



Tel : 0495 - 2371046

## KERALA WATER AUTHORITY

Office of the Superintending Engineer,  
P.H. Circle, Kozhikode,  
Malaparamba P.O,  
Pin – 673 009.

No. 1314/D5/2021/PHC-KKD

Dated: 04.02.2022

From

The Superintending Engineer

To

Sri.Abdul Nazer M,  
Mooladan Mannil House,  
Kunnamangalam PO ,  
Kozhikode- 673571.

Sir,

Sub:- JJM(2021-22) - Phase II - WSS to Manathavady, Edavaka and Nalooradu villages -Providing Functional Household Tap Connections in Edavakka Grama Panchayath in Wayanad District- Work Order Issued – Reg

- Ref:- 1. AS No : G.O.(Rt) No.489/2021/WRD dated18/09/2021 for Rs.3400 lakhs  
2.TS/2021-2022/2021/36615 dated: 07/12/2021 of The Chief Engineer NR, , KWA, Kozhikode for Rs. 3400 lakhs  
3. Tender No. SE/PHC/KKD/16/2021-22 Dtd : 09/12/2021  
4. Order No: KWA/CENR/D1W/JJM2021-22/PH2/EDAVAKA dated 31/01/2022 of Chief Engineer (NR) Kozhikode

With reference to the above, you are hereby informed that your tender for the above work is accepted at an amount of **Rs. 17,84,83,413.80/- (Rupees Seventeen Crores Eighty Four Lakh Eighty Three Thousand Four Hundred and Thirteen and Eighty Paise Only)** which is 1.10% below the tendered PAC of Rs. 18,04,68,568.01/-

You are directed to attend this office on or before **16/02/2022** with required Kerala Stamp paper worth **Rs.1,00,000/-** (0.1% of accepted PAC, Max Rs 100000) to execute agreement and to start the work after getting necessary instructions from the Executive Engineer, PH Division Sulthan Bathery

1. Before Executing the agreement you should provide **Performance guarantee of Rs. 89,24,500/- (Rupees Eighty Nine lakhs twenty four thousand and five hundred only)**. At least fifty percent(50%) of this shall be in the form of Treasury Fixed Deposit and the balance in the form of Bank Guarantee and produce the pass book duly pledged in favour Superintending Engineer, PH Circle, Kozhikode for fulfilment of



contract. It is informed that no interest shall be payable by KWA upon the security deposit or amount payable to the contractor under the contract. The EMD furnished along with tender will be released on receipt of the Performance guarantee and written request. You are not allowed to convert the EMD submitted by you as Performance Guarantee.

2. Any failure in this direction will be liable to result in the forfeiture of your offer, Permanent Earnest Money and the cancellation of the proposed contract and the contractor shall be liable to pay the Authority the entire loss that may be caused to Authority by the re-tender or the rearrangement of the work or otherwise consequent on the contractor's failure to execute the agreement or execute the work as provided for in the clause of the Notice Inviting Tender and all such loss shall be recovered from the contractor under the provision of the Revenue Recovery Act or otherwise.
3. It must be understood that on no account the rates once fixed will be increased. Payment will be made as per the availability of funds for the scheme.
4. The work should be completed in all respects within 24 Months from the date of work order.
5. All the terms and conditions of the NIT and Special conditions shall be binding on the Contract.
6. The contractor shall take over charge of the site within 10 days after executing agreement and commence the work.
7. The Contractor should complete the work in all respect as per scope of work within the accepted PAC of **Rs. 17,84,83,413.80 /-**.
8. The contractor shall engage a licensed plumber to lay service lines in FHTCs as per the judgement in WPC18399/2020 dated 08/09/2020 of the High Court of Kerala.
9. Payment will be made to the contractor for the total value of the work plus applicable GST.
10. 10% of Accepted PAC is to be secured by beneficiaries. This can be in the form of cash, kind, labour or materials. Hence if beneficiaries contribution is in any form other than cash such items will be accounted accordingly. In such case measurements will be made separately and the contractor will be entitled for payments of such measurements.

Yours faithfully,

Dr.Gireesan P

Superintending Engineer

Copy To

- 1) Chief Engineer (NR), Kerala Water Authority, Kozhikode for favour of information
- 2) Executive Engineer, PH Division, KWA, Sulthan Bathery for necessary action.

The date of handing over the site to the contractor shall be reported to this office.

The cost for geo tagging (@ Rs.20), Statutory fees for water connection(@Rs.575/-) and Additional Connection Fee (@ Rs.500/-) should be recorded in the measurement book.

3. RAO



Encl:

Accepted Schedule



**KERALA WATER AUTHORITY, P.H. CIRCLE, KOZHIKODE****Accepted Schedule****JJM(2021-22) - Phase II - WSS to Manathavady, Edavaka and Nalooradu villages - Providing Functional Household Tap Connections (4000 FHTC) in Edavakka Grama Panchayath in Wayanad District - (3rd SLSSC)****e-Tender No : SE/PHC/KKD/16/2021-22****Tendered PAC: RS:- 18,04,68,568.01****Accepted Rate: RS:- 17,84,83,413.80****Time of completion : 24 Months**

<b>Sl. No.</b>	<b>Item Description</b>	<b>Quantity</b>	<b>Units</b>	<b>Estimated Rate in Rs. P</b>	<b>TOTAL AMOUNT Without Taxes in Rs. P</b>	<b>TOTAL AMOUNT In Words</b>
<b>1</b>	<b>2</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>53</b>	<b>55</b>
	<b>APPENDIX A: Design,Laying,testing and Commissioning of Distribution System-Working Charges</b>					
1.001	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m :All kinds of soil (Ref. Item No. 2.10.1 of DSR)	38893.923	cum	558.99	<b>21741314.02</b>	INR Two Crore Seventeen Lakh Forty One Thousand Three Hundred & Fourteen and Paise Two Only
1.002	Fencing one side of trenches, 1.50 m height with two rows of 10 cm plastic caution tape in vertical casuarina pole (girth 15cm to 24cm) fixed at 2 m intervals. (Data Prepared based on PWD SDB - Item No.1009)	10000.000	metre	28.12	<b>281200.00</b>	INR Two Lakh Eighty One Thousand Two Hundred Only



1.003	"Laying HDPE pipes (IS : 4984)on land portion including conveying within initial lead and aligning the pipes, electro-fusion welding using automatic or semi automatic electrofusion machines, testing the pipe line thus fabricated to suit the hydraulic working pressure and after testing , aligning the pipeline, lowering the pipe in position into the trenches already made, testing the line to suitable pressure with potable water before back filling and leveling the trenches including all labour charge, hire for appliances etc. complete but excluding cost of pipe and fittings. r n 50 mm OD HDPE pipe"	3500.000	metre	78.73	<b>275555.00</b>	INR Two Lakh Seventy Five Thousand Five Hundred & Fifty Five Only
1.004	"Laying HDPE pipes (IS : 4984)on land portion including conveying within initial lead and aligning the pipes, electro-fusion welding using automatic or semi automatic electrofusion machines, testing the pipe line thus fabricated to suit the hydraulic working pressure and after testing , aligning the pipeline, lowering the pipe in position into the trenches already made, testing the line to suitable pressure with potable water before back filling and leveling the trenches including all labour charge, hire for appliances etc. complete but excluding cost of pipe and fittings. r n 63 mm OD HDPE pipe"	4500.000	metre	81.85	<b>368325.00</b>	INR Three Lakh Sixty Eight Thousand Three Hundred & Twenty Five Only
1.005	"Laying HDPE pipes (IS : 4984)on land portion including conveying within initial lead and aligning the pipes, electro-fusion welding using automatic or semi automatic electrofusion machines, testing the pipe line thus fabricated to suit the hydraulic working pressure and after testing , aligning the pipeline, lowering the pipe in position into the trenches already made, testing the line to suitable pressure with potable water before back filling and leveling the trenches including all labour charge, hire for appliances etc. complete but excluding cost of pipe and fittings. r n 75 mm OD HDPE pipe"	15370.000	metre	84.51	<b>1298918.70</b>	INR Twelve Lakh Ninety Eight Thousand Nine Hundred & Eighteen and Paise Seventy Only
1.006	"Laying HDPE pipes (IS : 4984)on land portion including conveying within initial lead and aligning the pipes, electro-fusion welding using automatic or semi automatic electrofusion machines, testing the pipe line thus fabricated to suit the hydraulic working pressure and after testing , aligning the pipeline, lowering the pipe in position into the trenches already made, testing the line to suitable pressure with potable water before back filling and leveling the trenches including all labour charge, hire for appliances etc. complete but excluding cost of pipe and fittings. 90 mm OD HDPE pipe"	15993.000	metre	93.87	<b>1501262.91</b>	INR Fifteen Lakh One Thousand Two Hundred & Sixty Two and Paise Ninety One Only



