



Tel : 0495 - 2371046

KERALA WATER AUTHORITY

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

No. 1926/D5/2022/PHC-KKD

Dated: 15.10.2022

From

Superintending Engineer

To

KT.Manoj,
Keecheri House,
Nenmenikunnu,
Sulthan Bathery,
Wayanad,
Kerala 673595

Sir

Sub:- JJM-2022-24- Providing FHTC in Mullankolly Panchayath in Wayanad District by Augmentation of the scheme CWSS to Pulpally and Mullankolly - 4600 FHTC. -Work Order issued-Reg.

Ref:- 1.AS No : G.O.(Rt) No.134/2022/WRD Dtd : 23/02/2022 for Rs. 5310 lakhs
2. TS/2022-2023/2021 /36559 Dated: 08-07-2022 of The Chief Engineer Northern Region Kozhikode for Rs. 4680 lakhs
3. Tender No. SE/PHC/KKD/15/2022-23 Dtd : 12/07/2022
4.OrderNo:KWA/CENR/D1W/JJMPH2/FHTC/MULLANKOLLY PT Dated 14.10.2022 of Chief Engineer Northern Region Kozhikode.

With reference to the above, you are hereby informed that your tender for the above work is accepted at an amount of **Rs.36,46,43,508.83 (Rupees Thirty Six Crore Forty Six Lakh Forty Three Thousand Five Hundred and Eight and Paise Eighty Three Only)** which is **4.11%** below the tendered PAC of **Rs. 38,02,97,169/-**

You are directed to attend this office on or before **29/10/2022** with required Kerala Stamp paper worth **Rs.100000/-** (0.1% of accepted PAC, Maximum Rs 100000) to execute agreement and to start the work after getting necessary instructions from the Executive Engineer, Project Division Kozhikode

1. Before Executing the agreement you should provide **Performance**



guarantee of ₹ 1,09,39,500/-. 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 of Superintending Engineer, PH Circle, Kozhikode for fulfillment 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 **18 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.36,46,43,508.83/-**
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.
11. In NIT Vol-1 "The additional special conditions (regarding pipe supply) mentioned are not relevant to this work. The trenching width given in NIT Vol-1 & NIT Vol-2(Clause No-4.12) is miss matching; these are to be ignored. The quantities given in schedule and approved estimate have precedence.
12. Clause 5 of Government Order No G.O.(P)No.54/2019/Fin dated 04.05.2019 will be applicable to this work .
13. In case you desire to file any appeal on this order, you may approach the following higher authorities in succession. (1) Chief Engineer (Northern Region), KWA, Kozhikode, (P.O). Malapparamba. 673019 (2) Managing Director, KWA, Jalabhavan, (P.O) Vellyampalam, Thiruvananthapuram.



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,Sulthan Bathery, KWA. 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.1075/-)should be recorded in the measurement



ACCEPTED SHEDULE

KERALA WATER AUTHORITY, PH CIRCLE, KOZHIKODE

JJM (2021-24) - Phase II (4th SWSM) - Providing FHTC in Mullankolly Panchayath in Wayanad District by Augmentation of the scheme CWSS to Pulpally and Mullankolly - 4600 FHTC

e-TENDER No. SE/PHC/KKD/15/2022-23

Name of Contractor. Manoj KT**Tendered PAC .Rs****380297169/-****Accepted PAC.Rs****364643508.8****Time of Completion****18 month**

Sl. No.	Item Description	Quantity	Units	BASIC RATE In Figures To be entered by the Bidder in Rs. P	TOTAL AMOUNT With Taxes Except GST in Rs. P	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
1	Appendix- 1:Construction of 8.0m Dia Well cum Pump House at Manzhadikadavu					
1.001	RING BUND Type-I-Putting up ring bund as per approved shape 2.5m bottom width, 1m top width using empty gunny/polythene bags filled with earth placed in 2 rows at 0.6m apart and filled in between with puddle clay to form bund for an average height 2.00m including labour dismantling the bund after completion of the work etc. complete.	60.000	metre	1471.27	88276.20	INR Eighty Eight Thousand Two Hundred & Seventy Six and Paise Twenty Only
1.002	Earthwork open well excavation (above water) for wells of dia. above 6.0m and upto 9.0 m in all kinds of soil and conveying and depositing the spoil within initial lead of 50m and lift up to 1.5 m including neat banking.NEW DATA	117.750	cum	435.81	51316.63	INR Fifty One Thousand Three Hundred & Sixteen and Paise Sixty Three Only
1.003	Earthwork open well excavation (in or under water) for wells of dia. above 6.0m and upto 9.0 m in ordinary rock in ordinary rock and conveying and depositing the spoil within initial lead of 50m and lift from 1.50m to 3.0 m including neat banking.NEW DATA	117.750	cum	1472.78	173419.85	INR One Lakh Seventy Three Thousand Four Hundred & Nineteen and Paise Eighty Five Only
1.004	Granite rock blasting in wells,measured in solids,including collecting and stacking spoil for measurement within the inital lead of 50m and lift upto 4.50m(2 nd depth 3.00m to 4.50m) but excluding bailing out water.(Ref. Item No. 1098 (c) of T C)	117.750	cum	1215.85	143166.34	INR One Lakh Forty Three Thousand One Hundred & Sixty Six and Paise Thirty Four Only
1.005	Granite rock blasting in wells, measured in solids, including collecting and stacking spoil for measurement within the initial lead of 50m and lift up to 6.0m (4.5m to 6.0m) but excluding bailing out water.	117.750	cum	1369.04	161204.46	INR One Lakh Sixty One Thousand Two Hundred & Four and Paise Forty Six Only
1.006	Granite rock blasting in wells, measured in solids, including collecting and stacking spoil for measurement within the initial lead of 50m and lift up to 6.0m (6m to 7.50 m) but excluding bailing out water	108.519	cum	1522.22	165189.79	INR One Lakh Sixty Five Thousand One Hundred & Eighty Nine and Paise Seventy Nine Only



1.007	Granite rock blasting in wells, measured in solids, including collecting and stacking spoil for measurement within the initial lead of 50m and lift up to 6.0m (7.5 m to 9.0m) but excluding bailing out water.	108.519	cum	4868.06	528277.00	INR Five Lakh Twenty Eight Thousand Two Hundred & Seventy Seven Only
1.008	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	221.616	cum	206.49	45761.49	INR Forty Five Thousand Seven Hundred & Sixty One and Paise Forty Nine Only
1.009	Extra for every additional lift 1.5 m or part there of in excavation / banking excavated or stacked materials.All kinds of soil	83.106	cum	102.63	8529.17	INR Eight Thousand Five Hundred & Twenty Nine and Paise Seventeen Only
1.01	Bailing out water with 5 HP engine and pumpset including conveyance to the site, erection, dismantling and taking back of engine and pump, cost of fuel lubricating oil and other stores pay of staff etc. complete.NEW DATA (Prepared based on PHED SDB - Item No.1070	5000.000	Kwh	35.65	178250.00	INR One Lakh Seventy Eight Thousand Two Hundred & Fifty Only
1.011	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)	12.276	cum	6574.87	80713.10	INR Eighty Thousand Seven Hundred & Thirteen and Paise Ten Only
1.012	Reinforced cement concrete work in well - steining 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)	201.744	cum	8256.36	1665671.09	INR Sixteen Lakh Sixty Five Thousand Six Hundred & Seventy One and Paise Nine Only
1.013	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 above plinth level upto floor V level	60.398	cum	10675.90	644803.01	INR Six Lakh Forty Four Thousand Eight Hundred & Three and Paise One Only
1.014	Centering and shuttering including strutting, etc. and removal of form for:Foundations, footings, bases of columns, etc for mass concrete	141.560	sqm	323.51	45796.08	INR Forty Five Thousand Seven Hundred & Ninety Six and Paise Eight Only
1.015	Centering and shuttering including strutting, etc. and removal of form for:Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	327.200	sqm	691.94	226402.77	INR Two Lakh Twenty Six Thousand Four Hundred & Two and Paise Seventy Seven Only
1.016	Centering and shuttering including strutting, etc. and removal of form for:Well steining	578.577	sqm	240.89	139373.41	INR One Lakh Thirty Nine Thousand Three Hundred & Seventy Three and Paise Forty One Only
1.017	Centering and shuttering including strutting, etc. and removal of form for:	210.173	sqm	787.04	165414.56	INR One Lakh Sixty Five Thousand Four Hundred & Fourteen and Paise Fifty Six Only
1.018	Centering and shuttering including strutting, etc. and removal of form for:Columns, Pillars, Piers, Abutments, Posts and Struts	76.950	sqm	833.22	64116.28	INR Sixty Four Thousand One Hundred & Sixteen and Paise Twenty Eight Only
1.019	Centering and shuttering including strutting, etc. and removal of form for:	144.796	sqm	626.93	90776.96	INR Ninety Thousand Seven Hundred & Seventy Six and Paise Ninety Six Only



1.02	Centering and shuttering including strutting, etc. and removal of form for:Stairs, (excluding landings) except spiral - staircases)	6.750	sqm	706.73	4770.43	INR Four Thousand Seven Hundred & Seventy and Paise Forty Three Only
1.021	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	22988.800	kg	94.84	2180257.79	INR Twenty One Lakh Eighty Thousand Two Hundred & Fifty Seven and Paise Seventy Nine Only
1.022	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in:	23.472	cum	8620.02	202329.11	INR Two Lakh Two Thousand Three Hundred & Twenty Nine and Paise Eleven Only
1.023	Structural steel work in single section, fixed with or without connecting plate, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	303.750	kilogram	97.72	29682.45	INR Twenty Nine Thousand Six Hundred & Eighty Two and Paise Forty Five Only
1.024	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.	270.000	kg	148.73	40157.10	INR Forty Thousand One Hundred & Fifty Seven and Paise Ten Only
1.025	Providing and fixing panelling or panelling and glazing in panelled or panelled and glazed shutters for doors, windows and clerestory windows (Area of opening for panel inserts excluding portion inside grooves or rebates to be measured), Panelling for panelled or panelled and glazed shutters 25 mm to 40 mm thick:Float glass panes4 mm thick glass pane	6.750	sqm	2035.67	13740.77	INR Thirteen Thousand Seven Hundred & Forty and Paise Seventy Seven Only
1.026	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	6.301	sqm	3343.42	21066.89	INR Twenty One Thousand & Sixty Six and Paise Eighty Nine Only
1.027	12 mm cement plaster finished with a floating coat of neat cement of mix:	891.753	sqm	387.08	345179.75	INR Three Lakh Forty Five Thousand One Hundred & Seventy Nine and Paise Seventy Five Only
1.028	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing, staircase railing and similar works, including applying priming coat of approved steel primer.	596.993	kg	165.41	98748.61	INR Ninety Eight Thousand Seven Hundred & Forty Eight and Paise Sixty One Only
1.029	Applying priming coat:With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron /steel works	35.333	sqm	57.55	2033.41	INR Two Thousand & Thirty Three and Paise Forty One Only
1.03	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade:Two or more coats on new work	35.333	sqm	138.01	4876.31	INR Four Thousand Eight Hundred & Seventy Six and Paise Thirty One Only
1.031	DRY RUBBLE MASONRY _ Dry rubble without concrete levelling course masonry with good quality blasted rubble including packing to compactness to lines and levels cost and conveyance of all materials labour charges etc. complete as per direction of Departmental officers at site	17.115	cum	3368.52	57652.22	INR Fifty Seven Thousand Six Hundred & Fifty Two and Paise Twenty Two Only
1.032	Finishing walls with water proofing cement paint of required shade:New work (Two or more coats applied @ 3.84 kg/10 sqm)	897.750	sqm	103.60	93006.90	INR Ninety Three Thousand & Six and Paise Ninety Only



