.1	Range 0- 30 M	Nos	1.00		
2	SITC of PressureTransmitter at common delivery location with all necessary hardware and software				
2.1	Range 0-35 kg/cm2	Nos	1.00		
3	SITC of Full bore type Electromagnetic Flow meter at common delivery header with all necessary hardware and software				
3.1	Dia- 250 mm	Nos	1.00		
4	SITC of Pressure Gauge with all necessary hardware				
4.1	Range 0-25 kg/cm2	Nos	2.00		
5	SITC of Pressure Switch with all necessary hardware				
5.1	Range 0-25 kg/cm2	Nos	2.00		
6	Cables & Cabling Accessories				
6.1	Single PairX 1 Sqmm. Stranded Cu, Shelded, Armoured,XLPE Instrumentation Cable	Mtr	60.00		
6.2	12 PairX 1 Sqmm. Stranded Cu, Shelded, Armoured,XLPE Instrumentation Cable	Mtr	150.00		
6.3	3C x 1.5 Sqmm. Stranded Cu, Armoured Control Cable	Mtr	60.00		
6.4	3C x 2.5 Sqmm. Stranded Cu, Armoured Control Cable	Mtr	100.00		
6.5	RS-485 Communication Cable	Mtr	20.00		
6.6	6 core Single Mode FO Cable	Mtr	500.00		
6.7	50 X 50, GI Perforated, with Cover Cable Tray	Mtr	50.00		
6.8	50 X 50, GI Perforated, with Cover Cable Tray	Mtr	50.00		
6.9	3 Mtr Long Cu Electrode for Electronoc Earthing	Nos	2.00		
7	Non Redundant, 32 Bit Processor PLC Panel with 10" HMI, UPS System, FO Converter, Ethernet Switch, Panel accessories etc. Basic IO Count DI=60 DO=20 AI=8 AO=5 RTD=16 Modbus Node=4	Lot	1.00		
C	**New 11 MLD WTP**				
1	SITC of Ultrasonic Level Transmitter with all necessary hardware and software				
1.1	Range 0- 10 M	Nos	1.00		
2	SITC of PressureTransmitter with all necessary hardware and software				
2.1	Range 0-35 kg/cm2	Nos	1.00		
3	SITC of Full bore type Electromagnetic Flow meter with all necessary hardware and software				
3.1	Dia- 250 mm	Nos	2.00		

4	SITC of Ultrasonic typeOpen Channel Flow meter with all necessary hardware and software				
4.1	Range 0- 5 M	Nos	1.00		
5	SITC of Pressure Gauge with all necessary hardware				
5.1	Range 0-25 kg/cm2	Nos	15.00		
6	SITC of Bypass Rotameter				
6.1	Range 0-2000 lph	Nos	3.00		
7	SITC of Ultrasonic typeOpen Channel Flow meter with all necessary hardware and software				
7.1	Range 0- 5 M	Nos	1.00		
8	SITC of pH Meter with all necessary hardware and software				
8.1	Range 0- 14 pH	Nos	2.00		
9	SITC of Turbidity Meter with all necessary hardware and software				
9.1	Range 0- 1000 NTU	Nos	1.00		
9.2	Range 0- 100 NTU	Nos	1.00		
9.3	Range 0- 5 NTU	Nos	1.00		
7	SITC of Residual Chlorine Transmitter with all necessary hardware and software				
7.1	Range 0- 5 ppm	Nos	1.00		
8	SITC of Capacitive Loss of Head Transmitter with all necessary hardware and software				
8.1	Range 0- 3 M	Nos	4.00		
8	SITC of Ultrasonic Rate of Flow Transmitter with all necessary hardware and software				
8.1	Range 0- 5 M	Nos	4.00		
9	Cables & Cabling Accessories				
9.1	Single PairX 1 Sqmm. Stranded Cu, Shelded, Armoured,XLPE Instrumentation Cable	Mtr	1250.00		
9.2	12 PairX 1 Sqmm. Stranded Cu, Shelded, Armoured,XLPE Instrumentation Cable	Mtr	1400.00		
9.3	3C x 1.5 Sqmm. Stranded Cu, Armoured Control Cable	Mtr	1200.00		
9.4	3C x 2.5 Sqmm. Stranded Cu, Armoured Control Cable	Mtr	700.00		
9.5	RS-485 Communication Cable	Mtr	20.00		
9.6	6 core Single Mode FO Cable	Mtr	500.00		
9.7	50 X 50, GI Perforated, with Cover Cable Tray	Mtr	50.00		
9.8	50 X 50, GI Perforated, with Cover Cable Tray	Mtr	50.00		
10	3 Mtr Long Cu Electrode for Electronoc Earthing	Nos	2.00		
11	Non-Redundant, 32 Bit Processor PLC Panel with 32" 1 no.Data Aquisition System,A3/A4 Colour Printer, UPS System, FO Converter, Ethernet Switch, Panel accessories etc. Basic IO Count AI=19	Lot	1.00		