1.007	Laying HDPE pipes (IS : 4984)on land portion including conveying within initial lead and aligning the pipes, electro-fusion welding using automatic or semi automatic electrofusion machines, testing the pipe line thus fabricated to suit the hydraulic working pressure and after testing , aligning the pipeline, lowering the pipe in position into the trenches already made, testing the line to suitable pressure with potable water before back filling and leveling the trenches including all labour charge, hire for appliances etc. complete but excluding cost of pipe and fittings.110 mm OD HDPE pipeNEW DATA	10017.000	metre	127.30	<b>1275164.10</b>	INR Twelve Lakh Seventy Five Thousand One Hundred & Sixty Four and Paise Ten Only
1.008	Laying HDPE pipes (IS : 4984)on land portion including conveying within initial lead and aligning the pipes, electro-fusion welding using automatic or semi automatic electrofusion machines, testing the pipe line thus fabricated to suit the hydraulic working pressure and after testing , aligning the pipeline, lowering the pipe in position into the trenches already made, testing the line to suitable pressure with potable water before back filling and leveling the trenches including all labour charge, hire for appliances etc. complete but excluding cost of pipe and fittings. 140 mm OD HDPE pipeNEW DATA	4374.000	metre	181.33	<b>793137.42</b>	INR Seven Lakh Ninety Three Thousand One Hundred & Thirty Seven and Paise Forty Two Only
1.009	Laying HDPE pipes (IS : 4984)on land portion including conveying within initial lead and aligning the pipes, electro-fusion welding using automatic or semi automatic electrofusion machines, testing the pipe line thus fabricated to suit the hydraulic working pressure and after testing , aligning the pipeline, lowering the pipe in position into the trenches already made, testing the line to suitable pressure with potable water before back filling and leveling the trenches including all labour charge, hire for appliances etc. complete but excluding cost of pipe and fittings. 160 mm OD HDPE pipe NEW DATA	7937.000	metre	216.53	<b>1718598.61</b>	INR Seventeen Lakh Eighteen Thousand Five Hundred & Ninety Eight and Paise Sixty One Only
1.01	Laying HDPE pipes (IS : 4984)on land portion including conveying within initial lead and aligning the pipes, electro-fusion welding using automatic or semi automatic electrofusion machines, testing the pipe line thus fabricated to suit the hydraulic working pressure and after testing , aligning the pipeline, lowering the pipe in position into the trenches already made, testing the line to suitable pressure with potable water before back filling and leveling the trenches including all labour charge, hire for appliances etc. complete but excluding cost of pipe and fittings.180 mm OD HDPE pipeNEW DATA	2471.000	metre	267.22	<b>660300.62</b>	INR Six Lakh Sixty Thousand Three Hundred and Paise Sixty Two Only
1.011	Laying HDPE pipes (IS : 4984)on land portion including conveying within initial lead and aligning the pipes, electro-fusion welding using automatic or semi automatic electrofusion machines, testing the pipe line thus fabricated to suit the hydraulic working pressure and after testing , aligning the pipeline, lowering the pipe in position into the trenches already made, testing the line to suitable pressure with potable water before back filling and leveling the trenches including all labour charge, hire for appliances etc. complete but excluding cost of pipe and fittings. 200 mm OD HDPE pipeNEW DATA	281.000	metre	321.86	<b>90442.66</b>	INR Ninety Thousand Four Hundred & Forty Two and Paise Sixty Six Only



1.012	Laying HDPE pipes (IS : 4984)on land portion including conveying within initial lead and aligning the pipes, electro-fusion welding using automatic or semi automatic electrofusion machines, testing the pipe line thus fabricated to suit the hydraulic working pressure and after testing , aligning the pipeline, lowering the pipe in position into the trenches already made, testing the line to suitable pressure with potable water before back filling and leveling the trenches including all labour charge, hire for appliances etc. complete but excluding cost of pipe and fittings. 250 mm OD HDPE pipeNEW DATA	2873.000	metre	444.59	<b>1277307.07</b>	INR Twelve Lakh Seventy Seven Thousand Three Hundred & Seven and Paise Seven Only
1.013	Laying HDPE pipes (IS : 4984)on land portion including conveying within initial lead and aligning the pipes, electro-fusion welding using automatic or semi automatic electrofusion machines, testing the pipe line thus fabricated to suit the hydraulic working pressure and after testing , aligning the pipeline, lowering the pipe in position into the trenches already made, testing the line to suitable pressure with potable water before back filling and leveling the trenches including all labour charge, hire for appliances etc. complete but excluding cost of pipe and fittings. 280 mm OD HDPE pipe NEW DATA	94.000	metre	523.04	<b>49165.76</b>	INR Forty Nine Thousand One Hundred & Sixty Five and Paise Seventy Six Only
1.014	Providing and fixing G.I. pipes complete with G.I fittings including trenching and refilling etc. External work40 mm dia nominal bore	1000.000	metre	572.30	<b>572300.00</b>	INR Five Lakh Seventy Two Thousand Three Hundred Only
1.015	Providing and fixing G.I. pipes complete with G.I fittings including trenching and refilling etc. External work50 mm dia nominal bore	500.000	metre	669.51	<b>334755.00</b>	INR Three Lakh Thirty Four Thousand Seven Hundred & Fifty Five Only
1.016	Providing and fixing G.I. pipes complete with G.I fittings including trenching and refilling etc. External work65 mm dia nominal bore	250.000	metre	848.11	<b>212027.50</b>	INR Two Lakh Twelve Thousand & Twenty Seven and Paise Fifty Only
1.017	Providing and fixing G.I. pipes complete with G.I fittings including trenching and refilling etc. External work80 mm dia nominal bore	300.000	metre	1026.23	<b>307869.00</b>	INR Three Lakh Seven Thousand Eight Hundred & Sixty Nine Only
1.018	Supplying 150mm GI Pipe (M) having relevant ISI mark (DSR 2018rate +Cost index)	54.000	metre	1881.10	<b>101579.40</b>	INR One Lakh One Thousand Five Hundred & Seventy Nine and Paise Forty Only
1.019	Supplying 125mm GI Pipe (M) having relevant ISI mark (DSR 2018rate +Cost index)	102.000	metre	1537.21	<b>156795.42</b>	INR One Lakh Fifty Six Thousand Seven Hundred & Ninety Five and Paise Forty Two Only



1.02	Supplying 100mm GI Pipe (M) having relevant ISI mark (DSR 2018rate +Cost index)	102.000	metre	1194.90	<b>121879.80</b>	INR One Lakh Twenty One Thousand Eight Hundred & Seventy Nine and Paise Eighty Only
1.021	Conveying and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc. but excluding cost of pipes and fittings - External work. 100 mm dia nominal bore Observed Data derived from item no.18.12 of DAR	102.000	metre	236.66	<b>24139.32</b>	INR Twenty Four Thousand One Hundred & Thirty Nine and Paise Thirty Two Only
1.022	"Conveying and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc. but excluding cost of pipes and fittings - External work. 125 mm dia nominal bore Observed Data derived from item no.18.12 of DAR	102.000	metre	265.10	<b>27040.20</b>	INR Twenty Seven Thousand &Forty and Paise Twenty Only
1.023	Conveying and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc. but excluding cost of pipes and fittings - External work. 150 mm dia nominal ore Observed Data derived from item no.18.12 of DAR	54.000	metre	293.21	<b>15833.34</b>	INR Fifteen Thousand Eight Hundred & Thirty Three and Paise Thirty Four Only
1.024	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :50 mm nominal bore	50.000	No	1029.51	<b>51475.50</b>	INR Fifty One Thousand Four Hundred & Seventy Five and Paise Fifty Only
1.025	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :65 mm nominal bore	40.000	No	1762.60	<b>70504.00</b>	INR Seventy Thousand Five Hundred & Four Only
1.026	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :80 mm nominal bore	30.000	No	2627.02	<b>78810.60</b>	INR Seventy Eight Thousand Eight Hundred & Ten and Paise Sixty Only
1.027	"Conveying and fixing C.I. sluice valves (with cap) by providing complete with bolts, nuts, rubber insertions etc. excluding the cost of valve (the tail pieces if required will be paid separately) :100 mm diameter. Class I"Data derived from item no.18.31.1.1of DAR	25.000	Nos	892.11	<b>22302.75</b>	INR Twenty Two Thousand Three Hundred & Two and Paise Seventy Five Only
1.028	"Conveying and fixing C.I. sluice valves (with cap) by providing complete with bolts, nuts, rubber insertions etc. excluding the cost of valve (the tail pieces if required will be paid separately) :125 mm diameter. Class I"Data derived from item no.18.31.2.1 of DAR	10.000	Nos	995.40	<b>9954.00</b>	INR Nine Thousand Nine Hundred & Fifty Four Only
1.029	Conveying and fixing C.I. sluice valves (with cap) by providing complete with bolts, nuts, rubber insertions etc. excluding the cost of valve (the tail pieces if required will be paid separately) :150 mm diameter. Class I"Data derived from item no.18.31.3.1 of DAR	10.000	Nos	1208.24	<b>12082.40</b>	INR Twelve Thousand &Eighty Two and Paise Forty Only