1.033	Supplying and fixing 500mm dia CI manhole cover with frame(medium duty) charges including all cost, labour charges etc complete.	2.000	Nos	7242.68	14485.36	INR Fourteen Thousand Four Hundred & Eighty Five and Paise Thirty Six Only
1.034	Providing and laying D.I specials of class K - 12 suitable for push - on jointing as per IS : 9523 :	1.200	quintal	19412.89	23295.47	INR Twenty Three Thousand Two Hundred & Ninety Five and Paise Forty Seven Only
1.035	Dry stone pitching 22.5 cm thick including supply of stones and preparing surface complete.	69.560	sqm	829.23	57681.24	INR Fifty Seven Thousand Six Hundred & Eighty One and Paise Twenty Four Only
1.036	Lettering with black Japan pint of approved brand and manufacture	3940.000	Letterxcm ht	5.36	21118.40	INR Twenty One Thousand One Hundred & Eighteen and Paise Forty Only
2	Appendix- 2: Construction of bridge to well cum pump house at Manhadikadavu					
2.001	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	162.350	cum	206.49	33523.65	INR Thirty Three Thousand Five Hundred & Twenty Three and Paise Sixty Five Only
2.002	Filling with contractor own earth (excluding rock) in open areas in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift up to 1.5 m as per direction of site Engineer-in-charge.	375.000	cum	285.11	106916.25	INR One Lakh Six Thousand Nine Hundred & Sixteen and Paise Twenty Five Only
2.003	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40 nominal size)	8.034	cum	6574.87	52822.51	INR Fifty Two Thousand Eight Hundred & Twenty Two and Paise Fifty One Only
2.004	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	13.235	cum	9082.00	120200.27	INR One Lakh Twenty Thousand Two Hundred and Paise Twenty Seven Only
2.005	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	32.551	cum	10675.90	347511.22	INR Three Lakh Forty Seven Thousand Five Hundred & Eleven and Paise Twenty Two Only
2.006	Centering and shuttering including strutting, etc. and removal of form for:Foundations, footings, bases of columns, etc for mass concrete	32.641	sqm	323.51	10559.69	INR Ten Thousand Five Hundred & Fifty Nine and Paise Sixty Nine Only



2.007	Centering and shuttering including strutting, etc. and removal of form for:Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	85.400	sqm	691.94	59091.68	INR Fifty Nine Thousand & Ninety One and Paise Sixty Eight Only
2.008	Centering and shuttering including strutting, etc. and removal of form for:	53.921	sqm	787.04	42437.98	INR Forty Two Thousand Four Hundred & Thirty Seven and Paise Ninety Eight Only
2.009	Centering and shuttering including strutting, etc. and removal of form for:	71.193	sqm	626.93	44633.03	INR Forty Four Thousand Six Hundred & Thirty Three and Paise Three Only
2.01	Centering and shuttering including strutting, etc. and removal of form for:Columns, Pillars, Piers, Abutments, Posts and Struts	41.268	sqm	833.22	34385.32	INR Thirty Four Thousand Three Hundred & Eighty Five and Paise Thirty Two Only
2.011	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	5229.621	kg	94.84	495977.26	INR Four Lakh Ninety Five Thousand Nine Hundred & Seventy Seven and Paise Twenty Six Only
2.012	12 mm cement plaster finished with a floating coat of neat cement of mix:	245.502	sqm	387.08	95028.91	INR Ninety Five Thousand & Twenty Eight and Paise Ninety One Only
2.013	Applying priming coat:With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron /steel works	6.301	sqm	57.55	362.62	INR Three Hundred & Sixty Two and Paise Sixty Two Only
2.014	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade:Two or more coats on new work	6.301	sqm	138.01	869.60	INR Eight Hundred & Sixty Nine and Paise Sixty Only
2.015	Finishing walls with water proofing cement paint of required shade:New work (Two or more coats applied @ 3.84 kg/10 sqm)	245.502	sqm	103.60	25434.01	INR Twenty Five Thousand Four Hundred & Thirty Four and Paise One Only
3	Appendix - 3: Construction of toilet at well cum pump house site Manzhadikadavu					
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	27.372	cum	206.49	5652.04	INR Five Thousand Six Hundred & Fifty Two and Paise Four 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:1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40 nominal size)	1.429	cum	6574.87	9395.49	INR Nine Thousand Three Hundred & Ninety Five and Paise Forty Nine Only
3.003	Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) up to plinth level with:	2.755	cum	6951.02	19150.06	INR Nineteen Thousand One Hundred & Fifty and Paise Six Only
3.004	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift up to 1.5 m.Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundation etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift up to 1.5 m.	0.638	cum	249.46	159.16	INR One Hundred & Fifty Nine and Paise Sixteen Only



3.005	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	2.893	cum	10675.90	30885.38	INR Thirty Thousand Eight Hundred & Eighty Five and Paise Thirty Eight Only
3.006	Centering and shuttering including strutting, etc. and removal of form for:Foundations, footings, bases of columns, etc for mass concrete	3.662	sqm	323.51	1184.69	INR One Thousand One Hundred & Eighty Four and Paise Sixty Nine Only
3.007	Centering and shuttering including strutting, etc. and removal of form for:	17.571	sqm	787.04	13829.08	INR Thirteen Thousand Eight Hundred & Twenty Nine and Paise Eight Only
3.008	Centering and shuttering including strutting, etc. and removal of form for:	5.680	sqm	626.93	3560.96	INR Three Thousand Five Hundred & Sixty and Paise Ninety Six Only
3.009	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	231.440	kg	94.84	21949.77	INR Twenty One Thousand Nine Hundred & Forty Nine and Paise Seventy Seven Only
3.01	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in:	6.640	cum	8620.02	57236.93	INR Fifty Seven Thousand Two Hundred & Thirty Six and Paise Ninety Three Only
3.011	Providing and fixing factory made panel PVC door shutter consisting of frame made out of M.S. tubes of 19 gauge thickness and sized of 19 mm x 19 mm for styles and 15x15 mm for top & bottom rails. M.S. frame shall have a coat of steel primers of approved make and manufacture. M.S. frame covered with 5 mm thick heat moulded PVC 'C' channel of size 30 mm thickness, 70 mm width out of which 50 mm shall be flat and 20 mm shall be tapered in 45 degree angle on both side forming styles and 5mm thick, 95 mm wide PVC sheet out of which 75 mm shall be tapered in 45 degree on th inner side to form top and bottom rail and 115 mm wide PVC sheet out of which 75 mm shall be flat and 20 mm shall be tapered on both sides to form lock rail. Top, bottom and lock rails shall be provided both side of the panel. 10 mm (5 mmx2) thick, 20 mm wide cross PVC sheet be provided as gap insert for top rail & bottom rail. paneling of 5 mm thick both side PVC sheet to be fitted in the M.S. frame welded /sealed to the styles & rails with 7 mm (5 mm + 2 mm) thick x 15 mm wide PVC sheet beading on inner side, and joined together with solvent cement adhesive. An additional 5 mm thick PVC strip of 20 mm width is to be stuck on the interior side of the 'C' Channel using PVC solvent adhesive etc. complete as per direction of Engineer -in-charge, manufacture's specification & drawing.30 mm thick plain PVC door shutters	1.891	sqm	2752.07	5204.16	INR Five Thousand Two Hundred & Four and Paise Sixteen Only
3.012	12 mm cement plaster finished with a floating coat of neat cement of mix:	76.923	sqm	387.08	29775.35	INR Twenty Nine Thousand Seven Hundred & Seventy Five and Paise Thirty Five Only



3.013	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.	4.399	sqm	1131.88	4979.14	INR Four Thousand Nine Hundred & Seventy Nine and Paise Fourteen Only
3.014	Structural steel work in single section, fixed with or without connecting plate, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	12.150	kilogram	97.72	1187.30	INR One Thousand One Hundred & Eighty Seven and Paise Thirty Only
3.015	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.	10.800	kg	148.73	1606.28	INR One Thousand Six Hundred & Six and Paise Twenty Eight Only
3.016	Providing and fixing panelling or panelling and glazing in panelled or panelled and glazed shutters for doors, windows and clerestory windows (Area of opening for panel inserts excluding portion inside grooves or rebates to be measured), Panelling for panelled or panelled and glazed shutters 25 mm to 40 mm thick: Float glass panes 4 mm thick glass pane	0.270	sqm	2035.67	549.63	INR Five Hundred & Forty Nine and Paise Sixty Three Only
3.017	Applying priming coat: With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron /steel works	0.270	sqm	57.55	15.54	INR Fifteen and Paise Fifty Four Only
3.018	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade: Two or more coats on new work	0.270	sqm	138.01	37.26	INR Thirty Seven and Paise Twenty Six Only
3.019	Finishing walls with water proofing cement paint of required shade: New work (Two or more coats applied @ 3.84 kg/10 sqm)	46.305	sqm	103.60	4797.20	INR Four Thousand Seven Hundred & Ninety Seven and Paise Twenty Only
3.02	Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100 mm Sand Cast Iron P or S trap, 10 litter low level white P.V.C. flushing cistern, including flush pipe, manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever require: White Vitreous china Orissa pattern W.C. pan of size 580x440 mm with integral type foot rests	1.000	No	6156.86	6156.86	INR Six Thousand One Hundred & Fifty Six and Paise Eighty Six Only
3.021	Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps, 32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require: White Vitreous China Wash basin size 550x400 mm with a pair of 15 mm C.P. brass pillar taps	1.000	No	3233.03	3233.03	INR Three Thousand Two Hundred & Thirty Three and Paise Three Only
3.022	Providing and fixing S.W. intercepting trap in manholes with stiff mixture of cement mortar 1:1 (1 cement:1 fine sand) including testing of joints etc. complete: 100 mm dia	2.000	No	415.20	830.40	INR Eight Hundred & Thirty and Paise Forty Only
3.023	Providing and fixing mirror of superior glass (of approved quality) and of required shape and size with plastic moulded frame of approved make and shade with 6 mm thick hard board backing : Rectangular shape 453x357 mm	1.000	No	1272.17	1272.17	INR One Thousand Two Hundred & Seventy Two and Paise Seventeen Only



3.024	Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fitting arrangement of approved quality and colour	1.000	Nos	630.73	630.73	INR Six Hundred & Thirty and Paise Seventy Three Only
3.025	Providing and fixing brass bib cock of approved quality :15 mm nominal bore	1.000	No	343.58	343.58	INR Three Hundred & Forty Three and Paise Fifty Eight Only
4	Appendix- 4: Supply and fixing of OH Crane at Well cum Pump house at Manzhadikadavu					
4.001	Supply,Fabrication and erection of long travel(LT) girder 450mm depth fixing to the base plate at trhe existing bracket at site including cutting,hoisting and fixing in position and painting the exposed surface with two coats of Zinc chromic primer and 2 coats of synthetic enamel paint including cost labour charges and conveyance of all materials etc. complete and as directed by the departmental officers.	2.525	MT	94909.27	239645.91	INR Two Lakh Thirty Nine Thousand Six Hundred & Forty Five and Paise Ninety One Only
4.002	Supply,Fabrication and erection of long travel(LT) rails polished square bars of size 80x80mm thick to the LT girder and painting to the exposed surface as detailed in above item complete.	11.304	quintal	8848.58	100024.35	INR One Lakh &Twenty Four and Paise Thirty Five Only
4.003	Design,manufacture,supply,testing and commissioning of overhead traverse trolley crane 5T capacity chain pulley block and geared trolley having wall to wall horizontal movement supported on girders having wall to wall horizontal movement etc. for smooth functioning of crane as per IS specification including all fittings, conveyance, erection,testing,commissioning and incidental charges etc. including painting the exposed surface as detailed in item above75(a) with following specifications.	1.000	No	479385.00	479385.00	INR Four Lakh Seventy Nine Thousand Three Hundred & Eighty Five Only
4.004	Erection and commissioning of HOT over head crane including providing and fixing suitable size 45x45 MS base plate 18mm thick over the existing RCC pillars 8Nos brackets by drilling,fixing belt of suitable size and grouting with CM and welding LT girder ISHB 450x200 with MS base plate and also fixing the ends of the LT girder to the size suitably and also providing LT rail with suitable end stoppage.This also includes provision for box type fabricated from rolled steel section and carriages of suitable construction with all good quality accessories like gears,wheels,axils,rubber buffers,bearing etc. the work also consists of all tools and equipments,labour,supervision,load testing,all safety devices and clarification of crane after completion of work by Kerala State Factories and Boilers Department etc.The rate inclusive of MS base plate and stoppers and carriages etc.	1.000	L.S	287631.00	287631.00	INR Two Lakh Eighty Seven Thousand Six Hundred & Thirty One Only
5	Appendix- 5 Supplying ,Laying,testing and commissioning of DI K9 Raw Water Pumping Main from Source to WTP					
5.001	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	4015.000	sqm	14.26	57253.90	INR Fifty Seven Thousand Two Hundred & Fifty Three and Paise Ninety Only