D	**Proposed 15 MLD WTP**				
1	SITC of Ultrasonic Level Transmitter with all necessary hardware and software				
1.1	Range 0- 10 M	Nos	1.00		
2	SITC of PressureTransmitter with all necessary hardware and software				
2.1	Range 0-35 kg/cm2	Nos	1.00		
3	SITC of Full bore type Electromagnetic Flow meter with all necessary hardware and software				
3.1	Dia- 250 mm	Nos	2.00		
4	SITC of Ultrasonic typeOpen Channel Flow meter with all necessary hardware and software				
4.1	Range 0- 5 M	Nos	1.00		
5	SITC of Pressure Gauge with all necessary hardware				
5.1	Range 0-25 kg/cm2	Nos	15.00		
6	SITC of Bypass Rotameter				
6.1	Range 0-2000 lph	Nos	3.00		
7	SITC of Ultrasonic typeOpen Channel Flow meter with all necessary hardware and software				
7.1	Range 0- 5 M	Nos	1.00		
8	SITC of pH Meter with all necessary hardware and software				
8.1	Range 0- 14 pH	Nos	2.00		
9	SITC of Turbidity Meter with all necessary hardware and software				
9.1	Range 0- 1000 NTU	Nos	1.00		
9.2	Range 0- 100 NTU	Nos	1.00		
9.3	Range 0- 5 NTU	Nos	1.00		
7	SITC of Residual Chlorine Transmitter with all necessary hardware and software				
7.1	Range 0- 5 ppm	Nos	1.00		
8	SITC of Capacitive Loss of Head Transmitter with all necessary hardware and software				
8.1	Range 0- 3 M	Nos	4.00		
8	SITC of Ultrasonic Rate of Flow Transmitter with all necessary hardware and software				
8.1	Range 0- 5 M	Nos	4.00		
9	Cables & Cabling Accessories				
9.1	Single PairX 1 Sqmm. Stranded Cu, Shelded, Armoured,XLPE Instrumentation Cable	Mtr	1250.00		
9.2	12 PairX 1 Sqmm. Stranded Cu, Shelded, Armoured,XLPE Instrumentation Cable	Mtr	1400.00		
9.3	3C x 1.5 Sqmm. Stranded Cu, Armoured Control Cable	Mtr	1200.00		
9.4	3C x 2.5 Sqmm. Stranded Cu, Armoured Control Cable	Mtr	700.00		
9.5	RS-485 Communication Cable	Mtr	20.00		
9.6	6 core Single Mode FO Cable	Mtr	500.00		