1.03	"Conveying and fixing C.I. sluice valves (with cap) by providing complete with bolts, nuts, rubber insertions etc. excluding the cost of valve (the tail pieces if required will be paid separately) :200 mm diameter. Class I"Data derived from item no.18.31.4.1 of DAR	5.000	Nos	1567.42	<b>7837.10</b>	INR Seven Thousand Eight Hundred & Thirty Seven and Paise Ten Only
1.031	"Conveying and fixing C.I. sluice valves (with cap) by providing complete with bolts, nuts, rubber insertions etc. excluding the cost of valve (the tail pieces if required will be paid separately) :250 mm diameter. Class I"Data derived from item no.18.31.5.1 of DAR	5.000	Nos	2221.93	<b>11109.65</b>	INR Eleven Thousand One Hundred & Nine and Paise Sixty Five Only
1.032	Conveying and fixing C I Single acting Air Valve of approved quality with bolts,nuts,rubber insertions etc . excluding the cost of air valve(the tail pieces if required will be paid seperately): 40 mm Single acting Air Valve Observed Data derived from item no.18.59.of DAR	12.000	Nos	177.78	<b>2133.36</b>	INR Two Thousand One Hundred & Thirty Three and Paise Thirty Six Only
1.033	Conveying and fixing C I Single acting Air Valve of approved quality with bolts,nuts,rubber insertions etc . excluding the cost of air valve(the tail pieces if required will be paid seperately):50 mm Double acting Air Valve Data derived from item no.18.59.1 of DAR	10.000	Nos	220.96	<b>2209.60</b>	INR Two Thousand Two Hundred & Nine and Paise Sixty Only
1.034	Conveying and fixing C I Single acting Air Valve of approved quality with bolts,nuts,rubber insertions etc . excluding the cost of air valve(the tail pieces if required will be paid seperately): 80 mm Double acting Air Valve Data derived from item no.18.59.2 of DAR	8.000	Nos	220.96	<b>1767.68</b>	INR One Thousand Seven Hundred & Sixty Seven and Paise Sixty Eight Only
1.035	Dismantling manually / by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer -in-Charge:Bituminous road	6300.001	sqm	363.20	<b>2288160.36</b>	INR Twenty Two Lakh Eighty Eight Thousand One Hundred & Sixty and Paise Thirty Six Only
1.036	Inter connection work from exi.250 mm di to existing 250 di to avoid AC pipe and connect existing branches to the new DI pipe including cost of specials such as tail piece, collar, bend, tee etc. for satisfactory completion of the work	8.000	No	10540.61	<b>84324.88</b>	INR Eighty Four Thousand Three Hundred & Twenty Four and Paise Eighty Eight Only
2	<b>APPENDIX C:Design,Laying and Commissioning of Distribution System-Cost of Materials</b>					
2.001	Supply of PE Pipe, PE100, PN10, 50mm dia, conforming to IS 4984/2016.	3500.000	metre	85.10	<b>297850.00</b>	INR Two Lakh Ninety Seven Thousand Eight Hundred & Fifty Only
2.002	Supply of PE Pipe, PE100, PN10, 63mm dia, conforming to IS 4984/2016.	4500.000	metre	131.25	<b>590625.00</b>	INR Five Lakh Ninety Thousand Six Hundred & Twenty Five Only



2.003	Supply of PE Pipe, PE100, PN8, 75mm dia, conforming to IS 4984/2016.	15370.000	metre	153.30	<b>2356221.00</b>	INR Twenty Three Lakh Fifty Six Thousand Two Hundred & Twenty One Only
2.004	Supply of PE Pipe, PE100, PN8, 90mm dia, conforming to IS 4984/2016.	15993.000	metre	213.70	<b>3417704.10</b>	INR Thirty Four Lakh Seventeen Thousand Seven Hundred & Four and Paise Ten Only
2.005	Supply of PE Pipe, PE100, PN8, 110mm dia, conforming to IS 4984/2016	10017.000	metre	321.75	<b>3222969.75</b>	INR Thirty Two Lakh Twenty Two Thousand Nine Hundred & Sixty Nine and Paise Seventy Five Only
2.006	Supply of PE Pipe, PE100, PN8, 140mm dia, conforming to IS 4984/2016	4374.000	metre	520.35	<b>2276010.90</b>	INR Twenty Two Lakh Seventy Six Thousand & Ten and Paise Ninety Only
2.007	Supply of PE Pipe, PE100, PN8, 160mm dia, conforming to IS 4984/2016.	7937.000	metre	681.80	<b>5411446.60</b>	INR Fifty Four Lakh Eleven Thousand Four Hundred & Forty Six and Paise Sixty Only
2.008	Supply of PE Pipe, PE100, PN8, 180mm dia, conforming to IS 4984/2016.	2471.000	metre	856.05	<b>2115299.55</b>	INR Twenty One Lakh Fifteen Thousand Two Hundred & Ninety Nine and Paise Fifty Five Only
2.009	Supply of PE Pipe, PE100, PN8, 200mm dia, conforming to IS 4984/2016.	281.000	metre	1056.95	<b>297002.95</b>	INR Two Lakh Ninety Seven Thousand & Two and Paise Ninety Five Only
2.01	Supply of PE Pipe, PE100, PN8, 250mm dia, conforming to IS 4984/2016.	2873.000	metre	1644.70	<b>4725223.10</b>	INR Forty Seven Lakh Twenty Five Thousand Two Hundred & Twenty Three and Paise Ten Only
2.011	Supply of PE Pipe, PE100, PN8, 280mm dia, conforming to IS 4984/2016.	94.000	metre	2066.30	<b>194232.20</b>	INR One Lakh Ninety Four Thousand Two Hundred & Thirty Two and Paise Twenty
2.012	Supply of CI Plain End Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 100mm.	25.000	No	4599.40	<b>114985.00</b>	INR One Lakh Fourteen Thousand Nine Hundred & Eighty Five Only



2.013	Supply of CI Plain End Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 125mm.	10.000	No	5460.60	<b>54606.00</b>	INR Fifty Four Thousand Six Hundred & Six Only
2.014	Supply of CI Plain End Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 150mm.	10.000	No	6734.30	<b>67343.00</b>	INR Sixty Seven Thousand Three Hundred & Forty Three Only
2.015	Supply of CI Plain End Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 200mm.	5.000	No	10604.70	<b>53023.50</b>	INR Fifty Three Thousand & Twenty Three and Paise Fifty Only
2.016	Supply of CI Plain End Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 250mm.	5.000	No	18054.25	<b>90271.25</b>	INR Ninety Thousand Two Hundred & Seventy One and Paise Twenty Five Only
2.017	Supply of CI Air Valve, Conforming to IS 14848 - 2000, Double Orifice Type DS2, Size 40mm.	12.000	No	2698.60	<b>32383.20</b>	INR Thirty Two Thousand Three Hundred & Eighty Three and Paise Twenty Only
2.018	Supply of CI Air Valve, Conforming to IS 14848 - 2000, Double Orifice Type DS2, Size 50mm.	10.000	No	2987.75	<b>29877.50</b>	INR Twenty Nine Thousand Eight Hundred & Seventy Seven and Paise Fifty Only
2.019	Supply of CI Air Valve with Flanges, Conforming to IS 14845 - 2000, Kinetic Air Valve Type DS1, Size 80mm.	8.000	No	3568.20	<b>28545.60</b>	INR Twenty Eight Thousand Five Hundred & Forty Five and Paise Sixty Only
3	<b>APPENDIX-D-Design,Laying and Commissioning of Distribution System-Construction of Valve Chambers.</b>					
3.001	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead up to 50 m and lift up to 1.5 m, disposed earth to be levelled and neatly dressed.All kinds of soil	229.501	cum	215.37	<b>49427.63</b>	INR Forty Nine Thousand Four Hundred & Twenty Seven and Paise Sixty Three Only
3.002	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:3:6 ( 1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size)	17.745	cum	7256.36	<b>128764.11</b>	INR One Lakh Twenty Eight Thousand Seven Hundred & Sixty Four and Paise Eleven Only
3.003	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level:1:2:4 ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	17.745	cum	8642.31	<b>153357.79</b>	INR One Lakh Fifty Three Thousand Three Hundred & Fifty Seven and Paise Seventy Nine Only



3.004	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. up to floor five level excluding cost of centering, shuttering, finishing and reinforcement :1:1.5:3( 1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)	55.890	cum	11022.71	<b>616059.26</b>	INR Six Lakh Sixteen Thousand & Fifty Nine and Paise Twenty Six Only
3.005	Reinforced cement concrete work in beams, suspended floors, roofs, having slope up to 15<sup>0</sup> landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases up to floor five level excluding the cost of centering, shuttering, finishing and reinforcement, with 1:1.5:3 (1 cement : 1.5 coarse sand (Zone III) : 3 graded stone aggregate 20 mm nominal size).	23.662	cum	11564.93	<b>273649.37</b>	INR Two Lakh Seventy Three Thousand Six Hundred & Forty Nine and Paise Thirty Seven Only
3.006	Centering and shuttering including strutting, etc. and removal of form for: Foundations, footings, bases of columns, etc for mass concrete	54.600	sqm	337.42	<b>18423.13</b>	INR Eighteen Thousand Four Hundred & Twenty Three and Paise Thirteen Only
3.007	Centering and shuttering including strutting, etc. and removal of form for: Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	795.800	sqm	721.70	<b>574328.86</b>	INR Five Lakh Seventy Four Thousand Three Hundred & Twenty Eight and Paise Eighty Six Only
3.008	Centering and shuttering including strutting, etc. and removal of form for:	91.000	sqm	820.89	<b>74700.99</b>	INR Seventy Four Thousand Seven Hundred and Paise Ninety Nine Only
3.009	Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete upto plinth level Thermo - Mechanically Treated bars of grade Fe-500D or more	10702.670	kilogram	98.92	<b>1058708.12</b>	INR Ten Lakh Fifty Eight Thousand Seven Hundred & Eight and Paise Twelve Only
3.01	12 mm cement plaster finished with a floating coat of neat cement of mix:	414.300	sqm	403.73	<b>167265.34</b>	INR One Lakh Sixty Seven Thousand Two Hundred & Sixty Five and Paise Thirty Four Only