5.002	Demolishing stone rubble masonry manually / by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer -in- Charges:In cement mortar	72.000	cum	1992.24	143441.28	INR One Lakh Forty Three Thousand Four Hundred & Forty One and Paise Twenty Eight Only
5.003	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	60.000	sqm	348.23	20893.80	INR Twenty Thousand Eight Hundred & Ninety Three and Paise Eighty Only
5.004	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)	3854.400	cum	535.94	2065727.14	INR Twenty Lakh Sixty Five Thousand Seven Hundred & Twenty Seven and Paise Fourteen Only
5.005	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)	803.000	metre	26.96	21648.88	INR Twenty One Thousand Six Hundred & Forty Eight and Paise Eighty Eight Only
5.006	Conveying and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS: 8329 excluding cost of pipes and specials : 250 mm dia Ductile Iron Class K-9 Pipes Data derived from 18.72.18 in DAR	4015.000	metre	157.31	631599.65	INR Six Lakh Thirty One Thousand Five Hundred & Ninety Nine and Paise Sixty Five Only
5.007	Providing push - on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:250 mm dia pipes	670.000	joint	304.86	204256.20	INR Two Lakh Four Thousand Two Hundred & Fifty Six and Paise Twenty Only
5.008	Providing and laying D.I specials of class K - 12 suitable for push - on jointing as per IS : 9523 :	35.000	quintal	19412.89	679451.15	INR Six Lakh Seventy Nine Thousand Four Hundred & Fifty One and Paise Fifteen Only
5.009	Labour for cutting C.I. pipe with steel saw.250 mm diameter C.I. pipe	150.000	Each Cut	516.79	77518.50	INR Seventy Seven Thousand Five Hundred & Eighteen and Paise Fifty Only
5.01	Fabricating MS pipes of size 250mm (ID) using 8 mm thick MS plate including cost and conveyance charges of MS plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under coat of primer etc. complete: For pipes fabricated	200.000	metre	6621.18	1324236.00	INR Thirteen Lakh Twenty Four Thousand Two Hundred & Thirty Six Only
5.011	Fabricating MS flanges of diameter 250 mm using 12 mm thick MS plate including cost and conveyance charges of MS plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under coat of primer etc. complete: For pipes fabricated with 8mm thick MS plates.	140.000	Nos	2385.91	334027.40	INR Three Lakh Thirty Four Thousand & Twenty Seven and Paise Forty Only
5.012	Cutting 250 mm (ID) MS pipes for making bends and other specials by gas cutting including cost of gas, all labour and hire charges of tools etc. complete: For pipes fabricated with 8mm thick MS plates.	300.000	No	251.43	75429.00	INR Seventy Five Thousand Four Hundred & Twenty Nine Only
5.013	Welding 250mm (ID) MS pipes for making bends and other specials by gas/electric welding machine including cost of gas and welding rods ,all labour and hire charges of tools etc. complete: For pipes fabricated with 8mm thick MS plates.	300.000	No	962.01	288603.00	INR Two Lakh Eighty Eight Thousand Six Hundred & Three Only



5.014	Grinding cut and weld edges of 250 mm (ID) MS pipes during fabrication work including all labour and hire charges of tools etc. complete: For pipes fabricated with 8mm thick MS plates.	300.000	No	180.39	54117.00	INR Fifty Four Thousand One Hundred & Seventeen Only
5.015	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	3.000	Nos	211.85	635.55	INR Six Hundred & Thirty Five and Paise Fifty Five Only
5.016	Testing 250mm DI/CI pipeline with potable water to the required test pressure . 250 mm dia Observed Data derived from item no.1022 of PHED DATA	4015.000	metre	49.09	197096.35	INR One Lakh Ninety Seven Thousand & Ninety Six and Paise Thirty Five Only
5.017	Supply of DI K9 Pipe Conforming to IS 8329/2000, 250mm Dia.	4015.000	metre	3342.70	13420940.50	INR One Crore Thirty Four Lakh Twenty Thousand Nine Hundred & Forty and Paise Fifty Only
5.018	Supply of CI Air Valve, Conforming to IS 14848 - 2000, Kinetic Air Valve Type DK, Size 80mm.	3.000	No	11264.16	33792.48	INR Thirty Three Thousand Seven Hundred & Ninety Two and Paise Forty Eight Only
5.019	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	13.948	cum	206.49	2880.12	INR Two Thousand Eight Hundred & Eighty and Paise Twelve Only
5.02	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)	0.648	cum	6574.87	4260.52	INR Four Thousand Two Hundred & Sixty and Paise Fifty Two Only
5.021	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)	14.251	cum	8285.99	118083.64	INR One Lakh Eighteen Thousand & Eighty Three and Paise Sixty Four Only
5.022	Centering and shuttering including strutting, etc. and removal of form for:Foundations, footings, bases of columns, etc for mass concrete	53.161	sqm	323.51	17198.12	INR Seventeen Thousand One Hundred & Ninety Eight and Paise Twelve Only
5.023	Centering and shuttering including strutting, etc. and removal of form for:Walls (any thickness) including attached pilasters, butteresses, plinth and string courses etc.	21.121	sqm	691.94	14614.46	INR Fourteen Thousand Six Hundred & Fourteen and Paise Forty Six Only
5.024	Centering and shuttering including strutting, etc. and removal of form for:	3.481	sqm	787.04	2739.69	INR Two Thousand Seven Hundred & Thirty Nine and Paise Sixty Nine Only
5.025	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	997.570	kg	94.84	94609.54	INR Ninety Four Thousand Six Hundred & Nine and Paise Fifty Four Only
5.026	Supplying and fixing 500mm dia CI manhole cover with frame(medium duty) charges including all cost, labour charges etc complete.	3.000	Nos	7242.68	21728.04	INR Twenty One Thousand Seven Hundred & Twenty Eight and Paise Four Only
6	Appendix 6 : Supply and erection of 2 nos. VT Raw water pump set for pumping water from source to treatment plant					



6.001	<p>1.Pump- 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 pumpset are given below. Speed upto 1500RPM, Discharge 30 lps, Head 84 m.</p> <p>2. Motor- 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.</p> <p>3. Valves, Reflux valves and Pressure guage: 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.</p> <p>4. Cabling: 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.)</p> <p>5. End Termination 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.</p> <p>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.</p> <p>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.</p> <p>6. Earthing: 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</p>	100.000	Hp	14673.67	1467367.00	INR Fourteen Lakh Sixty Seven Thousand Three Hundred & Sixty Seven Only
6.002	<p>Motor Soft starter:- Supplying a complete integrated soft starter panel capable of operating the motor in the previous item having a protection level of IP 40 or more with integrated bypass contactor in the panel and motor protection relay having parameters as per IE rules, with a power control MCCB and line power contactor, and the starting current shall be 2.5 to 3.5 times the normal full load current of motor with Ammeter, Voltmeter and phase indicators, Space heaters, floor mounting type and having insulation level of 1100V(for 440V supply) and 7.6KV for (3.3KV supply) and 14.2KV for (6.6KV Supply). the standard is to be IEC 60947-4-2</p>	100.000	Hp	2109.29	210929.00	INR Two Lakh Ten Thousand Nine Hundred & Twenty Nine Only
6.003	<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 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 calibration standards as per ISO 17025 and the product shall have sufficient warrenty provisions</p>	1.000	No	149951.63	149951.63	INR One Lakh Forty Nine Thousand Nine Hundred & Fifty One and Paise Sixty Three Only
7	<p>Appendix:-7 - Design,Supply and erection of 2 nos. Clear water centrifugal pump set for pumping water from WTP to OHSR at Pallimala</p>					



7.001	Supplying 350mm 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 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	183029.19	183029.19	INR One Lakh Eighty Three Thousand &Twenty Nine and Paise Nineteen Only
7.002	Motor starter: Supplying a complete integrated soft starter panel capable of operating the motor having a protection level of IP 40 or more with integrated bypass contactor in the panel and motor protection relay having parameters as per IE rules, with a power control MCCB and line power cotactor, and the staring current shall be 2.5 to 3.5 times the normal full load current of motor with Ammeter, Voltmeter and phase indicators, Space heaters, floor mounting type and having insulation level of 1100V(for 440V supply) and 7.6KV for (3.3KV supply) and 14.2KV for (6.6KV Supply). the standared is to be IEC 60947-4-2	240.000	Hp	2109.29	506229.60	INR Five Lakh Six Thousand Two Hundred & Twenty Nine and Paise Sixty Only



7.003	<p>Design, supply, erection, getting approval, testing and commissioning of reputed make Centrifugal pump set 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.
2. Motor
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.
3. Valves, Reflux valves and Pressure guage:
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.
4. Cabling:
supplying and laying the following size XLPE insulated sheathed armoured 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.)
5. End Termination
Supply of all materials and providing end termination of the following size XLPE insulated/sheathed armoured 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.
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.
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.
6. Earthing:
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>	160.000	Hp	20228.93	3236628.80	INR Thirty Two Lakh Thirty Six Thousand Six Hundred & Twenty Eight and Paise Eighty Only
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7.004	Design, supply, erection, getting approval, testing and commissioning of reputed make Centrifugal pump set 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. Discharge 30 lps Total Head 137 m . 2. Motor 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. 3. Valves, Reflux valves and Pressure guage: 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. 4. Cabling: 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.) 5. End Termination 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. 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. 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. 6. Earthing: 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	80.000	Hp	15613.44	1249075.20	INR Twelve Lakh Forty Nine Thousand & Seventy Five and Paise Twenty Only
8	Appendix:-8-Supply and Laying DI K9 clear water pumping main from WTP to OHSR at Pallimala					
8.001	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)	4560.000	cum	535.94	2443886.40	INR Twenty Four Lakh Forty Three Thousand Eight Hundred & Eighty Six and Paise Forty Only
8.002	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)	950.000	metre	26.96	25612.00	INR Twenty Five Thousand Six Hundred & Twelve Only
8.003	Conveying and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS: 8329 excluding cost of pipes and specials : 250 mm dia Ductile Iron Class K-9 Pipes Data derived from 18.72.18 in DAR	4750.000	metre	157.31	747222.50	INR Seven Lakh Forty Seven Thousand Two Hundred & Twenty Two and Paise Fifty Only
8.004	Providing push - on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:250 mm dia pipes	800.000	joint	304.86	243888.00	INR Two Lakh Forty Three Thousand Eight Hundred & Eighty Eight Only