9.7	50 X 50, GI Perforated, with Cover Cable Tray	Mtr	50.00		
9.8	50 X 50, GI Perforated, with Cover Cable Tray	Mtr	50.00		
10	3 Mtr Long Cu Electrode for Electronoc Earthing	Nos	2.00		
11	Non-Redundant, 32 Bit Processor PLC Panel with 32" 1 no.Data Aquisition System,A3/A4 Colour Printer, UPS System, FO Converter, Ethernet Switch, Panel accessories etc. Basic IO Count AI=19	Lot	1.00		
E	**Proposed 11 MLD WTP**				
1	SITC of Ultrasonic Level Transmitter with all necessary hardware and software				
1.1	Range 0- 10 M	Nos	1.00		
2	SITC of PressureTransmitter with all necessary hardware and software				
2.1	Range 0-35 kg/cm2	Nos	1.00		
3	SITC of Full bore type Electromagnetic Flow meter with all necessary hardware and software				
3.1	Dia- 250 mm	Nos	2.00		
4	SITC of Ultrasonic typeOpen Channel Flow meter with all necessary hardware and software				
4.1	Range 0- 5 M	Nos	1.00		
5	SITC of Pressure Gauge with all necessary hardware				
5.1	Range 0-25 kg/cm2	Nos	15.00		
6	SITC of Bypass Rotameter				
6.1	Range 0-2000 lph	Nos	3.00		
7	SITC of Ultrasonic typeOpen Channel Flow meter with all necessary hardware and software				
7.1	Range 0- 5 M	Nos	1.00		
8	SITC of pH Meter with all necessary hardware and software				
8.1	Range 0- 14 pH	Nos	2.00		
9	SITC of Turbidity Meter with all necessary hardware and software				
9.1	Range 0- 1000 NTU	Nos	1.00		
9.2	Range 0- 100 NTU	Nos	1.00		
9.3	Range 0- 5 NTU	Nos	1.00		
7	SITC of Residual Chlorine Transmitter with all necessary hardware and software				
7.1	Range 0- 5 ppm	Nos	1.00		
8	SITC of Capacitive Loss of Head Transmitter with all necessary hardware and software				
8.1	Range 0- 3 M	Nos	4.00		
8	SITC of Ultrasonic Rate of Flow Transmitter with all necessary hardware and software				
8.1	Range 0- 5 M	Nos	4.00		

9	Cables & Cabling Accessories				
9.1	Single PairX 1 Sqmm. Stranded Cu, Shelded, Armoured,XLPE Instrumentation Cable	Mtr	1250.00		
9.2	12 PairX 1 Sqmm. Stranded Cu, Shelded, Armoured,XLPE Instrumentation Cable	Mtr	1400.00		
9.3	3C x 1.5 Sqmm. Stranded Cu, Armoured Control Cable	Mtr	1200.00		
9.4	3C x 2.5 Sqmm. Stranded Cu, Armoured Control Cable	Mtr	700.00		
9.5	RS-485 Communication Cable	Mtr	20.00		
9.6	6 core Single Mode FO Cable	Mtr	500.00		
9.7	50 X 50, GI Perforated, with Cover Cable Tray	Mtr	50.00		
9.8	50 X 50, GI Perforated, with Cover Cable Tray	Mtr	50.00		
10	3 Mtr Long Cu Electrode for Electronoc Earthing	Nos	2.00		
11	Non-Redundant, 32 Bit Processor PLC Panel with 32" 1 no.Data Aquisition System,A3/A4 Colour Printer, UPS System, FO Converter, Ethernet Switch, Panel accessories etc. Basic IO Count AI=19	Lot	1.00		
F	**Old 6.5 MLD WTP**				
1	SITC of Ultrasonic Level Transmitter with all necessary hardware and software				
1.1	Range 0- 10 M	Nos	1.00		
2	SITC of PressureTransmitter with all necessary hardware and software				
2.1	Range 0-35 kg/cm2	Nos	1.00		
3	SITC of Full bore type Electromagnetic Flow meter with all necessary hardware and software				
3.1	Dia- 250 mm	Nos	2.00		
4	SITC of Ultrasonic typeOpen Channel Flow meter with all necessary hardware and software				
4.1	Range 0- 5 M	Nos	1.00		
5	SITC of Pressure Gauge with all necessary hardware				
5.1	Range 0-25 kg/cm2	Nos	15.00		
6	SITC of Bypass Rotameter				
6.1	Range 0-2000 lph	Nos	3.00		
7	SITC of Ultrasonic typeOpen Channel Flow meter with all necessary hardware and software				
7.1	Range 0- 5 M	Nos	1.00		
8	SITC of pH Meter with all necessary hardware and software				
8.1	Range 0- 14 pH	Nos	2.00		
9	SITC of Turbidity Meter with all necessary hardware and software				
9.1	Range 0- 1000 NTU	Nos	1.00		