4	<b>APPENDIX E:-Design,Construction and Commissioning of 7LL OHSR at Gov.college compound</b>					
4.001	Clearing grass and removal of the rubbish up to a distance of 50 m outside the periphery of the area cleared.	375.000	sqm	7.57	<b>2838.75</b>	INR Two Thousand Eight Hundred & Thirty Eight and Paise Seventy Five Only
4.002	Earth work in excavation by mechanical means (Hydraulic excavator) /manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.All kinds of soil	144.000	cum	298.80	<b>43027.20</b>	INR Forty Three Thousand & Twenty Seven and Paise Twenty Only
4.003	Earthwork in excavation by mechanical means (Hydraulic excavator)/manual means in foundation trenches or drains (not exceeding 1.5m in width or 10 sqm on plan)including dressing of sides and ramming of bottoms,lift up to 3m,including getting out the excavated soil and disposal of surplus excavated soil as directed,within a lead of 50 m All kinds of soil	144.000	cum	405.84	<b>58440.96</b>	INR Fifty Eight Thousand Four Hundred & Forty and Paise Ninety Six Only
4.004	Earthwork in excavation by mechanical means (Hydraulic excavator)/manual means in foundation trenches or drains (not exceeding 1.5m in width or 10 sqm on plan)including dressing of sides and ramming of bottoms,lift up to 4.5m,including getting out the excavated soil and disposal of surplus excavated soil as directed,within a lead of 50 m All kinds of soil	24.000	cum	512.88	<b>12309.12</b>	INR Twelve Thousand Three Hundred & Nine and Paise Twelve Only
4.005	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40 nominal size)	9.601	cum	6857.61	<b>65839.91</b>	INR Sixty Five Thousand Eight Hundred & Thirty Nine and Paise Ninety One Only
4.006	Centering and shuttering including strutting, etc. and removal of form for:Foundations, footings, bases of columns, etc for mass concrete	43.200	sqm	337.42	<b>14576.54</b>	INR Fourteen Thousand Five Hundred & Seventy Six and Paise Fifty Four Only
4.007	Centering and shuttering including strutting, etc. and removal of form for:Walls (any thickness) including attached pilasters, butteresses, plinth and string courses etc.	419.265	sqm	721.70	<b>302583.55</b>	INR Three Lakh Two Thousand Five Hundred & Eighty Three and Paise Fifty Five Only
4.008	Centering and shuttering including strutting, etc. and removal of form for:	844.489	sqm	820.89	<b>693232.58</b>	INR Six Lakh Ninety Three Thousand Two Hundred & Thirty Two and Paise Fifty Eight Only



4.009	Centering and shuttering including strutting, etc. and removal of form for:	908.160	sqm	653.89	<b>593836.74</b>	INR Five Lakh Ninety Three Thousand Eight Hundred & Thirty Six and Paise Seventy Four Only
4.01	Centering and shuttering including strutting, etc. and removal of form for:Columns, Pillars, Piers, Abutments, Posts and Struts	922.320	sqm	869.05	<b>801542.20</b>	INR Eight Lakh One Thousand Five Hundred & Forty Two and Paise Twenty Only
4.011	Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete upto plinth levelThermo - Mechanically Treated bars of grade Fe-500D or more	7204.200	kilogram	98.92	<b>712639.46</b>	INR Seven Lakh Twelve Thousand Six Hundred & Thirty Nine and Paise Forty Six Only
4.012	Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete above plinth level.Thermo - Mechanically Treated bars of grade Fe-500D or more	52311.000	kg	98.92	<b>5174604.12</b>	INR Fifty One Lakh Seventy Four Thousand Six Hundred & Four and Paise Twelve Only
4.013	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer - in-charge. Note:- Cement content considered in this item is @ 330 kg/ cum. Excess or less cement used as per design mix is payable or recoverable separately.All work upto plinth level	72.042	cum	9472.55	<b>682421.45</b>	INR Six Lakh Eighty Two Thousand Four Hundred & Twenty One and Paise Forty Five Only
4.014	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer - in-charge. Note:- Cement content considered in this item is @ 330 kg/ cum. Excess or less cement used as per design mix is payable or recoverable separately.All work above plinth level upto floor V level	435.925	cum	11135.00	<b>4854024.88</b>	INR Forty Eight Lakh Fifty Four Thousand & Twenty Four and Paise Eighty Eight Only
4.015	12 mm cement plaster of mix:	2796.650	sqm	316.06	<b>883909.20</b>	INR Eight Lakh Eighty Three Thousand Nine Hundred & Nine and Paise Twenty Only



4.016	12 mm cement plaster finished with a floating coat of neat cement of mix:	1607.007	sqm	403.73	<b>648796.94</b>	INR Six Lakh Forty Eight Thousand Seven Hundred & Ninety Six and Paise Ninety Four Only
4.017	Finishing walls with water proofing cement paint of required shade:New work (Two or more coats applied @ 3.84 kg/10 sqm)	1607.007	sqm	108.06	<b>173653.18</b>	INR One Lakh Seventy Three Thousand Six Hundred & Fifty Three and Paise Eighteen Only
4.018	Finishing walls with textured exterior pint of required shade:New work (Two or more coats applied @ 3.28 ltr/ 10 sqm ) over and including priming coat of exterior primer applied @ 2.20 kg/ 10 sqm	2796.650	sqm	274.79	<b>768491.45</b>	INR Seven Lakh Sixty Eight Thousand Four Hundred & Ninety One and Paise Forty Five Only
4.019	Supplying and fixing C.I with out frame for manholes:455 x 610 mm rectangular C.I cover ( light duty ) the weight of the cover to be no less than 23 kg	4.000	No	1570.90	<b>6283.60</b>	INR Six Thousand Two Hundred & Eighty Three and Paise Sixty Only
4.02	Filling water with 5000 litre tankers fitted in lorry and conveying water from a distance of 5 km (average) to the reservoir site and pumping the water into the reservoir of height not less than 3 m using 5 HP diesel engine pump set , hire for tanker lorry, tools and other appliances and cost of water etc. complete."(Ref. No. 000, Technical Circular)"	700.000	Kilo litre	185.67	<b>129969.00</b>	INR One Lakh Twenty Nine Thousand Nine Hundred & Sixty Nine Only
4.021	Item Shifted to head 14 as item 14.74Steel work welded in built up sections/framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.	1500.000	kg	155.13	<b>232695.00</b>	INR Two Lakh Thirty Two Thousand Six Hundred & Ninety Five Only
4.022	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade:Two or more coats on new work	35.438	sqm	143.94	<b>5100.95</b>	INR Five Thousand One Hundred and Paise Ninety Five Only
4.023	Fabricating and fixing wall casting pipe with MS pipe of 250mm for scour and distribution pipe to the reservoir .Charges including labor charge etc.complete	4.000	No	15651.96	<b>62607.84</b>	INR Sixty Two Thousand Six Hundred & Seven and Paise Eighty Four Only
4.024	Supply of DI K9 Pipe Conforming to IS 8329/2000, 250mm Dia.	72.000	metre	2811.20	<b>202406.40</b>	INR Two Lakh Two Thousand Four Hundred & Six and Paise Forty Only
4.025	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 250mm.	4.000	No	18345.20	<b>73380.80</b>	INR Seventy Three Thousand Three Hundred & Eighty and Paise Eighty Only



4.026	"Conveying and fixing C.I. sluice valves (with cap) by providing complete with bolts, nuts, rubber insertions etc. excluding the cost of valve (the tail pieces if required will be paid separately) :250 mm diameter. Class I"Data derived from item no.18.31.5.1 of DAR	4.000	Nos	2221.93	<b>8887.72</b>	INR Eight Thousand Eight Hundred & Eighty Seven and Paise Seventy Two Only
4.027	Conveying and laying Double Flanged (Screwed / Welded) Centrifugally (Spun) Ductile Iron Pipes of Class K-9 conforming to IS: 8329:K-9 conforming to IS: 8329 excluding cost of pipe and specials: 250 mm dia Ductile Iron Double Flanged"Data derived from 18.73.4 in DAR	76.500	metre	199.75	<b>15280.88</b>	INR Fifteen Thousand Two Hundred & Eighty and Paise Eighty Eight Only
4.028	Providing flanged joints to double flanged C.I./ D.I pipes and specials, including testing of joints:250 mm diameter pipe	51.000	Nos	574.14	<b>29281.14</b>	INR Twenty Nine Thousand Two Hundred & Eighty One and Paise Fourteen Only
4.029	supplying and fixing 80mm CI Vent cowl as per the direction of Dept.officers.The charges including all cost labour charges for fixing etc.complete	4.000	No	1161.50	<b>4646.00</b>	INR Four Thousand Six Hundred & Forty Six Only





5	<b>APPENDIX F:-Supply and erection of suitable pumpsets at Raw water pumping at Choottakkadavu Pump house</b>					
5.001	<p>Pump&lt;br&gt;Design, supply, erection, getting approval, testing and commissioning of reputed make vertical turbine pump with bronze impeller, stainless steel shaft/ column assembly with strainer and all accessories, confirming to IS 1710. The pump shall be coupled with motor specified in item No. 2. The duty conditions of pumpsets are given below. &lt;br&gt;Discharge 102 lps Speed upto 1500RPM, Total Head 22 m, Suction Head 15m, Length of Pumping Main 100m and Size of Pumping main 400mm DI pipe.&lt;br&gt;2. Motor&lt;br&gt;Supply, erection, testing and commissioning of reputed make screen protected drip proof squirrel cage induction motor (LT , having maximum speed of 960-1500 rpm) vertical Solid shaft, suitable for operation on 440V, 3 Phase 50 Hz AC- Voltage suitable for the above pumpset with necessary supplying. Non reversible ratchet arrangements etc, complete. The motor should confirm to IS: 325. &lt;br&gt;3. Valves, Reflux valves and Pressure guage:&lt;br&gt;Supply, erection, testing and commissioning of suitable size best quality ISI marked heavy cast iron, double flanged sluice valve as per IS 780 suitable for the above pumpset. &lt;br&gt;4. Cabling: &lt;br&gt;supplying and laying the following size XLPE insulated sheathed armored aluminium conductor cable (1100volts grade to be laid in the built trench. 3 core suitable sq mm XLPE cable (from 11KV/433V , panel as sub station room to starter then to motor and capacitor.) &lt;br&gt;5. End Termination&lt;br&gt;Supply of all materials and providing end termination of the following size XLPE insulated/sheathed armored aluminium conductor cable (1100 volts grade) using heat shrinkable indoor kit for giving power connection to motor control panels, motor etc complete as per standards. 3 core suitable sq XLPE indoor kit. &lt;br&gt;Supply, erection, testing and commissioning of suitable size best quality ISI marked heavy duty cast iron, double flanged reflux valve as per IS 5312 suitable for the above um set. &lt;br&gt;Supply, erection, testing and commissioning of reputed make 150 mm dia, 20 kg/cm2 pressure gauge with stop cock,Suitable size electronic flow meter and accessories suitable for the above pumpset. &lt;br&gt;6. Earthing:&lt;br&gt;supply of all materials and providing of plate earthing using 600mm x600mmx3.15 mm size copper earth plate buried in ground at a depth of 3.00 M from ground level with alternate layers of charcoal and salt including supplying and affixing 38mm dia</p>	90.000	Hp	16033.48	<b>1443013.20</b>	INR Fourteen Lakh Forty Three Thousand &Thirteen and Paise Twenty Only
5.002	<p>Supplying 250mm size electro-magnetic flow meter conforming to protection level of IP-68 for Flow sensor and IP-67 for transmitter and having an accuracy level of 0.5% with LED/LCD display unit. The flow meter should have the housing(flow sensor) to be made of SS 304/Carbon steel with anti corrossive protection and inside liner to be made up of Hard Rubber/neoprene all conforming to drinking water standareds. The flow meter should be coupled with HART for data aquisition and transfer with provision for wire less transfer through GSM. The manufactures should have the calibration standareds as per ISO 17025 and the product shall have sufficient warrenty provisions</p>	1.000	No	157964.00	<b>157964.00</b>	INR One Lakh Fifty Seven Thousand Nine Hundred & Sixty Four Only