8.005	Labour for cutting C.I. pipe with steel saw.250 mm diameter C.I. pipe	100.000	Each Cut	516.79	51679.00	INR Fifty One Thousand Six Hundred & Seventy Nine Only
8.006	Fabricating MS pipes of size 250mm (ID) using 8 mm thick MS plate including cost and conveyance charges of MS plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under coat of primer etc. complete: For pipes fabricated with 8mm thick MS plates.	200.000	metre	6621.18	1324236.00	INR Thirteen Lakh Twenty Four Thousand Two Hundred & Thirty Six Only
8.007	Fabricating MS flanges of diameter 250 mm using 12 mm thick MS plate including cost and conveyance charges of MS plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under coat of primer etc. complete: For pipes fabricated with 8mm thick MS plates.	200.000	Nos	2386.23	477246.00	INR Four Lakh Seventy Seven Thousand Two Hundred & Forty Six Only
8.008	Cutting 250 mm (ID) MS pipes for making bends and other specials by gas cutting including cost of gas, all labour and hire charges of tools etc. complete: For pipes fabricated with 8mm thick MS plates.	250.000	No	251.43	62857.50	INR Sixty Two Thousand Eight Hundred & Fifty Seven and Paise Fifty Only
8.009	Welding 250mm (ID) MS pipes for making bends and other specials by gas/electric welding machine including cost of gas and welding rods ,all labour and hire charges of tools etc. complete: For pipes fabricated with 8mm thick MS plates.	300.000	No	962.01	288603.00	INR Two Lakh Eighty Eight Thousand Six Hundred & Three Only
8.01	Grinding cut and weld edges of 250 mm (ID) MS pipes during fabrication work including all labour and hire charges of tools etc. complete: For pipes fabricated with 8mm thick MS plates.	300.000	No	180.30	54090.00	INR Fifty Four Thousand & Ninety Only
8.011	Testing 250mm DI/CI pipeline with potable water to the required test pressure . 250 mm dia Observed Data derived from item no.1022 of PHED DATA	4750.000	metre	49.09	233177.50	INR Two Lakh Thirty Three Thousand One Hundred & Seventy Seven and Paise Fifty Only
8.012	"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	8.000	Nos	2130.32	17042.56	INR Seventeen Thousand & Forty Two and Paise Fifty Six Only
8.013	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	5.000	Nos	1158.42	5792.10	INR Five Thousand Seven Hundred & Ninety Two and Paise Ten Only
8.014	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 separately):50 mm Double acting Air Valve Data derived from item no.18.59.1 of DAR	15.000	Nos	211.85	3177.75	INR Three Thousand One Hundred & Seventy Seven and Paise Seventy Five Only
8.015	"Conveying and fixing C.I. Non-Return valves 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	2130.34	10651.70	INR Ten Thousand Six Hundred & Fifty One and Paise Seventy Only
8.016	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	33.750	cum	206.49	6969.04	INR Six Thousand Nine Hundred & Sixty Nine and Paise Four Only



8.017	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)	6.750	cum	8285.99	55930.43	INR Fifty Five Thousand Nine Hundred & Thirty and Paise Forty Three Only
8.018	Centering and shuttering including strutting, etc. and removal of form for:Foundations, footings, bases of columns, etc for mass concrete	13.500	sqm	323.51	4367.39	INR Four Thousand Three Hundred & Sixty Seven and Paise Thirty Nine Only
8.019	Centering and shuttering including strutting, etc. and removal of form for:Walls (any thickness) including attached pilasters, butteresses, plinth and string courses etc.	90.000	sqm	691.94	62274.60	INR Sixty Two Thousand Two Hundred & Seventy Four and Paise Sixty Only
8.02	Centering and shuttering including strutting, etc. and removal of form for:	33.750	sqm	787.04	26562.60	INR Twenty Six Thousand Five Hundred & Sixty Two and Paise Sixty Only
8.021	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	4200.000	kilogram	94.84	398328.00	INR Three Lakh Ninety Eight Thousand Three Hundred & Twenty Eight Only
8.022	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:1:1:5:3 (1 cement 1.5 coarse sand :3 graded stone aggregate 20 mm nominal size	57.866	cum	8765.16	507204.75	INR Five Lakh Seven Thousand Two Hundred & Four and Paise Seventy Five Only
8.023	Supplying and fixing 500mm dia CI manhole cover with frame(medium duty) charges including all cost, labour charges etc complete.	15.000	Nos	7242.68	108640.20	INR One Lakh Eight Thousand Six Hundred & Forty and Paise Twenty Only
8.024	Supply of DI K9 Pipe Conforming to IS 8329/2000, 250mm Dia.	4750.000	metre	3342.70	15877825.00	INR One Crore Fifty Eight Lakh Seventy Seven Thousand Eight Hundred & Twenty Five Only
8.025	Supply of CI Non Return Valve, Conforming to IS 5312 Part I - 1984, PN 1.0, Size 250mm.	5.000	No	33925.07	169625.35	INR One Lakh Sixty Nine Thousand Six Hundred & Twenty Five and Paise Thirty Five Only
8.026	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 250mm.	8.000	No	32945.06	263560.48	INR Two Lakh Sixty Three Thousand Five Hundred & Sixty and Paise Forty Eight Only
8.027	Supply of CI Air Valve with Flanges, Conforming to IS 14845 - 2000, Kinetic Air Valve Type DS1, Size 50mm.	15.000	No	8386.60	125799.00	INR One Lakh Twenty Five Thousand Seven Hundred & Ninety Nine Only
8.028	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 150mm.	5.000	No	12844.40	64222.00	INR Sixty Four Thousand Two Hundred & Twenty Two Only
9	Appendix:-9- Construction and commissioning of 10.50 LL capacity OHSR cum Clear Water Pumping station at Pallimala					
9.001	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	338.001	cum	206.49	69793.83	INR Sixty Nine Thousand Seven Hundred & Ninety Three and Paise Eighty Three Only
9.002	Extra for every additional lift 1.5 m or part there of in excavation / banking excavated or stacked materials.All kinds of soil	306.410	cum	102.63	31446.86	INR Thirty One Thousand Four Hundred & Forty Six and Paise Eighty Six Only



9.003	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	400.000	sqm	14.26	5704.00	INR Five Thousand Seven Hundred & Four 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)	25.351	cum	6574.87	166679.53	INR One Lakh Sixty Six Thousand Six Hundred & Seventy Nine and Paise Fifty Three Only
9.005	Centering and shuttering including strutting, etc. and removal of form for:Foundations, footings, bases of columns, etc for mass concrete	210.011	sqm	323.51	67940.66	INR Sixty Seven Thousand Nine Hundred & Forty and Paise Sixty Six Only
9.006	Centering and shuttering including strutting, etc. and removal of form for:Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	537.921	sqm	691.94	372209.06	INR Three Lakh Seventy Two Thousand Two Hundred & Nine and Paise Six Only
9.007	Centering and shuttering including strutting, etc. and removal of form for:	908.693	sqm	787.04	715177.74	INR Seven Lakh Fifteen Thousand One Hundred & Seventy Seven and Paise Seventy
9.008	Centering and shuttering including strutting, etc. and removal of form for:	529.732	sqm	626.93	332104.88	INR Three Lakh Thirty Two Thousand One Hundred & Four and Paise Eighty Eight Only
9.009	Centering and shuttering including strutting, etc. and removal of form for:Columns, Pillars, Piers, Abutments, Posts and Struts	510.880	sqm	833.22	425675.43	INR Four Lakh Twenty Five Thousand Six Hundred & Seventy Five and Paise Forty Three Only
9.01	Centering and shuttering including strutting, etc. and removal of form for:Stairs, (excluding landings) except spiral - staircases)	34.790	sqm	706.73	24587.14	INR Twenty Four Thousand Five Hundred & Eighty Seven and Paise Fourteen 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	105.901	cum	9082.00	961792.88	INR Nine Lakh Sixty One Thousand Seven Hundred & Ninety Two and Paise Eighty Eight 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	285.433	cum	10675.90	3047254.16	INR Thirty Lakh Forty Seven Thousand Two Hundred & Fifty Four and Paise Sixteen Only



9.013	Extra for providing richer mixes at all floor levels. Note:- Excess/less cement over the specified cement content used is payable/ recoverable separately.Providing M-30 grade concrete instead of M-25 grade BMC/RMC. (Note:- Cement content considered in M-30 is @ 340 kg/cum).	200.000	cum	79.20	15840.00	INR Fifteen Thousand Eight Hundred & Forty Only
9.014	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	44930.225	kg	94.84	4261182.54	INR Forty Two Lakh Sixty One Thousand One Hundred & Eighty Two and Paise Fifty Four Only
9.015	12 mm cement plaster finished with a floating coat of neat cement of mix:	3225.281	sqm	387.08	1248441.77	INR Twelve Lakh Forty Eight Thousand Four Hundred & Forty One and Paise Seventy Seven Only
9.016	Finishing walls with water proofing cement paint of required shade:New work (Two or more coats applied @ 3.84 kg/10 sqm)	2547.922	sqm	103.60	263964.72	INR Two Lakh Sixty Three Thousand Nine Hundred & Sixty Four and Paise Seventy Two Only
9.017	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade:Two or more coats on new work	73.362	sqm	138.01	10124.69	INR Ten Thousand One Hundred & Twenty Four and Paise Sixty Nine Only
9.018	Providing flanged joints to double flanged C.I./ D.I pipes and specials, including testing of joints:250 mm diameter pipe	3.000	Nos	550.47	1651.41	INR One Thousand Six Hundred & Fifty One and Paise Forty One Only
9.019	Providing flanged joints to double flanged C.I./ D.I pipes and specials, including testing of joints:300 mm diameter pipe	3.000	Nos	558.05	1674.15	INR One Thousand Six Hundred & Seventy Four and Paise Fifteen Only
9.02	Providing and laying Double Flanged (screwed / welded) Centrifugally (Spun) Cast Iron, Class B (IS : 1536):	3.000	metre	3250.15	9750.45	INR Nine Thousand Seven Hundred & Fifty and Paise Forty Five Only
9.021	Providing and laying Double Flanged (screwed / welded) Centrifugally (Spun) Cast Iron, Class B (IS : 1536):	3.000	metre	5120.08	15360.24	INR Fifteen Thousand Three Hundred & Sixty and Paise Twenty Four Only
9.022	Providing and laying Double Flanged (screwed / welded) Centrifugally (Spun) Cast Iron, Class B (IS : 1536):	3.000	metre	9981.54	29944.62	INR Twenty Nine Thousand Nine Hundred & Forty Four and Paise Sixty Two Only
9.023	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	3.000	Nos	1158.42	3475.26	INR Three Thousand Four Hundred & Seventy Five and Paise Twenty Six Only
9.024	"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) :300 mm diameter. Class I"Data derived from item no.18.31.6.1 of DAR	3.000	Nos	2503.06	7509.18	INR Seven Thousand Five Hundred & Nine and Paise Eighteen Only
9.025	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 150mm.	3.000	No	12844.40	38533.20	INR Thirty Eight Thousand Five Hundred & Thirty Three and Paise Twenty Only
9.026	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 250mm.	3.000	No	32945.06	98835.18	INR Ninety Eight Thousand Eight Hundred & Thirty Five and Paise Eighteen Only
9.027	Supply of CI Plain End Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 250mm.	3.000	No	17309.87	51929.61	INR Fifty One Thousand Nine Hundred & Twenty Nine and Paise Sixty One Only
9.028	Providing and laying D.I specials of class K - 12 suitable for push - on jointing as per IS : 9523 :	8.000	quintal	19412.89	155303.12	INR One Lakh Fifty Five Thousand Three Hundred & Three and Paise Twelve Only



9.029	Felling trees of the girth (measured at a height of 1 m above ground level) including cutting of trunks and branches, removing the roots and stacking of serviceable material and disposal of unserviceable material.Beyond 30 cm girth up to and including 60 cm girth	15.000	No	432.21	6483.15	INR Six Thousand Four Hundred & Eighty Three and Paise Fifteen Only
9.03	Felling trees of the girth (measured at a height of 1 m above ground level) including cutting of trunks and branches, removing the roots and stacking of serviceable material and disposal of unserviceable material.Beyond 60 cm girth up to and including 120 cm girth	20.000	No	1924.21	38484.20	INR Thirty Eight Thousand Four Hundred & Eighty Four and Paise Twenty Only
9.031	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	69.699	cum	6390.49	445410.76	INR Four Lakh Forty Five Thousand Four Hundred & Ten and Paise Seventy Six Only
9.032	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)	1065.000	kg	142.52	151783.80	INR One Lakh Fifty One Thousand Seven Hundred & Eighty Three and Paise Eighty Only
9.033	Providing and fixing panelling or panelling and glazing in panelled or panelled and glazed shutters for doors, windows and clerestory windows (Area of opening for panel inserts excluding portion inside grooves or rebates to be measured), Panelling for panelled or panelled and glazed shutters 25 mm to 40 mm thick:Float glass panes4 mm thick glass pane	33.750	sqm	2035.67	68703.86	INR Sixty Eight Thousand Seven Hundred & Three and Paise Eighty Six Only
9.034	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	8.750	sqm	3343.42	29254.93	INR Twenty Nine Thousand Two Hundred & Fifty Four and Paise Ninety Three Only
9.035	12 mm cement plaster of mix:	251.600	sqm	303.03	76242.35	INR Seventy Six Thousand Two Hundred & Forty Two and Paise Thirty Five Only
9.036	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)	11.130	cum	8285.99	92223.07	INR Ninety Two Thousand Two Hundred & Twenty Three and Paise Seven Only
9.037	Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface:Water thinnable cement primer	251.600	sqm	68.16	17149.06	INR Seventeen Thousand One Hundred & Forty Nine and Paise Six Only
9.038	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	251.600	sqm	263.46	66286.54	INR Sixty Six Thousand Two Hundred & Eighty Six and Paise Fifty Four Only
9.039	Lettering with black Japan pint of approved brand and manufacture	200.000	Letterxcm ht	5.36	1072.00	INR One Thousand & Seventy Two Only