9.2	Range 0- 100 NTU	Nos	1.00		
9.3	Range 0- 5 NTU	Nos	1.00		
7	SITC of Residual Chlorine Transmitter with all necessary hardware and software				
7.1	Range 0- 5 ppm	Nos	1.00		
8	SITC of Capacitive Loss of Head Transmitter with all necessary hardware and software				
8.1	Range 0- 3 M	Nos	4.00		
8	SITC of Ultrasonic Rate of Flow Transmitter with all necessary hardware and software				
8.1	Range 0- 5 M	Nos	4.00		
9	Cables & Cabling Accessories				
9.1	Single PairX 1 Sqmm. Stranded Cu, Shelded, Armoured,XLPE Instrumentation Cable	Mtr	1250.00		
9.2	12 PairX 1 Sqmm. Stranded Cu, Shelded, Armoured,XLPE Instrumentation Cable	Mtr	1400.00		
9.3	3C x 1.5 Sqmm. Stranded Cu, Armoured Control Cable	Mtr	1200.00		
9.4	3C x 2.5 Sqmm. Stranded Cu, Armoured Control Cable	Mtr	700.00		
9.5	RS-485 Communication Cable	Mtr	20.00		
9.6	6 core Single Mode FO Cable	Mtr	500.00		
9.7	50 X 50, GI Perforated, with Cover Cable Tray	Mtr	50.00		
9.8	50 X 50, GI Perforated, with Cover Cable Tray	Mtr	50.00		
10	3 Mtr Long Cu Electrode for Electronoc Earthing	Nos	2.00		
11	Non-Redundant, 32 Bit Processor PLC Panel with 32" 1 no.Data Aquisition System,A3/A4 Colour Printer, UPS System, FO Converter, Ethernet Switch, Panel accessories etc. Basic IO Count AI=19	Lot	1.00		
G	**Abrama Head Works (Old 11MLD/ Proposed 15 MLD CWPH+ New 11 MLD CWPH + Old 6.5 MLD + Proposed 11MLD Polder)**				
1	SITC of Ultrasonic Level Transmitter at Intake well location with all necessary hardware and software				
1.1	Range 0- 15 M	Nos	4.00		
2	SITC of PressureTransmitter at common delivery location with all necessary hardware and software				
2.1	Range 0-35 kg/cm2	Nos	3.00		
3	SITC of Full bore type Electromagnetic Flow meter at common delivery header with all necessary hardware and software				
3.1	Dia- 350 mm	Nos	3.00		
4	SITC of Pressure Gauge with all necessary hardware				
4.1	Range 0-25 kg/cm2	Nos	10.00		
5	SITC of Pressure Switch with all necessary				

	hardware				
5.1	Range 0-25 kg/cm2	Nos	10.00		
6	Cables & Cabling Accessories				
6.1	Single PairX 1 Sqmm. Stranded Cu, Shelded, Armoured,XLPE Instrumentation Cable	Mtr	60.00		
6.2	12 PairX 1 Sqmm. Stranded Cu, Shelded, Armoured,XLPE Instrumentation Cable	Mtr	150.00		
6.3	3C x 1.5 Sqmm. Stranded Cu, Armoured Control Cable	Mtr	60.00		
6.4	3C x 2.5 Sqmm. Stranded Cu, Armoured Control Cable	Mtr	100.00		
6.5	RS-485 Communication Cable	Mtr	20.00		
6.6	Single Mode FO Cable	Mtr	500.00		
6.7	50 X 50, GI Perforated, with Cover Cable Tray	Mtr	50.00		
6.8	50 X 50, GI Perforated, with Cover Cable Tray	Mtr	50.00		
6.9	3 Mtr Long Cu Electrode for Electronoc Earthing	Nos	2.00		
7	Redundant, 32 Bit Processor Main PLC Panel with 32", 2 Nos. ES cum OS SCADA Station, A3/A4 online colour Printer, UPS System, FO Converter, Ethernet Switch,GPRS Modem, Panel accessories etc. complete Basic IO Count DI=146 DO=46 AI=20 AO=10 RTD=80 Modbus Node=10	Lot	1.00		
H	**ESR**				
1	SITC of GSM/GPRS Ultrasonic Level Transmitter at ESR location with all necessary hardware and software				
1.1	Range 0- 10 M	Nos	1.00		
				Total Amount =	
				Total Cost for Schedule B6 =	

Total Amount in Figures Rs. _____
Total Amount in Words Rs. _____ Only

Signature of Contractor.