6					<b>0.00</b>	
	<b>APPENDIX G:-DEMOLISHING OF EXI.2.5 LL GLSR AND REMOVAL OF DEBRIS AND CLEARING OF SITE</b>					
6.001	Demolishing cement concrete manually / by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in-Charge.Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)	32.301	cum	2057.94	<b>66473.52</b>	INR Sixty Six Thousand Four Hundred & Seventy Three and Paise Fifty Two Only
6.002	Demolishing R.C.C. work manually / by mechanical means including stacking of steel bars and disposal of unserviceable material with in 50 metres lead as per direction of Engineer -in-Charge.	133.659	cum	3002.29	<b>401283.08</b>	INR Four Lakh One Thousand Two Hundred & Eighty Three and Paise Eight Only
6.003	Extra for cutting reinforcement bars manually/ by mechanical means in R.C.C. or R.B. work ( Payment shall be made on the cross sectional area of R.C.C. or R.B work) as per direction of Engineer-in-charge.	314.260	sqm	1022.62	<b>321368.56</b>	INR Three Lakh Twenty One Thousand Three Hundred & Sixty Eight and Paise Fifty Six Only
6.004	Dismantling of C. I sluice valve including stacking of useful materials within a lead of 50 metres.Above 150 mm diameter	2.000	Nos	1040.76	<b>2081.52</b>	INR Two Thousand & Eighty One and Paise Fifty Two Only



7	<b>APPENDIX H:-Supply ,erection and commissioning of CF pump set at Treatment plant site for pumping clear water to 2/4 OHSR at Edavaka</b>					
7.001	<p>Pump&lt;br&gt;Design, supply, erection, getting approval, testing and commissioning of reputed make CF pump with bronze impeller, stainless steel shaft/ column assembly with strainer and all accessories, confirming to IS 1710. The pump shall be coupled with motor specified in item No. 2. The duty conditions of pumpsets are given below.</p> <p>&lt;br&gt;Discharge 25 lps Speed upto 1500RPM, Total Head 94 m, Length of Pumping Main 4735 m and Size of Pumping main 250 mm DI pipe.&lt;br&gt;2. Motor&lt;br&gt;Supply, erection, testing and commissioning of reputed make screen protected drip proof squirrel cage induction motor (LT , having maximum speed of 960-1500 rpm) vertical Solid shaft, suitable for operation on 440V, 3 Phase 50 Hz AC- Voltage suitable for the above pumpset with necessary supplying. Non reversible ratchet arrangements etc, complete. The motor should confirm to IS: 325. &lt;br&gt;3. Valves, Reflux valves and Pressure guage:&lt;br&gt;Supply, erection, testing and commissioning of suitable size best quality ISI marked heavy cast iron, double flanged sluice valve as per IS 780 suitable for the above pumpset. &lt;br&gt;4. Cabling: &lt;br&gt;supplying and laying the following size XLPE insulated sheathed armored aluminium conductor cable (1100volts grade to be laid in the built trench. 3 core suitable sq mm XLPE cable (from 11KV/433V , panel as sub station room to starter then to motor and capacitor.) &lt;br&gt;5. End Termination&lt;br&gt;Supply of all materials and providing end termination of the following size XLPE insulated/sheathed armored aluminium conductor cable (1100 volts grade) using heat shrinkable indoor kit for giving power connection to motor control panels,motor etc complete as per standards. 3 core suitable sq XLPE indoor kit. &lt;br&gt;Supply, erection, testing and commissioning of suitable size best quality ISI marked heavy duty cast iron, double flanged reflux valve as per IS 5312 suitable for the above um set. &lt;br&gt;Supply, erection, testing and commissioning of reputed make 150 mm dia, 20 kg/cm2 pressure gauge with stop cock,Suitable size electronic flow meter and accessories suitable for the above pumpset. &lt;br&gt;6. Earthing:&lt;br&gt;supply of all materials and providing of plate earthing using 600mm x600mmx3.15 mm size copper earth plate buried in ground at a depth of 3.00 M from ground level with alternate layers of charcoal and salt including supplying and affixing 38mm dia perforated GI pipe. funnel for watering purpose,copper strips</p>	90.000	Hp	16234.40	<b>1461096.00</b>	INR Fourteen Lakh Sixty One Thousand &Ninety Six Only



7.002	Supplying 250mm size electro-magnetic flow meter conforming to protection level of IP-68 for Flow sensor and IP-67 for transmitter and having an accuracy level of 0.5% with LED/LCD display unit. The flow meter should have the housing(flow sensor) to be made of SS 304/Carbon steel with anti corrossive protection and inside liner to be made up of Hard Rubber/neoprene all conforming to drinking water standareds. The flow meter should be coupled with HART for data aquisition and transfer with provision for wire less transfer through GSM. The manufactures should have the caliberation standareds as per ISO 17025 and the product shall have sufficient warrenty provisions	1.000	No	157964.00	<b>157964.00</b>	INR One Lakh Fifty Seven Thousand Nine Hundred & Sixty Four Only
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8	<p align="center"><b>APPENDIX I :-Supply ,erection and commissioning of CF pump set at Treatment plant site for clear water pumping to College compound OHSR at Thonichal</b></p>				<b>0.00</b>	
8.001	<p>Pump&lt;br&gt;Design, supply, erection, getting approval, testing and commissioning of reputed make CF pump with bronze impeller, stainless steel shaft/ column assembly with strainer and all accessories, confirming to IS 1710. The pump shall be coupled with motor specified in item No. 2. The duty conditions of pumpsets are given below. &lt;br&gt;Discharge 26 lps Speed upto 1500RPM, Total Head 85 m, Length of Pumping Main 4045 m and Size of Pumping main 250 mm DI pipe.&lt;br&gt;2. Motor&lt;br&gt;Supply, erection, testing and commissioning of reputed make screen protected drip proof squirrel cage induction motor (LT , having maximum speed of 960-1500 rpm) vertical Solid shaft, suitable for operation on 440V, 3 Phase 50 Hz AC- Voltage suitable for the above pumpset with necessary supplying. Non reversible ratchet arrangements etc, complete. The motor should confirm to IS: 325. &lt;br&gt;3. Valves, Reflux valves and Pressure guage:&lt;br&gt;Supply, erection, testing and commissioning of suitable size best quality ISI marked heavy cast iron, double flanged sluice valve as per IS 780 suitable for the above pumpset. &lt;br&gt;4. Cabling: &lt;br&gt;supplying and laying the following size XLPE insulated sheathed armored aluminium conductor cable (1100volts grade to be laid in the built trench. 3 core suitable sq mm XLPE cable (from 11KV/433V , panel as sub station room to starter then to motor and capacitor.) &lt;br&gt;5. End Termination&lt;br&gt;Supply of all materials and providing end termination of the following size XLPE insulated/sheathed armored aluminium conductor cable (1100 volts grade) using heat shrinkable indoor kit for giving power connection to motor control panels,motor etc complete as per standards. 3 core suitable sq XLPE indoor kit. &lt;br&gt;Supply, erection, testing and commissioning of suitable size best quality ISI marked heavy duty cast iron, double flanged reflux valve as per IS 5312 suitable for the above um set. &lt;br&gt;Supply, erection, testing and commissioning of reputed make 150 mm dia, 20 kg/cm2 pressure gauge with stop cock,Suitable size electronic flow meter and accessories suitable for the above pumpset. &lt;br&gt;6. Earthing:&lt;br&gt;supply of all materials and providing of plate earthing using 600mm x600mmx3.15 mm size copper earth plate buried in ground at a depth of 3.00 M from ground level with alternate layers of charcoal and salt including supplying and affixing 38mm dia perforated GI pipe. funnel for watering purpose,copper strips</p>	90.000	Hp	16234.40	<b>1461096.00</b>	INR Fourteen Lakh Sixty One Thousand &Ninety Six Only