9.04	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)"	1050.000	Kilo litre	178.01	186910.50	INR One Lakh Eighty Six Thousand Nine Hundred & Ten and Paise Fifty Only
9.041	Supply of CI Plain End Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.0, Size 300mm.	3.000	No	20031.20	60093.60	INR Sixty Thousand & Ninety Three and Paise Sixty Only
9.042	"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	6.000	Nos	2130.32	12781.92	INR Twelve Thousand Seven Hundred & Eighty One and Paise Ninety Two Only
10	Appendix:-10. Supply and erection of 2 nos. Centrifugal pump set for pumping water from OHSR Pallimala to OHSR at Sisumala					
10.001	Supplying 350mm 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 acquisition and transfer with provision for wire less transfer through GSM. The manufactures should have the calibration standards as per ISO 17025 and the product shall have sufficient warranty provisions	1.000	No	183029.19	183029.19	INR One Lakh Eighty Three Thousand & Twenty Nine and Paise Nineteen Only



10.002	Design, supply, erection, getting approval, testing and commissioning of reputed make Centrifugal pump set 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. 2. Motor 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. 3. Valves, Reflux valves and Pressure guage: 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. 4. Cabling: 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.) 5. End Termination 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. 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. 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. 6. Earthing: 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	40.000	Hp	20228.93	809157.20	INR Eight Lakh Nine Thousand One Hundred & Fifty Seven and Paise Twenty Only
11	Appendix:-11-Supplying ,Laying testing & commissioning of DI K9 clear water Transmission main from OHSR at Pallimala to Mullenkolly marakadave road(Replacing existing AC Distribution main)					
11.001	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	3000.000	sqm	348.23	1044690.00	INR Ten Lakh Forty Four Thousand Six Hundred & Ninety Only
11.002	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 consolidatingeach 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)	8740.000	cum	535.94	4684115.60	INR Forty Six Lakh Eighty Four Thousand One Hundred & Fifteen and Paise Sixty Only
11.003	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)	2000.000	metre	26.96	53920.00	INR Fifty Three Thousand Nine Hundred & Twenty Only
11.004	Conveying and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS: 8329 excluding cost of pipes and specials :200 mm dia Ductile Iron Class K-9 Pipes Data derived from 18.72.17 in DAR	9500.000	metre	117.79	1119005.00	INR Eleven Lakh Nineteen Thousand & Five Only
11.005	Providing push - on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:200 mm dia pipes	1600.000	joint	249.66	399456.00	INR Three Lakh Ninety Nine Thousand Four Hundred & Fifty Six Only



11.006	Labour for cutting C.I. pipe with steel saw.200 mm diameter C.I. pipe	250.000	Each Cut	415.53	103882.50	INR One Lakh Three Thousand Eight Hundred & Eighty Two and Paise Fifty Only
11.007	Fabricating MS pipes of size 200mm (ID) using 8 mm thick MS plate including cost and conveyance charges of MS plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under coat of primer etc. complete: For pipes fabricated	500.000	metre	5699.01	2849505.00	INR Twenty Eight Lakh Forty Nine Thousand Five Hundred & Five Only
11.008	Fabricating MS flanges of diameter 200 mm using 12 mm thick MS plate including cost and conveyance charges of MS plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under coat of primer etc. complete: For	200.000	Nos	1939.76	387952.00	INR Three Lakh Eighty Seven Thousand Nine Hundred & Fifty Two Only
11.009	Cutting 200 mm (ID) MS pipes for making bends and other specials by gas cutting including cost of gas, all labour and hire charges of tools etc. complete: For pipes fabricated with 8mm thick MS plates.	250.000	No	204.13	51032.50	INR Fifty One Thousand &Thirty Two and Paise Fifty Only
11.01	Welding 200 mm (ID) MS pipes for making bends and other specials by gas/electric welding machine including cost of gas and welding rods ,all labour and hire charges of tools etc. complete: For pipes fabricated with 8mm thick MS plates.	300.000	No	781.16	234348.00	INR Two Lakh Thirty Four Thousand Three Hundred & Forty Eight Only
11.011	Grinding cut and weld edges of 200 mm (ID) MS pipes during fabrication work inc	300.000	No	146.44	43932.00	INR Forty Three Thousand Nine Hundred & Thirty Two Only
11.012	Testing 200mm DI/CI pipeline with potable water to the required test pressure 200 mm dia Observed Data derived from item no.1020 of PHED DATA	9500.000	metre	38.49	365655.00	INR Three Lakh Sixty Five Thousand Six Hundred & Fifty Five Only
11.013	"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	10.000	Nos	1502.80	15028.00	INR Fifteen Thousand &Twenty Eight Only
11.014	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 separately):50 mm Double acting Air Valve Data derived from item no.18.59.1 of DAR	20.000	Nos	211.85	4237.00	INR Four Thousand Two Hundred & Thirty Seven Only
11.015	Supplying and fixing 500mm dia CI manhole cover with frame(medium duty) charges including all cost, labour charges etc complete.	10.000	Nos	7242.68	72426.80	INR Seventy Two Thousand Four Hundred & Twenty Six and Paise Eighty Only
11.016	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	29.251	cum	206.49	6040.04	INR Six Thousand &Forty and Paise Four Only
11.017	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)	3.375	cum	6574.87	22190.19	INR Twenty Two Thousand One Hundred & Ninety and Paise Nineteen Only
11.018	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)	104.970	cum	8285.99	869780.37	INR Eight Lakh Sixty Nine Thousand Seven Hundred & Eighty and Paise Thirty Seven Only



11.019	Centering and shuttering including strutting, etc. and removal of form for: Foundations, footings, bases of columns, etc for mass concrete	9.000	sqm	323.51	2911.59	INR Two Thousand Nine Hundred & Eleven and Paise Fifty Nine Only
11.02	Centering and shuttering including strutting, etc. and removal of form for: Walls (any thickness) including attached pilasters, butteresses, plinth and string courses etc.	46.800	sqm	691.94	32382.79	INR Thirty Two Thousand Three Hundred & Eighty Two and Paise Seventy Nine Only
11.021	Centering and shuttering including strutting, etc. and removal of form for:	22.500	sqm	787.04	17708.40	INR Seventeen Thousand Seven Hundred & Eight and Paise Forty Only
11.022	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	6298.200	kilogram	94.84	597321.29	INR Five Lakh Ninety Seven Thousand Three Hundred & Twenty One and Paise Twenty Nine Only
11.023	Supply of CI Air Valve with Flanges, Conforming to IS 14845 - 2000, Kinetic Air Valve Type DS1, Size 50mm.	20.000	No	8386.60	167732.00	INR One Lakh Sixty Seven Thousand Seven Hundred & Thirty Two Only
11.024	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 200mm.	10.000	No	22745.52	227455.20	INR Two Lakh Twenty Seven Thousand Four Hundred & Fifty Five and Paise Twenty Only
11.025	Supply of DI K9 Pipe Conforming to IS 8329/2000, 200mm Dia.	9500.000	metre	2393.06	22734070.00	INR Two Crore Twenty Seven Lakh Thirty Four Thousand & Seventy Only
11.026	Providing and laying D.I specials of class K - 12 suitable for push - on jointing as per IS : 9523 :	200.000	quintal	19412.89	3882578.00	INR Thirty Eight Lakh Eighty Two Thousand Five Hundred & Seventy Eight Only
12	Appendix:-12 - Construction and commissioning of 0.50 LL capacity GLSR at Sisumala					
12.001	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	80.000	cum	206.49	16519.20	INR Sixteen Thousand Five Hundred & Nineteen and Paise Twenty 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. Ordinary rock	32.000	cum	400.23	12807.36	INR Twelve Thousand Eight Hundred & Seven and Paise Thirty Six Only
12.003	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	100.000	sqm	14.26	1426.00	INR One Thousand Four Hundred & Twenty Six Only



12.004	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)	5.776	cum	6574.87	37976.45	INR Thirty Seven Thousand Nine Hundred & Seventy Six and Paise Forty Five Only
12.005	Centering and shuttering including strutting, etc. and removal of form for:Foundations, footings, bases of columns, etc for mass concrete	12.160	sqm	323.51	3933.88	INR Three Thousand Nine Hundred & Thirty Three and Paise Eighty Eight Only
12.006	Centering and shuttering including strutting, etc. and removal of form for:Walls (any thickness) including attached pilasters, butresses, plinth and string courses etc.	72.151	sqm	691.94	49924.16	INR Forty Nine Thousand Nine Hundred & Twenty Four and Paise Sixteen Only
12.007	Centering and shuttering including strutting, etc. and removal of form for:	11.135	sqm	626.93	6980.87	INR Six Thousand Nine Hundred & Eighty and Paise Eighty Seven Only
12.008	Centering and shuttering including strutting, etc. and removal of form for:Columns, Pillars, Piers, Abutments, Posts and Struts	18.720	sqm	833.22	15597.88	INR Fifteen Thousand Five Hundred & Ninety Seven and Paise Eighty Eight Only
12.009	Centering and shuttering including strutting, etc. and removal of form for:	61.691	sqm	787.04	48553.28	INR Forty Eight Thousand Five Hundred & Fifty Three and Paise Twenty Eight Only
12.01	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	26.896	cum	9082.00	244269.47	INR Two Lakh Forty Four Thousand Two Hundred & Sixty Nine and Paise Forty Seven 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 above plinth level upto floor V level	24.006	cum	10675.90	256285.66	INR Two Lakh Fifty Six Thousand Two Hundred & Eighty Five and Paise Sixty Six Only
12.012	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	5690.350	kg	94.84	539672.79	INR Five Lakh Thirty Nine Thousand Six Hundred & Seventy Two and Paise Seventy Nine Only



12.013	12 mm cement plaster finished with a floating coat of neat cement of mix:	268.418	sqm	387.07	103896.56	INR One Lakh Three Thousand Eight Hundred & Ninety Six and Paise Fifty 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)	98.280	sqm	103.60	10181.81	INR Ten Thousand One Hundred & Eighty One and Paise Eighty One Only
12.015	Providing flanged joints to double flanged C.I./ D.I pipes and specials, including testing of joints:150 mm diameter pipe	12.000	Nos	371.84	4462.08	INR Four Thousand Four Hundred & Sixty Two and Paise Eight Only
12.016	Providing and laying Double Flanged (screwed / welded) Centrifugally (Spun) Cast Iron, Class B (IS : 1536):	12.000	metre	3250.15	39001.80	INR Thirty Nine Thousand &One and Paise Eighty Only
12.017	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	3.000	Nos	1158.42	3475.26	INR Three Thousand Four Hundred & Seventy Five and Paise Twenty Six Only
12.018	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 150mm.	3.000	No	12844.40	38533.20	INR Thirty Eight Thousand Five Hundred & Thirty Three and Paise Twenty Only
12.019	Providing and laying D.I specials of class K - 12 suitable for push - on jointing as per IS : 9523 :	2.000	quintal	19412.89	38825.78	INR Thirty Eight Thousand Eight Hundred & Twenty Five and Paise Seventy Eight Only
12.02	Supplying and fixing 500mm dia CI manhole cover with frame(medium duty) charges including all cost, labour charges etc complete.	6.000	Nos	7242.68	43456.08	INR Forty Three Thousand Four Hundred & Fifty Six and Paise Eight Only
12.021	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift up to 1.5 m.Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundation etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift up to 1.5 m.	11.521	cum	249.46	2874.03	INR Two Thousand Eight Hundred & Seventy Four and Paise Three Only
12.022	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)"	50.000	Kilo litre	178.01	8900.50	INR Eight Thousand Nine Hundred and Paise Fifty Only
12.023	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	150.000	kg	115.57	17335.50	INR Seventeen Thousand Three Hundred & Thirty Five and Paise Fifty Only
12.024	Lettering with black Japan pint of approved brand and manufacture	200.000	Letterxcm ht	5.36	1072.00	INR One Thousand &Seventy Two Only
13	Appendix:-13-Supplying, Laying, testing and commissioning of clear water pumping main from Booster pumping station Pallimala to GLSR at Sisumala and Gravity mains from GLSR Sisumala to Seethamound and sasimala existing service Reservoirs					