Schedule B7					
SITC for Instrumentation ,Automation & SCADA works for Abrama Valiya Works					
Item No.	**Item Description**	**Unit**	**Quantity**	**Rate (Rs)**	**Amount (Rs)**
A	**Pump House for Mogabadi & Pump House for Abrama**				
1	SITC of Ultrasonic Level Transmitter at Intake well location with all necessary hardware and software				
1.1	Range 0- 15 M	Nos	2.00		
2	SITC of PressureTransmitter at common delivery location with all necessary hardware and software				
2.1	Range 0-35 kg/cm2	Nos	2.00		
3	SITC of Full bore type Electromagnetic Flow meter at common delivery header with all necessary hardware and software				
3.2	Dia- 400 mm	Nos	1.00		
3.3	Dia- 250 mm	Nos	1.00		
4	SITC of Pressure Gauge with all necessary hardware				
4.1	Range 0-25 kg/cm2	Nos	4.00		
5	SITC of Pressure Switch with all necessary hardware				
5.1	Range 0-25 kg/cm2	Nos	4.00		
6	Cables & Cabling Accessories				
6.1	Single PairX 1 Sqmm. Stranded Cu, Shelded, Armoured,XLPE Instrumentation Cable	Mtr	60.00		
6.2	12 PairX 1 Sqmm. Stranded Cu, Shelded, Armoured,XLPE Instrumentation Cable	Mtr	150.00		
6.3	3C x 1.5 Sqmm. Stranded Cu, Armoured Control Cable	Mtr	60.00		
6.4	3C x 2.5 Sqmm. Stranded Cu, Armoured Control Cable	Mtr	100.00		
6.5	RS-485 Communication Cable	Mtr	20.00		
6.6	6 core Single Mode FO Cable	Mtr	2550.00		
6.7	50 X 50, GI Perforated, with Cover Cable Tray	Mtr	50.00		
6.8	50 X 50, GI Perforated, with Cover Cable Tray	Mtr	50.00		
6.9	3 Mtr Long Cu Electrode for Electronoc Earthing	Nos	2.00		
7	Non Redundant, 32 Bit Processor PLC Panel with 10" HMI, UPS System, FO Converter, GSM ModemEthernet Switch, Panel accessories etc. Basic IO Count DI=68 DO=22 AI=9 AO=4 RTD=32	Lot	1.00		

	Modbus Node=4				
B	**ESR**				
1	SITC of GSM/GPRS Ultrasonic Level Transmitter at ESR location with all necessary hardware and software				
1.1	Range 0- 10 M	Nos	2.00		
				Total Amount =	
				Total Cost for Schedule B7 =	

Total Amount in Figures Rs. _____
Total Amount in Words Rs. _____ Only

Signature of Contractor.