8.002	Supplying 250mm size electro-magnetic flow meter conforming to protection level of IP-68 for Flow sensor and IP-67 for transmitter and having an accuracy level of 0.5% with LED/LCD display unit. The flow meter should have the housing(flow sensor) to be made of SS 304/Carbon steel with anti corrosive protection and inside liner to be made up of Hard Rubber/neoprene all conforming to drinking water standards. The flow meter should be coupled with HART for data aquisition and transfer with provision for wire less transfer through GSM. The manufactures should have the caliberation standards as per ISO 17025 and the product shall have sufficient warrenty provisions	1.000	No	157964.00	<b>157964.00</b>	INR One Lakh Fifty Seven Thousand Nine Hundred & Sixty Four Only
9	<b>APPENDIX K:-Renovation works at the WTP site by constructing a pump house.</b>					
9.001	Clearing grass and removal of the rubbish up to a distance of 50 m outside the periphery of the area cleared.	150.000	sqm	7.57	<b>1135.50</b>	INR One Thousand One Hundred & Thirty Five and Paise Fifty Only
9.002	Earth work in excavation by mechanical means (Hydraulic excavator) /manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.All kinds of soil	12.960	cum	298.80	<b>3872.45</b>	INR Three Thousand Eight Hundred & Seventy Two and Paise Forty Five Only
9.003	Earth work in excavation by mechanical means (Hydraulic excavator) /manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift up to 3 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m. All kinds of soil	3.456	cum	405.84	<b>1402.58</b>	INR One Thousand Four Hundred & Two and Paise Fifty Eight Only
9.004	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40 nominal size)	0.864	cum	6857.61	<b>5924.98</b>	INR Five Thousand Nine Hundred & Twenty Four and Paise Ninety Eight Only
9.005	Centering and shuttering including strutting, etc. and removal of form for:Foundations, footings, bases of columns, etc for mass concrete	8.257	sqm	337.42	<b>2786.08</b>	INR Two Thousand Seven Hundred & Eighty Six and Paise Eight Only
9.006	Centering and shuttering including strutting, etc. and removal of form for:	45.596	sqm	820.89	<b>37429.30</b>	INR Thirty Seven Thousand Four Hundred & Twenty Nine and Paise Thirty Only



9.007	Centering and shuttering including strutting, etc. and removal of form for:	41.161	sqm	653.89	<b>26914.77</b>	INR Twenty Six Thousand Nine Hundred & Fourteen and Paise Seventy Seven Only
9.008	Centering and shuttering including strutting, etc. and removal of form for:Columns, Pillars, Piers, Abutments, Posts and Struts	24.960	sqm	869.05	<b>21691.49</b>	INR Twenty One Thousand Six Hundred & Ninety One and Paise Forty Nine Only
9.009	Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete upto plinth levelThermo - Mechanically Treated bars of grade Fe-500D or more	567.480	kilogram	98.92	<b>56135.12</b>	INR Fifty Six Thousand One Hundred & Thirty Five and Paise Twelve Only
9.01	Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete above plinth level.Thermo - Mechanically Treated bars of grade Fe-500D or more	806.520	kg	98.92	<b>79780.96</b>	INR Seventy Nine Thousand Seven Hundred & Eighty and Paise Ninety Six Only
9.011	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer - in-charge. Note:- Cement content considered in this item is @ 330 kg/ cum. Excess or less cement used as per design mix is payable or recoverable separately.All work upto plinth level	4.729	cum	9472.55	<b>44795.69</b>	INR Forty Four Thousand Seven Hundred & Ninety Five and Paise Sixty Nine Only
9.012	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer - in-charge. Note:- Cement content considered in this item is @ 330 kg/ cum. Excess or less cement used as per design mix is payable or recoverable separately.All work above plinth level upto floor V level	6.721	cum	11135.00	<b>74838.34</b>	INR Seventy Four Thousand Eight Hundred & Thirty Eight and Paise Thirty Four Only
9.013	Solid block masonry using pre cast solid blocks ( Factory made) of size 30x20x20cm or nearest available size confirming to IS 2185 Part I of 1979 for super structure up to floor two level thickness 20cm and above in: CM 1:6 ( 1 cement : 6 coarse sand) etc complete	10.734	cum	6665.30	<b>71545.33</b>	INR Seventy One Thousand Five Hundred & Forty Five and Paise Thirty Three Only



9.014	Providing and fixing M.S. Tubular frames for doors, windows, ventilators and cupboard with rectangular /L-Type sections, made of 1.60 mm thick M.S. Sheet, joints mitred, welded and grinded finish, with profiles of required size, including fixing of necessary butt hinges and screws and applying a priming coat of approved steel primer. Fixing with carbon steel galvanised dash fastener of required dia and size ( to be paid for separately)	300.000	kg	148.65	<b>44595.00</b>	INR Forty Four Thousand Five Hundred & Ninety Five Only
9.015	Providing and fixing panelled or panelled and glazed shutters for doors, windows and clerestory windows, including ISI marked M.S. pressed butt hinges bright finished of required size with necessary screws, excluding panelling which will be paid for separately, all complete as per direction of Engineer - in-charge. Second class teak wood Providing and fixing panelled or panelled and glazed shutters for doors, windows and clerestory windows fixing with butt hinges of required size with necessary screws, excluding panelling which will be paid for separately, all complete as per direction of Engineer-in-charge. (Note:- Butt hinges and necessary screws shall be paid separately) Second class teak wood 35 mm thick shutters	11.250	sqm	4279.92	<b>48149.10</b>	INR Forty Eight Thousand One Hundred & Forty Nine and Paise Ten Only
9.016	Providing & fixing glass panes with putty and glazing clips in steel doors, windows, clerestory windows all complete with :4.0 mm thick glass panes	11.250	sqm	1066.62	<b>11999.48</b>	INR Eleven Thousand Nine Hundred & Ninety Nine and Paise Forty Eight Only
9.017	62 mm thick cement concrete flooring with concrete hardener topping, under layer 50 mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) and top layer 12 mm thick cement hardener consisting of mix 1:2 (1 cement hardener mix : 2 graded stone aggregate, 6 mm nominal size) by volume, hardening compound mixed @ 2 litre per 50 kg of cement or as per manufactures specification. This includes cost of cement slurry, but excluding the cost of nosing of steps etc. complete.	21.000	sqm	1011.91	<b>21250.11</b>	INR Twenty One Thousand Two Hundred & Fifty and Paise Eleven Only
9.018	12 mm cement plaster finished with a floating coat of neat cement of mix:	84.342	sqm	403.73	<b>34051.40</b>	INR Thirty Four Thousand & Fifty One and Paise Forty Only
9.019	12 mm cement plaster of mix:	153.283	sqm	316.06	<b>48446.62</b>	INR Forty Eight Thousand Four Hundred & Forty Six and Paise Sixty Two Only
9.02	Finishing walls with water proofing cement paint of required shade: New work (Two or more coats applied @ 3.84 kg/10 sqm)	84.342	sqm	108.06	<b>9114.00</b>	INR Nine Thousand One Hundred & Fourteen Only





9.021	Finishing walls with textured exterior pint of required shade:New work (Two or more coats applied @ 3.28 ltr/ 10 sqm ) over and including priming coat of exterior primer applied @ 2.20 kg/ 10 sqm	153.283	sqm	274.79	<b>42120.64</b>	INR Forty Two Thousand One Hundred & Twenty and Paise Sixty Four Only
9.022	Providing and laying Ceramic glazed floor tiles of size 300x300 mm (thickness to be specified by the manufacturer), of 1st quality conforming to IS : 15622, of approved make, in all colours, shades, except White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick bed of cement mortar 1:4 ( 1 cement : 4 Coarse sand), including pointing the joints with white cement and matching pigments etc., complete.	22.701	sqm	1180.55	<b>26799.67</b>	INR Twenty Six Thousand Seven Hundred & Ninety Nine and Paise Sixty Seven Only
9.023	Supplying and fixing rolling shutters of approved make, made of required size M.S. laths, interlocked together through their entire length and jointed together at the end by end locks, mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS: 4454 - part 1 and M.S. top cover of required thickness for rolling shutters.80x1.25 mm M.S. laths with 1.25 mm thick top cover	4.200	sqm	3487.20	<b>14646.24</b>	INR Fourteen Thousand Six Hundred & Forty Six and Paise Twenty Four Only
9.024	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade:Two or more coats on new work	4.200	sqm	143.94	<b>604.55</b>	INR Six Hundred & Four and Paise Fifty Five Only
9.025	Providing and laying 400 mm DI K9 PIPE and providing and fixing joints conforming to IS 8329/200 including cost of earthwork excavation ,dismantling the existing damaged clear water channel from WTP to clear water sump and disposal of material within 50 meters.	40.000	metre	14000.00	<b>560000.00</b>	INR Five Lakh Sixty Thousand Only



10						
	<b>APPENDIX L:-Providing of FHTC</b>					
10.001	Providing 15mm (1/2 inch) house connection with 15mm water meter from existing PVC / HDPE mains up to 110 mm dia., up to a length of 5m using 20mm ( 1/2 inch ) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PP PN 16 Compression / GM / Brass specials viz. brass ferrule, brass hexagonal nipple, GM full way wheel valve, bend, MTA, FTA, couplers, PVC Service Saddle of suitable size etc. and connecting with the mains, testing the joints etc. complete including trenching and refilling in all kinds of soil up to a depth of 1.50m for main line tracing and trench of average cross section 0.3m x 0.75m for laying connection pipe and service pipe, fixing water meter, lighting, watching, providing caution boards, traffic control etc. complete including cost of materials, hire for tools, cost of consumables and labour charges, including the cost of tested Class B Multijet water meter with ISI mark and weather resistant PP / PE meter box of minimum size 300mm x 200mm x 150mm, but excluding charges for cutting the concrete / tarred / bituminous roads etc, and as per the direction of the departmental officers.	2500.000	Nos	7017.69	<b>17544225.00</b>	INR One Crore Seventy Five Lakh Forty Four Thousand Two Hundred & Twenty Five Only
10.002	Providing 15mm (1/2 inch) house connection with 15mm water meter from existing AC / GI mains up to 125 mm dia., up to a length of 5m using 20mm ( 1/2 inch ) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PP PN 16 Compression / GM / Brass specials viz. brass ferrule, brass hexagonal nipple, GM full way wheel valve, bend, MTA, FTA, couplers, GI / MS Service Saddle of suitable size etc. and connecting with the mains, testing the joints etc. complete including trenching and refilling in all kinds of soil up to a depth of 1.50m for main line tracing and trench of average cross section 0.3m x 0.75m for laying connection pipe and service pipe, fixing water meter, lighting, watching, providing caution boards, traffic control etc. complete including cost of materials, hire for tools, cost of consumables and labour charges, including the cost of tested Class B Multijet water meter with ISI mark and weather resistant PP / PE meter box of minimum size 300mm x 200mm x 150mm, but excluding charges for cutting the concrete / tarred / bituminous roads etc, and as per the direction of the departmental officers.	750.000	Nos	7130.59	<b>5347942.50</b>	INR Fifty Three Lakh Forty Seven Thousand Nine Hundred & Forty Two and Paise Fifty Only