13.001	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)	6687.450	cum		535.94	3584071.95	INR Thirty Five Lakh Eighty Four Thousand & Seventy One and Paise Ninety Five Only
13.002	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)	2000.000	metre		26.96	53920.00	INR Fifty Three Thousand Nine Hundred & Twenty Only
13.003	Conveying and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS: 8329 excluding cost of pipes and specials : 150 mm dia Ductile Iron Class K-9 Pipes Data derived from 18.72.16 in DAR	4105.000	metre		84.57	347159.85	INR Three Lakh Forty Seven Thousand One Hundred & Fifty Nine and Paise Eighty Five Only
13.004	Conveying and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS: 8329 excluding cost of pipes and specials :100 mm dia Ductile Iron Class K-9 Pipes Data derived from 18.72.15 in DAR	6510.000	metre		56.77	369572.70	INR Three Lakh Sixty Nine Thousand Five Hundred & Seventy Two and Paise Seventy Only
13.005	Providing push - on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:150 mm dia pipes	700.000	joint		170.19	119133.00	INR One Lakh Nineteen Thousand One Hundred & Thirty Three Only
13.006	Labour for cutting C.I. pipe with steel saw.150 mm diameter C.I. pipe	100.000	Each Cut		311.60	31160.00	INR Thirty One Thousand One Hundred & Sixty Only
13.007	Labour for cutting C.I. pipe with steel saw.100 mm diameter C.I. pipe	100.000	Each Cut		165.81	16581.00	INR Sixteen Thousand Five Hundred & Eighty One Only
13.008	Providing push - on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron F	1100.000	joint		104.06	114466.00	INR One Lakh Fourteen Thousand Four Hundred & Sixty Six Only
13.009	Fabricating MS pipes of size 150mm (ID) using 8 mm thick MS plate including cost and conveyance charges of MS plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under coat of primer etc. complete: For pipes fabricated with 8mm thick MS plates.	300.000	metre		4782.84	1434852.00	INR Fourteen Lakh Thirty Four Thousand Eight Hundred & Fifty Two Only
13.01	Fabricating MS flanges of diameter 150 mm using 12 mm thick MS plate including cost and conveyance charges of MS plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under coat of primer etc. complete: For pipes fabricated with 8mm thick MS plates.	150.000	No		1437.92	215688.00	INR Two Lakh Fifteen Thousand Six Hundred & Eighty Eight Only
13.011	Cutting 150mm (ID)MS pipes for making bends and other specials by gas cutting including cost of gas, all labour and hire charges of tools etc. complete: For pipes fabricated with 8mm thick MS plates.	150.000	No		156.91	23536.50	INR Twenty Three Thousand Five Hundred & Thirty Six and Paise Fifty Only
13.012	Welding 150mm (ID) MS pipes for making bends and other specials by gas/electric welding machine including cost of gas and welding rods ,all labour and hire charges of tools etc. complete: For pipes fabricated with 8mm thick MS plates.	450.000	No		600.31	270139.50	INR Two Lakh Seventy Thousand One Hundred & Thirty Nine and Paise Fifty Only



13.013	Grinding cut and weld edges of 150mm (ID) MS pipes during fabrication work including all labour and hire charges of tools etc. complete: For pipes fabricated with 8mm thick MS plates.	500.000	No	112.57	56285.00	INR Fifty Six Thousand Two Hundred & Eighty Five Only
13.014	Fabricating MS pipes of size 100mm (ID) using 8 mm thick MS plate including cost and conveyance charges of MS plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under coat of primer etc. complete: For pipes fabricated with 8mm thick MS plates.	400.000	metre	3865.64	1546256.00	INR Fifteen Lakh Forty Six Thousand Two Hundred & Fifty Six Only
13.015	Fabricating MS flanges of diameter 100 mm using 12 mm thick MS plate including cost and conveyance charges of MS plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under coat of primer etc. complete: For pipes fabricated with 8mm thick MS plates.	270.000	Nos	1079.52	291470.40	INR Two Lakh Ninety One Thousand Four Hundred & Seventy and Paise Forty Only
13.016	Cutting 100mm (ID) MS pipes for making bends and other specials by gas cutting including cost of gas, all labour and hire charges of tools etc. complete: For pipes fabricated with 8mm thick MS plates.	300.000	No	109.63	32889.00	INR Thirty Two Thousand Eight Hundred & Eighty Nine Only
13.017	Welding 100mm (ID) MS pipes for making bends and other specials by gas/electric welding machine including cost of gas and welding rods ,all labour and hire charges of tools etc. complete: For pipes fabricated with 8mm thick MS plates.	500.000	No	419.52	209760.00	INR Two Lakh Nine Thousand Seven Hundred & Sixty Only
13.018	Grinding cut and weld edges of 100mm (ID) MS pipes during fabrication work including all labour and hire charges of tools etc. complete: For pipes fabricated with 8mm thick MS plates.	500.000	No	78.68	39340.00	INR Thirty Nine Thousand Three Hundred & Forty Only
13.019	Testing 150mm DI/CI pipeline with potable water to the required test pressure 150 mm dia Observed Data derived from item no.1018 of PHED DATA	4105.000	metre	30.43	124915.15	INR One Lakh Twenty Four Thousand Nine Hundred & Fifteen and Paise Fifteen Only
13.02	Testing 100mm DI/CI pipeline with potable water to the required test pressure 100 mm dia Observed Data derived from item no.1016 of PHED DATA	6510.000	metre	22.52	146605.20	INR One Lakh Forty Six Thousand Six Hundred & Five and Paise Twenty Only
13.021	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	5.000	Nos	1158.42	5792.10	INR Five Thousand Seven Hundred & Ninety Two and Paise Ten Only
13.022	"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.18.31.1.1 of DAR	10.000	Nos	855.33	8553.30	INR Eight Thousand Five Hundred & Fifty Three and Paise Thirty Only
13.023	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	20.000	Nos	211.85	4237.00	INR Four Thousand Two Hundred & Thirty Seven Only
13.024	Supplying and fixing 500mm dia CI manhole cover with frame(medium duty) charges including all cost, labour charges etc complete.	30.000	Nos	7242.68	217280.40	INR Two Lakh Seventeen Thousand Two Hundred & Eighty and Paise Forty Only



13.025	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	81.000	cum	206.49	16725.69	INR Sixteen Thousand Seven Hundred & Twenty Five and Paise Sixty Nine Only
13.026	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)	10.125	cum	6574.87	66570.56	INR Sixty Six Thousand Five Hundred & Seventy and Paise Fifty Six Only
13.027	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)	116.896	cum	8285.99	968599.09	INR Nine Lakh Sixty Eight Thousand Five Hundred & Ninety Nine and Paise Nine Only
13.028	Centering and shuttering including strutting, etc. and removal of form for:Foundations, footings, bases of columns, etc for mass concrete	40.801	sqm	323.51	13199.53	INR Thirteen Thousand One Hundred & Ninety Nine and Paise Fifty Three Only
13.029	Centering and shuttering including strutting, etc. and removal of form for:Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	204.000	sqm	691.94	141155.76	INR One Lakh Forty One Thousand One Hundred & Fifty Five and Paise Seventy Six Only
13.03	Centering and shuttering including strutting, etc. and removal of form for:	67.500	sqm	787.04	53125.20	INR Fifty Three Thousand One Hundred & Twenty Five and Paise Twenty Only
13.031	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	7013.760	kilogram	94.84	665185.00	INR Six Lakh Sixty Five Thousand One Hundred & Eighty Five Only
13.032	Supply of DI K9 Pipe Conforming to IS 8329/2000, 150mm Dia.	4105.000	metre	1747.31	7172707.55	INR Seventy One Lakh Seventy Two Thousand Seven Hundred & Seven and Paise Fifty Five Only
13.033	Supply of DI K9 Pipe Conforming to IS 8329/2000, 100mm Dia.	6510.000	metre	1162.36	7566963.60	INR Seventy Five Lakh Sixty Six Thousand Nine Hundred & Sixty Three and Paise Sixty Only
13.034	Supply of CI Air Valve with Flanges, Conforming to IS 14845 - 2000, Kinetic Air Valve Type DS1, Size 50mm.	20.000	No	8386.60	167732.00	INR One Lakh Sixty Seven Thousand Seven Hundred & Thirty Two Only
13.035	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Hand Wheel PN 1.0, Size 100mm.	10.000	No	8226.25	82262.50	INR Eighty Two Thousand Two Hundred & Sixty Two and Paise Fifty Only
13.036	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Hand Wheel PN 1.0, Size 150mm.	5.000	No	12309.84	61549.20	INR Sixty One Thousand Five Hundred & Forty Nine and Paise Twenty Only
13.037	Providing and laying D.I specials of class K - 12 suitable for push - on jointing as per IS : 9523 :	75.000	quintal	19412.89	1455966.75	INR Fourteen Lakh Fifty Five Thousand Nine Hundred & Sixty Six and Paise Seventy Five Only
14	Appendix:-14- Laying of the Distribution system (Including replacement of existing obsolete AC & PVC Pipes)					



14.001	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)	30630.001	cum	535.94	16415842.74	INR One Crore Sixty Four Lakh Fifteen Thousand Eight Hundred & Forty Two and Paise Seventy Four Only
14.002	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)	7000.000	metre	26.96	188720.00	INR One Lakh Eighty Eight Thousand Seven Hundred & Twenty Only
14.003	"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 75 mm OD HDPE pipe"	10000.000	metre	81.03	810300.00	INR Eight Lakh Ten Thousand Three Hundred Only
14.004	"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"	6000.000	metre	78.48	470880.00	INR Four Lakh Seventy Thousand Eight Hundred & Eighty Only
14.005	"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	2000.000	metre	75.48	150960.00	INR One Lakh Fifty Thousand Nine Hundred & Sixty Only
14.006	"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"	10000.000	metre	90.00	900000.00	INR Nine Lakh Only
14.007	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	10000.000	metre	122.05	1220500.00	INR Twelve Lakh Twenty Thousand Five Hundred Only



14.008	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	6000.000	metre		173.85	1043100.00	INR Ten Lakh Forty Three Thousand One Hundred Only
14.009	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	10000.000	metre		207.60	2076000.00	INR Twenty Lakh Seventy Six Thousand Only
14.01	Providing and fixing G.I. pipes complete with G.I fittings including trenching and refilling etc. External work40 mm dia nominal bore	60.000	metre		548.70	32922.00	INR Thirty Two Thousand Nine Hundred & Twenty Two Only
14.011	Providing and fixing G.I. pipes complete with G.I fittings including trenching and refilling etc. External work50 mm dia nominal bore	100.000	metre		641.91	64191.00	INR Sixty Four Thousand One Hundred & Ninety One Only
14.012	Providing and fixing G.I. pipes complete with G.I fittings including trenching and refilling etc. External work65 mm dia nominal bore	100.000	metre		813.14	81314.00	INR Eighty One Thousand Three Hundred & Fourteen Only
14.013	Providing and fixing G.I. pipes complete with G.I fittings including trenching and refilling etc. External work80 mm dia nominal bore	500.000	metre		983.92	491960.00	INR Four Lakh Ninety One Thousand Nine Hundred & Sixty Only
14.014	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	100.000	metre		226.90	22690.00	INR Twenty Two Thousand Six Hundred & Ninety Only
14.015	"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	60.000	metre		254.17	15250.20	INR Fifteen Thousand Two Hundred & Fifty and Paise Twenty Only
14.016	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	200.000	metre		281.12	56224.00	INR Fifty Six Thousand Two Hundred & Twenty Four Only
14.017	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :25 mm nominal bore	50.000	No		564.60	28230.00	INR Twenty Eight Thousand Two Hundred & Thirty Only
14.018	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :32 mm nominal bore	30.000	No		660.09	19802.70	INR Nineteen Thousand Eight Hundred & Two and Paise Seventy Only
14.019	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :40 mm nominal bore	50.000	No		770.43	38521.50	INR Thirty Eight Thousand Five Hundred & Twenty One and Paise Fifty Only
14.02	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :50 mm nominal bore	50.000	No		987.06	49353.00	INR Forty Nine Thousand Three Hundred & Fifty Three Only