Schedule B8					
SITC for Instrumentation ,Automation & SCADA works for Kalyan Baug Works					
Item No.	**Item Description**	**Unit**	**Quantity**	**Rate (Rs)**	**Amount (Rs)**
A	**Pump House for other ESR**				
1	SITC of Ultrasonic Level Transmitter at Intake well location with all necessary hardware and software				
1.1	Range 0- 15 M	Nos	1.00		
2	SITC of PressureTransmitter at common delivery location with all necessary hardware and software				
2.1	Range 0-35 kg/cm2	Nos	1.00		
3	SITC of Full bore type Electromagnetic Flow meter at common delivery header with all necessary hardware and software				
3.3	Dia- 250 mm	Nos	2.00		
4	SITC of Pressure Gauge with all necessary hardware				
4.1	Range 0-25 kg/cm2	Nos	5.00		
5	SITC of Pressure Switch with all necessary hardware				
5.1	Range 0-25 kg/cm2	Nos	5.00		
6	**Cables & Cabling Accessories**				
6.1	Single PairX 1 Sqmm. Stranded Cu, Shelded, Armoured,XLPE Instrumentation Cable	Mtr	60.00		
6.2	12 PairX 1 Sqmm. Stranded Cu, Shelded, Armoured,XLPE Instrumentation Cable	Mtr	150.00		
6.3	3C x 1.5 Sqmm. Stranded Cu, Armoured Control Cable	Mtr	60.00		
6.4	3C x 2.5 Sqmm. Stranded Cu, Armoured Control Cable	Mtr	100.00		
6.5	RS-485 Communication Cable	Mtr	20.00		
6.6	6 core Single Mode FO Cable	Mtr	7050.00		
6.7	50 X 50, GI Perforated, with Cover Cable Tray	Mtr	50.00		
6.8	50 X 50, GI Perforated, with Cover Cable Tray	Mtr	50.00		
6.9	3 Mtr Long Cu Electrode for Electronic Earthing	Nos	2.00		
7	Non Redundant, 32 Bit Processor PLC Panel with 10" HMI, UPS System, FO Converter, GSM ModemEthernet Switch, Panel accessories etc.Basic IO CountDI=80DO=26AI=11AO=5RTD=40Modbus Node=4	Lot	1.00		
B	**ESR**				
1	SITC of GSM/GPRS Ultrasonic Level Transmitter at ESR location with all necessary hardware and software				
1.1	Range 0- 10 M	Nos	6.00		
				Total Amount =	
				Total Cost for Schedule B8 =	

Total Amount in Figures Rs. _____
Total Amount in Words Rs. _____ Only

Signature of Contractor.

Schedule B9 - SITC of Conversation of manual opertaed Sluice valves into Electrical Actuator operated valves					
Sr. No.	**Description**	**Qty**	**Unit**	**Rate (In Rs.)**	**Amout (In Rs.)**
1.1	Supply Installation, Testing and Commissioning of Electrical actuator & Conversation of manual opertaed Sluice valves into Electrical Actuator operated valves of following Diameter & Specification • Actuator shall be 3 phase, 415 V operated. • Actuator shall have integral starter with IP 68 protection in case submerged application and IP67 in case outside chamber/ building application. • Material of Actuator shall be Non corrosive and shall withstand minimum 10 years of life.		Nos		
1.2	250 mm Dia	2	Nos		
1.3	300 mm Dia	16	Nos		
1.4	350 mm Dia	12	Nos		
1.5	400 mm Dia	5	Nos		
				Total =	
				Total Cost for Schedule B9 =	

SCHEDULE C Post Completion Operation & Maintenance (For 5 Years)					
ITEM NO.	**ITEM DESCRIPTION**	**QTY**	**UNIT**	**RATE (IN RS)**	**AMOUNT (IN RS)**
1.1	O & M for 1st Year	12	Months	-	-
1.2	O & M for 2nd Year	12	Months	-	-
1.3	O & M for 3rd Year	12	Months		
1.4	O & M for 4th Year	12	Months		
1.5	O & M for 5th Year	12	Months		
				Total Schedule C	-

Total Amount in Figures Rs.
_____

Total Amount in Words Rs.
_____ Only

Signature of Contractor.

Note: For SCADA and Instrumentation :

Comprehensive Operation & Maintenance of entire facility/system will include

a) Operation and maintenance activity of all new and existing flow meters and associated electro-mechanical & civil equipments,

b) Regular software & hardware updates of Web Based Monitoring system,

c) Wireless communication (SIM & Broadband Services) costs,

d) Maintains spares as describes in the tender,

e) Maintains stationeries and consumables,

f) Replacement of faulty equipment,

g) Periodic report generations & submissions, log book preparation in approved format,

h) Insurance of all new and existing flow meters and associated electro-mechanical & civil equipments

i) Maintaining Data logger systems, UPS system and other supporting systems components,

j) Manpower engagement for operation of the Web Based Monitoring system etc.,

k) Manpower engagement for periodic inspection of flow meters & other site equipments,

l) Routine, periodic & remedial Maintenance of EMF/ UFM meters and its associated

accessories,

m) Periodic site calibrations/ verifications, replacement of faulty instruments and maintaining the whole system as per provisions of contract & comprehensive O&M manual.