10.003	Providing 15mm (1/2 inch) house connection with 15mm water meter from existing PVC / HDPE mains from 140mm to 200mm dia., up to a length of 5 m using 20mm ( 1/2 inch ) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PP PN 16 Compression / GM / Brass specials viz. brass ferrule, brass hexagonal nipple, GM full way wheel valve, bend, MTA, FTA, couplers, PVC Service Saddle of suitable size etc. and connecting with the mains, testing the joints etc. complete including trenching and refilling in all kinds of soil up to a depth of 1.50m for main line tracing and trench of average cross section 0.3m x 0.75m for laying connection pipe and service pipe, fixing water meter, lighting, watching, providing caution boards, traffic control etc. complete including cost of materials, hire for tools, cost of consumables and labour charges, including the cost of tested Class B Multijet water meter with ISI mark and weather resistant PP / PE meter box of minimum size 300mm x 200mm x 150mm, but excluding charges for cutting the concrete / tarred / bituminous roads etc, and as per the direction of the departmental officers.	850.000	Nos	7110.09	<b>6043576.50</b>	INR Sixty Lakh Forty Three Thousand Five Hundred & Seventy Six and Paise Fifty Only
10.004	Providing additional length of house connection pipe using 20mm (1/2 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PN16 specials and testing the joints etc., by trenching and refilling in all kinds of soil with trench of average cross section 0.3m x 0.75m for laying of connection pipe and service pipe, lighting, watching, providing caution boards, traffic control etc., hire for tools, cost of consumables and labour charges etc. complete, but excluding the cost of cutting of concrete / tarred / bituminous roads, and excluding cost of materials etc., and as per the directions of the department officers.	266500.000	metre	149.47	<b>39833755.00</b>	INR Three Crore Ninety Eight Lakh Thirty Three Thousand Seven Hundred & Fifty Five Only
10.005	Providing 15mm PVC Tap in the water meter assembly for 15mm connection, using 20mm Indian Standard Class 6 uPVC pipes and specials including cost of materials, consumables, hire charges for tools and labour charges etc. complete and as per the direction of departmental officers.	4100.000	Nos	574.04	<b>2353564.00</b>	INR Twenty Three Lakh Fifty Three Thousand Five Hundred & Sixty Four Only
10.006	Providing 20mm ( 1/2 inch ) PVC Air Valve in the water meter assembly for 15mm water connection, using 20mm ( 1/2 inch ) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PP PN 16 Compression specials including cost of materials, consumables, hire for tools and labour charges etc. complete and as per the directions of the department officers.	500.000	Nos	581.33	<b>290665.00</b>	INR Two Lakh Ninety Thousand Six Hundred & Sixty Five Only
10.007	Supply of uPVC Pipe, IS 4985: 2000 , 6kg/cm2, 63mm Dia..	3690.000	metre	98.85	<b>364756.50</b>	INR Three Lakh Sixty Four Thousand Seven Hundred & Fifty Six and Paise Fifty Only



11	<b>APPENDIX O:-Construction of compound wall at 2/4-,Edavaka and collage compound OHSR site,</b>					
11.001	Constructing compound walls around the treatment plant site, reservoir sites with laterate masonry with neatly dressed laterate stone of size 40x20x15cm or nearest size in cement mortar 1:6 for foundation and basement and super structure including all cost of materials, labour charges etc. complete and neatly plastered with 2 mm cement plaster of mix:1:4 ( 1 cement : 4 fine sand). Finishing walls with water proofing cement paint of required shade: New work (Two or more coats applied @ 3.84 kg/10 sqm) .The size of foundation is 40cmx60cm and height of super structure is 1.5m 	180.000	metre	5587.26	<b>1005706.80</b>	INR Ten Lakh Five Thousand Seven Hundred & Six and Paise Eighty Only
11.002	Item Shifted to head 14 as item 14.74 Steel work welded in built up sections/framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.	200.000	kg	155.13	<b>31026.00</b>	INR Thirty One Thousand & Twenty Six Only
12	<b>APPENDIX:- Q - Construction of settling tank attached to treatment plant at Choottakadavu for recycling back wash water with pump set of capacity 100000lit..</b>					
12.001	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth up to 30 cm measured at a height of 1 m above ground level and removal of rubbish up to a distance of 50 m outside the periphery of the area cleared	150.000	sqm	14.87	<b>2230.50</b>	INR Two Thousand Two Hundred & Thirty and Paise Fifty Only
12.002	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead up to 50 m and lift up to 1.5 m, disposed earth to be levelled and neatly dressed. All kinds of soil	107.040	cum	215.37	<b>23053.20</b>	INR Twenty Three Thousand & Fifty Three and Paise Twenty Only
12.003	Earth work in excavation by mechanical means (Hydraulic excavator) /manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift up to 3 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m. All kinds of soil	107.040	cum	405.84	<b>43441.11</b>	INR Forty Three Thousand Four Hundred & Forty One and Paise Eleven Only
12.004	Earth work in excavation by mechanical means (Hydraulic excavator) /manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift up to 4.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m. All kinds of soil	46.384	cum	512.88	<b>23789.43</b>	INR Twenty Three Thousand Seven Hundred & Eighty Nine and Paise Forty Three Only
12.005	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40 nominal size)	7.136	cum	6857.61	<b>48935.90</b>	INR Forty Eight Thousand Nine Hundred & Thirty Five and Paise Ninety Only



12.006	Centering and shuttering including strutting, etc. and removal of form for:Foundations, footings, bases of columns, etc for mass concrete	17.303	sqm	337.42	<b>5838.38</b>	INR Five Thousand Eight Hundred & Thirty Eight and Paise Thirty Eight Only
12.007	Centering and shuttering including strutting, etc. and removal of form for:Walls (any thickness) including attached pilasters, buttersesses, plinth and string courses etc.	226.757	sqm	721.70	<b>163650.53</b>	INR One Lakh Sixty Three Thousand Six Hundred & Fifty and Paise Fifty Three Only
12.008	Centering and shuttering including strutting, etc. and removal of form for:	53.538	sqm	820.89	<b>43948.81</b>	INR Forty Three Thousand Nine Hundred & Forty Eight and Paise Eighty One Only
12.009	Centering and shuttering including strutting, etc. and removal of form for:	7.650	sqm	653.89	<b>5002.26</b>	INR Five Thousand &Two and Paise Twenty Six Only
12.01	Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete upto plinth levelThermo - Mechanically Treated bars of grade Fe-500D or more	6550.100	kilogram	98.92	<b>647935.89</b>	INR Six Lakh Forty Seven Thousand Nine Hundred & Thirty Five and Paise Eighty Nine Only
12.011	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer - in-charge. Note:- Cement content considered in this item is @ 330 kg/ cum. Excess or less cement used as per design mix is payable or recoverable separately.All work upto plinth level	65.501	cum	9472.55	<b>620461.50</b>	INR Six Lakh Twenty Thousand Four Hundred & Sixty One and Paise Fifty Only
12.012	12 mm cement plaster finished with a floating coat of neat cement of mix:	213.040	sqm	403.73	<b>86010.64</b>	INR Eighty Six Thousand &Ten and Paise Sixty Four Only
12.013	12 mm cement plaster of mix:	173.335	sqm	316.06	<b>54784.26</b>	INR Fifty Four Thousand Seven Hundred & Eighty Four and Paise Twenty Six Only
12.014	Finishing walls with water proofing cement paint of required shade:New work (Two or more coats applied @ 3.84 kg/10 sqm)	213.040	sqm	108.06	<b>23021.10</b>	INR Twenty Three Thousand &Twenty One and Paise Ten Only