14.021	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :65 mm nominal bore	30.000	No	1689.93	50697.90	INR Fifty Thousand Six Hundred & Ninety Seven and Paise Ninety Only
14.022	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :80 mm nominal bore	20.000	No	2518.71	50374.20	INR Fifty Thousand Three Hundred & Seventy Four and Paise Twenty Only
15	Appencix:-15-Providing of FHTC					
15.001	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.	3600.000	Nos	6713.15	24167340.00	INR Two Crore Forty One Lakh Sixty Seven Thousand Three Hundred & Forty Only
15.002	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.	500.000	Nos	6821.40	3410700.00	INR Thirty Four Lakh Ten Thousand Seven Hundred Only



15.003	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.	500.000	Nos	6801.74	3400870.00	INR Thirty Four Lakh Eight Hundred & Seventy Only
15.004	Providing additional length of house connection pipe using 20 mm (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., including cost of materials, hire for tools, cost of consumables and labour charges etc. complete, but excluding the cost of cutting of concrete / tarred / bituminous roads etc., and as per the directions of the department officers.	301000.000	metre	166.99	50263990.00	INR Five Crore Two Lakh Sixty Three Thousand Nine Hundred & Ninety Only
15.005	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.	4600.000	Nos	556.79	2561234.00	INR Twenty Five Lakh Sixty One Thousand Two Hundred & Thirty Four Only
15.006	Providing 15mm (1/2 inch) GM Check 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.	4600.000	Nos	473.37	2177502.00	INR Twenty One Lakh Seventy Seven Thousand Five Hundred & Two Only
15.007	Providing 15mm CP Brass Tap in the water meter assembly for 15mm (1/2 inch) water connection, using 20mm (1/2 inch) Indian Standard uPVC Class 6 pipes, uPVC specials and PP PN 16 Compression specials including cost of materials, consumables, hire charges for tools and labour charges etc. complete and as per the direction of departmental officers.	4600.000	Nos	1012.18	4656028.00	INR Forty Six Lakh Fifty Six Thousand & Twenty Eight Only
15.008	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	20.000	Nos	211.85	4237.00	INR Four Thousand Two Hundred & Thirty Seven Only
15.009	"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) :80 mm diameter. Class I"Observed Data derived from item no.18.31.of DAR	5.000	Nos	567.28	2836.40	INR Two Thousand Eight Hundred & Thirty Six and Paise Forty Only



15.01	"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	5.000	Nos	855.33	4276.65	INR Four Thousand Two Hundred & Seventy Six and Paise Sixty Five Only
15.011	"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	5.000	Nos	954.36	4771.80	INR Four Thousand Seven Hundred & Seventy One and Paise Eighty Only
15.012	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	2.000	Nos	1158.42	2316.84	INR Two Thousand Three Hundred & Sixteen and Paise Eighty Four Only
16	Appendix:-16-Cost of pipe and specials					
16.001	Supply of PE Pipe, PE100, PN10, 50mm dia, conforming to IS 4984/2016.	2000.000	metre	86.24	172480.00	INR One Lakh Seventy Two Thousand Four Hundred & Eighty Only
16.002	Supply of PE Pipe, PE100, PN10, 63mm dia, conforming to IS 4984/2016.	6000.000	metre	123.01	738060.00	INR Seven Lakh Thirty Eight Thousand & Sixty Only
16.003	Supply of PE Pipe, PE100, PN10, 75mm dia, conforming to IS 4984/2016.	10000.000	metre	175.31	1753100.00	INR Seventeen Lakh Fifty Three Thousand One Hundred Only
16.004	Supply of PE Pipe, PE100, PN10, 90mm dia, conforming to IS 4984/2016.	10000.000	metre	253.69	2536900.00	INR Twenty Five Lakh Thirty Six Thousand Nine Hundred Only
16.005	Supply of PE Pipe, PE100, PN10, 110mm dia, conforming to IS 4984/2016.	10000.000	metre	369.65	3696500.00	INR Thirty Six Lakh Ninety Six Thousand Five Hundred Only
16.006	Supply of PE Pipe, PE100, PN10, 140mm dia, conforming to IS 4984/2016.	6000.000	metre	615.67	3694020.00	INR Thirty Six Lakh Ninety Four Thousand & Twenty Only
16.007	Supply of PE Pipe, PE100, PN10, 160mm dia, conforming to IS 4984/2016.	10000.000	metre	806.33	8063300.00	INR Eighty Lakh Sixty Three Thousand Three Hundred Only
16.008	3% for Extra for PE Pipe Specials	21542600.000	L.S	0.03	646278.00	INR Six Lakh Forty Six Thousand Two Hundred & Seventy Eight Only
16.009	Providing 100mm GI pipe (m)	100.000	metre	1286.22	128622.00	INR One Lakh Twenty Eight Thousand Six Hundred & Twenty Two Only
16.01	Providing 125mm GI pipe (m)	60.000	metre	1686.01	101160.60	INR One Lakh One Thousand One Hundred & Sixty and Paise Sixty Only
16.011	Providing 150mm GI pipe (m)	200.000	metre	2004.50	400900.00	INR Four Lakh Nine Hundred Only
16.012	5% Extra for GI Pipe Specials	657803.600	L.S	0.05	32890.18	INR Thirty Two Thousand Eight Hundred & Ninety and Paise Eighteen Only



16.013	Supply of CI Air Valve, Conforming to IS 14848 - 2000, Kinetic Air Valve Type DK, Size 50mm.	10.000	No		7623.80	76238.00	INR Seventy Six Thousand Two Hundred & Thirty Eight Only
16.014	Supply of CI Air Valve, Conforming to IS 14848 - 2000, Single Orifice, Large Orifice Type S2, Size 50mm.	10.000	No		5858.71	58587.10	INR Fifty Eight Thousand Five Hundred & Eighty Seven and Paise Ten Only
16.015	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 80mm.	5.000	No		6350.94	31754.70	INR Thirty One Thousand Seven Hundred & Fifty Four and Paise Seventy Only
16.016	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 100mm.	5.000	No		8632.72	43163.60	INR Forty Three Thousand One Hundred & Sixty Three and Paise Sixty Only
16.017	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 125mm.	5.000	No		10610.47	53052.35	INR Fifty Three Thousand & Fifty Two and Paise Thirty Five Only
16.018	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 150mm.	2.000	No		12844.40	25688.80	INR Twenty Five Thousand Six Hundred & Eighty Eight and Paise Eighty Only
17	Appendix:-17-Renovation works at Existing WTP, clear water pumping stations Kabanigiri						
17.001	Repairing the existing transformer including yard works	1.000	L.S		1150524.00	1150524.00	INR Eleven Lakh Fifty Thousand Five Hundred & Twenty Four Only
17.002	Reparing of the Clarifier and Aerator	1.000	L.S		958770.00	958770.00	INR Nine Lakh Fifty Eight Thousand Seven Hundred & Seventy Only
17.003	Provision for new chlorinator, cylinders and other safety equipments at the WTP	1.000	L.S		1438155.00	1438155.00	INR Fourteen Lakh Thirty Eight Thousand One Hundred & Fifty Five Only
17.004	Repairing of the filter media structures including replacing of the filter media	1.000	L.S		1917540.00	1917540.00	INR Nineteen Lakh Seventeen Thousand Five Hundred & Forty Only
17.005	Repairing of the existing pumphouse at WTP including improvements by GI Sheet roofing	1.000	L.S		1342278.00	1342278.00	INR Thirteen Lakh Forty Two Thousand Two Hundred & Seventy Eight Only
18	Appendix :-18.Road restoration works LSGD and PWD roads						
18.001	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, traffice 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.	52400.000	metre		29.37	1538988.00	INR Fifteen Lakh Thirty Eight Thousand Nine Hundred & Eighty Eight Only
18.002	Construction of granular sub-base by providing graded material, spreading in uniform layers with a motor grader on a prepared surface, mixing by mix in-place method with rotavator at OMC, and compacting with a vibratory roller to achieve the desired density, complete as per clause 401. Grading-III -For lower sub-base - Mix in Place Method. (MoRTH 4.2.A.1)	4760.000	cum		2887.28	13743452.80	INR One Crore Thirty Seven Lakh Forty Three Thousand Four Hundred & Fifty Two and Paise Eighty Only



18.003	Providing, laying, spreading and compacting graded stone aggregate to Wet Mix Macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver in sub- base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density. (MoRTH 4.12)	4760.000	cum	2971.43	14144006.80	INR One Crore Forty One Lakh Forty Four Thousand & Six and Paise Eighty Only
18.004	Providing and applying primer coat with bitumen emulsion (SS) on prepared surface of granular Base including clearing of road surface and spraying primer at the rate of 0.70 - 1.0 kg/sqm using mechanical means. (MoRTH 5.1.a)	30600.000	sqm	52.70	1612620.00	INR Sixteen Lakh Twelve Thousand Six Hundred & Twenty Only
18.005	Providing and applying tack coat with bitumen emulsion(RS) using emulsion pressure distributor at the rate of 0.20 - 0.30 kg per sqm on the prepared bituminous surface cleaned with mechanical broom. (MoRTH 5.2.a)	30600.000	sqm	10.11	309366.00	INR Three Lakh Nine Thousand Three Hundred & Sixty Six Only
18.006	Providing and laying bituminous macadam with 80-100 TPH hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading premixed with a bituminous binder (VG 30), transported to the site, laid over a previously prepared surface with paver finisher to the required grade, level, and alignment and rolled as per clauses 501.6 and 501.7 to achieve the desired compaction For Grading II - (19 mm nominal size). (MoRTH 5.3.2.a)	937.500	cum	7474.32	7007175.00	INR Seventy Lakh Seven Thousand One Hundred & Seventy Five Only
18.007	Providing and laying bituminous concrete with 80-100 TPH hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with a bituminous binder(NRMB) @ 5.4 percent of mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level, and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 507 complete in all respects For Grading - II (13.2 mm Nominal Size). (MoRTH 5.6.2.a)	562.500	cum	10234.05	5756653.13	INR Fifty Seven Lakh Fifty Six Thousand Six Hundred & Fifty Three and Paise Thirteen Only
18.008	Providing, laying and rolling of close-graded premix surfacing material of 20 mm thickness composed of 11.2 mm to 0.09 mm (Type-A) aggregates using viscosity grade bitumen (VG - 30) to the required line, grade, and level to serve as wearing course on a previously prepared base, including mixing in a suitable HMP of appropriate capacity not less than 75 tonnes/hour., laying and rolling with a Smooth wheeled roller 8-10 tonne capacity, and finishing to the required level and grade. (MoRTH 5.7.1)	4950.000	sqm	179.31	887584.50	INR Eight Lakh Eighty Seven Thousand Five Hundred & Eighty Four and Paise Fifty Only
18.009	Providing, laying and rolling of open-graded premix surfacing of 20 mm thickness composed of 13.2 mm to 5.6 mm aggregates using Viscosity Grade paving Bitumen(VG -30) to the required line, grade, and level to serve as wearing course on a previously prepared base, including mixing in a suitable HMP of appropriate capacity not less than 75 tonnes/hour, laying and rolling with a smooth wheeled roller 8-10 tonne capacity, finished to the required level and grades (MoRTH 5.9.1.a)	13500.000	sqm	138.75	1873125.00	INR Eighteen Lakh Seventy Three Thousand One Hundred & Twenty Five Only