12.015	Finishing walls with textured exterior pint of required shade:New work (Two or more coats applied @ 3.28 ltr/ 10 sqm ) over and including priming coat of exterior primer applied @ 2.20 kg/ 10 sqm	173.335	sqm	274.79	<b>47630.72</b>	INR Forty Seven Thousand Six Hundred & Thirty and Paise Seventy Two Only
12.016	Supplying and fixing C.I with out frame for manholes:455 x 610 mm rectangular C.I cover ( light duty ) the weight of the cover to be no less than 23 kg	4.000	No	1570.90	<b>6283.60</b>	INR Six Thousand Two Hundred & Eighty Three and Paise Sixty Only
12.017	Filling water with 5000 litre tankers fitted in lorry and conveying water from a distance of 5 km (average) to the reservoir site and pumping the water into the reservoir of height not less than 3 m using 5 HP diesel engine pump set , hire for tanker lorry, tools and other appliances and cost of water etc. complete."(Ref. No. 000, Technical Circular)"	125.000	Kilo litre	185.67	<b>23208.75</b>	INR Twenty Three Thousand Two Hundred & Eight and Paise Seventy Five Only
12.018	Item Shifted to head 14 as item 14.74Steel work welded in built up sections/framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.	225.000	kg	155.13	<b>34904.25</b>	INR Thirty Four Thousand Nine Hundred & Four and Paise Twenty Five Only
12.019	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade:Two or more coats on new work	13.050	sqm	143.94	<b>1878.42</b>	INR One Thousand Eight Hundred & Seventy Eight and Paise Forty Two Only
12.02	Fabricating and Fixing Wall casting pipe with MS pipe of dia 200mm for Scour and Distribution pipe to the reservoir.Charges including all cost labour charges etc. complete.	2.000	No	12450.70	<b>24901.40</b>	INR Twenty Four Thousand Nine Hundred & One and Paise Forty Only
12.021	Fabricating and Fixing Wall casting pipe to the reservoir of dia 100mm for for pumping main .Charges including all cost labour charges etc. complete.	1.000	No	8567.33	<b>8567.33</b>	INR Eight Thousand Five Hundred & Sixty Seven and Paise Thirty Three Only
12.022	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 100mm.	1.000	No	4186.85	<b>4186.85</b>	INR Four Thousand One Hundred & Eighty Six and Paise Eighty Five Only
12.023	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 200mm.	2.000	No	11794.00	<b>23588.00</b>	INR Twenty Three Thousand Five Hundred & Eighty Eight Only
12.024	"Conveying and fixing C.I. sluice valves (with cap) by providing complete with bolts, nuts, rubber insertions etc. excluding the cost of valve (the tail pieces if required will be paid separately) :100 mm diameter. Class I"Data derived from item no.18.31.1.1of DAR	1.000	Nos	892.11	<b>892.11</b>	INR Eight Hundred & Ninety Two and Paise Eleven Only



12.025	"Conveying and fixing C.I. sluice valves (with cap) by providing complete with bolts, nuts, rubber insertions etc. excluding the cost of valve (the tail pieces if required will be paid separately) :200 mm diameter. Class I"Data derived from item no.18.31.4.1 of DAR	2.000	Nos	1567.42	<b>3134.84</b>	INR Three Thousand One Hundred & Thirty Four and Paise Eighty Four Only
12.026	Supplying and fixing 80 mm CI vent cowl as per the direction of Dept.officers.The charges including all cost labour charges for fixing etc. complete.	6.000	No	1161.50	<b>6969.00</b>	INR Six Thousand Nine Hundred & Sixty Nine Only
12.027	Supply and erection of CF pump set with the following specification 1. Pump Supply, erection, testing and commissioning of KWA pre-qualified reputed make Centrifugal pump sets with Bronze/SS impeller, SS shaft and CI pump casing with suitable type base plate with coupling, coupling guard foundation bolts & nuts etc. complete suitable for coupling the pump and motor above the base plate etc. complete including providing suitable concrete foundation including cost of cement sand and metal etc. complete Alternatively the inlet & out let levels, type, size & length of pumping main etc. can be given. Modification may done for monoblock pump sets 2. Motor Supply, erection, testing and commissioning of KWA pre qualified reputed make horizontal solid shaft foot mounted TEFC squirrel cage induction motor suitable for the above pump working 3 phase 50 Hz AC supply, working voltage 415 V/3300V (select the suitable). The motor shall confirm to EEF1/IS 325 including providing suitable concrete foundation including cost of cement sand and metal etc. complete For 3300v motors digital motor protection relay shall be included in starter as per present IE rules. Flexible coupling shall be used for coupling of pumps and motors. 3. Starter Supply, erection, testing and commissioning of suitable rating (Fully Automatic starter with air break contact for less than 100 HP and for above 100 HP FCMA starters to be used.) starter suitable for the above motor with over voltage and under voltage protection, single phase preventer, over load relay with motor protection relay with main contactor and bypass contactor as per IE rules and code of practice etc. complete. 4. Panel board (suitable for operating two pump sets but one pump set at a time) Supply, erection, testing and commissioning of cubical type floor mounted MS fabricated dust and vermin proof common control panel board consisting of 1 No. suitable capacity MCCB as incomer and 2 Nos of suitable capacity MCCB as out going (the two MCCBs are interlocking with each other) providing suitable size Aluminium bus bar inter connect the above MCCBs and fitted with 3 Nos of indicator lamps, 1 No. volt meter with selector switch, 1 No. Ammeter with selector switch etc. Complete and provided with a common earth bus for the entire panel and inter connect with the MCCBs as per IE rules and code of practice. The panel shall be fitted on a common	10.000	Hp	24470.36	<b>244703.60</b>	INR Two Lakh Forty Four Thousand Seven Hundred & Three and Paise Sixty Only



13	<b>Appendix-R:-Road restoration works other than PWD roads</b>				
13.001	Cutting the bituminous / concrete roads with cutting machine for a minimum depth of 200mm along the sides of proposed alignment of the pipe to be laid without causing any damage to other utilities, including the charges for hire and conveyance of tools and plant, cost of consumables and charges for lighting, watching, ribbon fencing, caution boards, traffic diversion, and as per the direction of departmental officers etc. complete, before carrying out the demolition of bituminous / concrete road by mechanical means and carrying out the excavation.	25000.000	metre	30.63	<b>765750.00</b> INR Seven Lakh Sixty Five Thousand Seven Hundred & Fifty Only
13.002	Supply ,stacking,spreading and consolidating of Quarry Muck in the trench of pipe line, including carriage, loading ,unloading & stacking up to any lead.	750.000	cum	549.44	<b>412080.00</b> INR Four Lakh Twelve Thousand &Eighty Only
13.003	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:2:4 (cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	450.000	cum	8040.95	<b>3618427.50</b> INR Thirty Six Lakh Eighteen Thousand Four Hundred & Twenty Seven and Paise Fifty Only
13.004	Excavation for road work in soil, Compacting Original Ground supporting sub grade Loosening of the ground up to a level of 300 mm below the sub grade level, watered, graded and compacted in layers to meet requirement of Tables 300.1 and 300.2 for sub grade construction as per Technical Specification Clause 303.5.2. (Rate as per LSGD data MoRD 3.15.2)	1875.000	cum	60.70	<b>113812.50</b> INR One Lakh Thirteen Thousand Eight Hundred & Twelve and Paise Fifty Only
13.005	Providing , laying spreading and compacting graded stone aggregate ( size range 53 mm to 0.075 mm) to wet mix macadam (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub - base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density, complete as per specifications and directions of Engineer - in- Charge.	1875.000	cum	3128.64	<b>5866200.00</b> INR Fifty Eight Lakh Sixty Six Thousand Two Hundred Only
13.006	Prime Coat - Bitumen Emulsion (SS-1) Providing and applying primer coat with bitumen emulsion (SS-1) on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.70-1.0 kg/sqm using mechanical means as per Technical Specification Clause 502(low porosity). (Rate as per Item code of 51.16.PC.1 of LSGD data)	20000.000	sqm	68.08	<b>1361600.00</b> INR Thirteen Lakh Sixty One Thousand Six Hundred Only
13.007	Tack Coat - RS Bitumen Emulsion Providing and applying tack coat with Bitumen emulsion (RS-1) using emulsion distributor at the rate of 0.25 to 0.30 kg per sqm on the prepared granular surfaces treated with primer & cleaned with Hydraulic broom as per Technical Specification Clause 503.Data as per item No. 51.16.31.1.3 of LSGD	20000.000	sqm	13.35	<b>267000.00</b> INR Two Lakh Sixty Seven Thousand Only





13.008	5.9.1.2a 20mm thick Open-Graded Premix Carpet using Bituminous (penetration grade/modified bitumen) Binder - Bitumen S-65 Providing, laying and rolling of open-graded premix carpet of 20 mm thickness composed of 13.2 mm to 5.6 mm aggregates either using penetration grade bitumen or emulsion to required line, grade and level to serve as wearing course on a previously prepared base, including mixing in a suitable plant, laying and rolling with a three wheel 80-100 kN static roller capacity, finished to required level and grades to be followed by seal coat of either Type A or Type B or Type C as per Technical Specification Clause 508. Case - I By Manual Means (II) Bitumen (S-65) (As per LSGD data)	20000.000	sqm	157.81	<b>3156200.00</b>	INR Thirty One Lakh Fifty Six Thousand Two Hundred Only
13.009	Seal Coat - Mechanical Means - Type C - Bitumen S-65 Providing and laying seal coat sealing the voids in a bituminous surface laid to the specified levels, grade and cross fall using Type A, Type B and Type C as per Technical Specification Clause 510 B. By Mechanical Means :- Case - III : Type C (II) Bitumen (S-65) (Rate as per LSGD data)	20000.000	sqm	67.69	<b>1353800.00</b>	INR Thirteen Lakh Fifty Three Thousand Eight Hundred Only
<b>Total in Figures</b>					<b>180468568.01</b>	INR Eighteen Crore Four Lakh Sixty Eight Thousand Five Hundred & Sixty Eight and Paise Five Only
<b>Quoted Rate in Figures</b>						
					<b>Less (-)</b>	<b>1.10%</b>
					<b>178483413.76</b>	INR Seventeen Crore Eighty Four Lakh Eighty Three Thousand Four Hundred & Fourteen Only
<b>Quoted Rate in Words</b>					<b>INR Seventeen Crore Eighty Four Lakh Eighty Three Thousand Four Hundred &amp; thirteen Only</b>	

work order 1





**JJM (2021-22)- PhaseII -WSS To Manathavadi ,Edavaka and Nallornad villages - Providing FHTC (4000FHTC) n Edavaka Grama Panchayath in Wayanad District (3rd SLSSC)**

**e Tender No.SE/PHC/KKD16/2021-22**

**Abstract**

Tendered PAC	=	Rs. <b>18,04,68,568</b>
Accepted Rate	=	Rs. <b>17,84,83,413.76</b>
% over all Excess / Below	=	$\frac{180468568.01 - 17483413.76}{180468568} \times 100$
	=	<b>-1.10 % Beow Tendered PAC</b>