18.01	Providing and laying of premix sand seal coat with HMP of appropriate capacity not less than 75 tonnes/ hours using crushed stone chipping 6.7 mm size and bitumen (VG-30) 6.8 kg per 10 sqm (MoRTH 5.10.2.a)	13500.000	sqm	51.97	701595.00	INR Seven Lakh One Thousand Five Hundred & Ninety Five Only
18.011	Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads on Bituminous Surface @ 250 gms per sqm area, the thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform, and free from streaks and holes.	600.000	sqm	461.97	277182.00	INR Two Lakh Seventy Seven Thousand One Hundred & Eighty Two Only
18.012	Providing and fixing reflective road studs (Raised Pavement Marker) of ' category A' made out of ASA/HIPS/ABS moulded body with shanks and conforming to ASTM D 4280, strong enough to support a load of more than 13.635 T when tested in accordance with ASTM D 4280, reflective panel confirming to ASTM D 788, and reflectivity conforming to clause 804.4. including installation, drilling, fixing with adhesive etc. with 2 years warranty for the road stud as well as for in field performance as per clause 804.7.3 Road Markers/Road Stud with Lense Reflector :	500.000	No	183.01	91505.00	INR Ninety One Thousand Five Hundred & Five Only
18.013	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 40 mm nominal size) in pavements, laid to required slope and camber in panels as required including consolidation finishing and tamping complete	120.000	cum	7768.75	932250.00	INR Nine Lakh Thirty Two Thousand Two Hundred & Fifty Only
18.014	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)	1890.000	cum	7709.42	14570803.80	INR One Crore Forty Five Lakh Seventy Thousand Eight Hundred & Three and Paise Eighty Only
19	Appendix:-19-Construction of approach roads and compound walls to Raw water pumping station and reservoir sites					
19.001	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 heigth of super ctructure is 1.5m	240.000	metre	5348.27	1283584.80	INR Twelve Lakh Eighty Three Thousand Five Hundred & Eighty Four and Paise Eighty Only
19.002	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.	300.000	kg	148.73	44619.00	INR Forty Four Thousand Six Hundred & Nineteen Only



19.003	Construction of concrete road by 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.for formation of road and Providing and laying in position specified grade of reinforced cement concrete, and reinforcement 1:1:5:3 (1 cement 1.5 coarse sand :3 graded stone aggregate 20 mm nominal size over cement concrete of specified grade of 1:2:4)1 cement : 2 coarse sand : 4 graded stone aggregate 40 mm nominal size)for road works.Chrges including all cost labour charges etc. complete.	200.000	metre	7543.96	1508792.00	INR Fifteen Lakh Eight Thousand Seven Hundred & Ninety Two Only
20	Appendix:-20-Supply erection ,testing &&&&Commissioning of , 250 kVA 4 nos.,110kVA 2Nos. Capacity Transformers with all accessories including yard etc. at HEAD WORKS ,WTP, Booster Pumping station of the scheme					
20.001	11 KV/415 V, 110 KVA Transformer :- Supply, erection, testing and commissioning of 110 KVA, 11 KV/433 KV, 3 Phase, 50 Hz, ONAN cooled, outdoor type copper wound distribution transformers with HV side bushings and LV side cable end box arrangements, off load tap changer with 5 tap positions having 5% to - 5% variations in 2.5% steps with first filling of oil etc. complete with all fittings as per IS 2026 and Kerala Electrical Inspectorate standards.The rate including all cost labour charges,statutory charges to be remitted to KSEB Authorities.	2.000	No	428740.37	857480.74	INR Eight Lakh Fifty Seven Thousand Four Hundred & Eighty and Paise Seventy Four Only
20.002	11 KV/415 V, 250 KVA Transformer :- Supply, erection, testing and commissioning of 250 KVA, 11 KV/433 KV, 3 Phase, 50 Hz, ONAN cooled, outdoor type copper wound distribution transformers with HV side bushings and LV side cable end box arrangements, off load tap changer with 5 tap positions having 5% to - 5% variations in 2.5% steps with first filling of oil etc. complete with all fittings as per IS 2026 and Kerala Electrical Inspectorate standards.The rate including all cost labour charges,statutory charges to be remitted to KSEB Authorities.	4.000	No	974409.94	3897639.76	INR Thirty Eight Lakh Ninety Seven Thousand Six Hundred & Thirty Nine and Paise Seventy Six Only



20.003	Erection of transformer yard including equipments,sub station fencing,weld mesh gate,Supply, erection, testing and commissioning of out door type metering unit,Supply, erection, testing and commissioning of TOD meter with maximum demand in KVA suitable for the above out door metering set, Supply, erection, testing and commissioning of MCB distribution board Lighting Switch Board (LSB),Supply of various size cable suitable for the erection of transformers,Supply of all materials and providing end termination of the following size PVC/XLPE insulated, sheathed armoured Aluminium conductor cable (1100 volts grade) for giving power connections to Transformers, Panel Boards etc,Supply of all materials and providing end termination of the following size PVC/XLPE insulated, sheathed armoured Aluminium conductor cable (1100 volts grade) for giving power connections to Transformers, Panel Boards etc. complete as per standards. 3.5 core 70 Sq.mm PVC AL Cable, Supply of all materials and providing end termination of the following size PVC/XLPE insulated, sheathed armoured Aluminium conductor cable (1100 volts grade) for giving power connections to Transformers, Panel Boards etc. complete as per standards. 4 core 10 Sq.mm PVC AL Cable, Supply of all materials and providing end termination of the following size PVC/XLPE insulated, sheathed armoured Aluminium conductor cable (1100 volts grade) for giving power connections to Transformers, Panel Boards etc. complete as per standards. 10 Core 2.5 Sq.mm PVC AL. Cable ,Supply of all materials and providing end termination of the following size PVC/XLPE insulated, sheathed armoured Aluminium conductor cable (1100 volts grade) for giving power connections to Transformers, Panel Boards etc. complete as per standards. 3 core 6 Sq.mm PVC Cu Cable, Earthing: - Supply installation GI/CI 1200 x1200 x 12.5mm plate earthing as per standards, Supply, laying and termination of the following sizes	2.000	set	2227222.71	4454445.42	INR Forty Four Lakh Fifty Four Thousand Four Hundred & Forty Five and Paise Forty Two Only
Total in Figures					364643508.83	Thirty Six Crore Forty Six Lakh Forty Three Thousand Five Hundred & Eight and Paise Eighty Three Only
Quoted Rate in Words		INR Thirty Six Crore Forty Six Lakh Forty Three Thousand Five Hundred & Eight and Paise Eighty Three Only				



**JJM (2021-24) - Phase II (4th SWSM) - Providing FHTC in Mullankolly Panchayath in Wayanad District by
Augmentation of the scheme CWSS to Pulpally and Mullankolly - 4600 FHTC**

E-Tender No. SE/PHC/KKD/15/2022-23

Abstract

Tendered PAC	=	Rs. 380297169/-
Accepted Rate	=	Rs.36,46,43,508.83/-
% over all Excess / Below	=	$\frac{38,02,97,169 - 36,46,43,508.83}{38,02,97,169} \times 100$
	=	4.11% Below Tendered PAC





GOVERNMENT OF KERALA

Abstract

Finance Department – Execution of public works on Item Rate Contracts – Regulating the abnormally high quoted and low quoted items – Clarifications – Orders issued

FINANCE (INDUSTRIES & PUBLIC WORKS - B) DEPARTMENT

G.O.(P)No. 54/2019/Fin.

Dated, Thiruvananthapuram, 04.05.2019

- Read :-
- 1) G.O.(P) No. 324/2015/Fin dated 30.07.2015
 - 2) G.O.(P) No. 30/2016/Fin dated 29.02.2016
 - 3) G.O.(P) No. 16/2017/Fin dated 06.02.2017
 - 4) G.O.(P) No. 8/2018/Fin dated 15.01.2018
 - 5) G.O.(P) No. 154/2018/ Fin dated 01.10.2018

ORDER

As per the Government Order cited 1st and 2nd papers, all tenders for public works costing more than ₹ 5 lakhs shall be invited through E-tender portal on Item Rate Contract only. Vide Government Order read as 3rd and 5th papers, Government have dispensed the Tender Committees at Government level and delegated powers to the Departmental Tender Committees at Chief Engineer, Superintending Engineer and Executive Engineer levels for approving the tenders subject to certain conditions.

2) In order to avoid time and cost over run on account of deviations necessitated during the course of execution of work, as per the Government Order read as 4th above, instructions were issued to all Government Departments and PSUs to ensure the detailed investigation, design, estimation etc while according Administrative Sanction itself. It was also stipulated that if revision of estimates in excess of 10% of Technical Sanction amount is necessitated due to lapses in



investigation / design / planning / estimation, the Officers will be made accountable and proceeded against.

3) As per relevant Clauses of Government approved Standard Bidding Document (SBD), the contractor is bound to execute excess quantities up to 25% of scheduled quantity at contract rates. The criteria to be adopted for fixing the rates for excess quantities and extra items are also mentioned in the SBD.

4) However, some discrepancies have been observed while processing of tenders and execution of works under Item Rate Contracts. Also instances have been noticed where the low quoted items are excluded during execution and excess quantities of high quoted items are executed without adequate technical justification, resulting in heavy loss to the public exchequer.

5) In order to avoid such instances in future, Government are pleased to issue the following clarifications on Item Rate Contracts to all Government Departments and PSUs:-

- 1) Tenders for all public works costing more than ₹ 5 lakh shall be invited through E-tenders on Item Rate Contract only.
- 2) The bidder who has quoted lowest total amount shall be considered as L1.
- 3) The quoted rates of L1 for all items may be compared with current DSR and current LMR. The items whose quoted rates are more than current DSR may be treated as High Quoted Items and less than current DSR may be treated as Low Quoted Items.
- 4) Negotiations shall be done with L1 only to reduce the high quoted rates so as to explore the possibility for bringing them within DSR + 10% tolerance limit or LMR, which ever is lower.
- 5) The admissible contract amount will be least of (i) Negotiated Contract PAC of L1 (ii) Estimate amount based on current LMR and (iii) Estimate amount based on current DSR plus 10% tolerance limit.
- 6) The quoted rates with deviation of more than (+/-) 25% over Technical Sanction Estimate Rates may be treated as Abnormally High Quoted Rates



(AHQR) item / Abnormally Low Quoted Rates (ALQR) item, as the case may be. In respect of AHQR item, under normal circumstances, the contract rate is applicable for the scheduled quantities in the Agreement only.

- 7) In case of quantities exceeding the agreement schedule quantities and up to 25% limit that are necessitated for proper completion of work, the contract rates of corresponding item shall apply.
- 8) For excess quantities, i.e, quantities in excess of 25% over agreement schedule quantities, the admissible rates shall be limited to Technical Sanctioned Estimate Rate modified by overall tender excess / tender deficit, as the case may be, subject to a maximum of PWD local market rates prevailing at the time of ordering.
- 9) In case of ALQR items, sanction of Technical Sanction authority shall be insisted before limiting execution of concerned item less than 75% scheduled quantity.
- 10) The relevant clauses of Standard Bidding Document (SBD) and Kerala PWD Manual 2012 shall be modified accordingly.

**By Order of the Governor,
SANJEEV KAUSHIK IAS
Principal Secretary (Finance-Resources)**

To

The Principal Accountant General (A&E) Kerala, Thiruvananthapuram
The Principal Accountant General (G&SSA) Kerala, Thiruvananthapuram
The Accountant General (E&RSA) Kerala, Thiruvananthapuram
The Principal Accountant General (Audit) Kerala, Thiruvananthapuram
All Heads of Departments and Offices
The Secretary to Governor
All Departments of Secretariat
All Private Secretaries to Ministers
Private Secretary to Chief Minister
Private Secretary to the Leader of Opposition
All Secretaries to Government



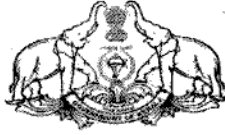
The Registrar, High Court of Kerala
The Secretary, Kerala Human Rights Commission, Thiruvananthapuram
The Election Commissioner, State Election Commission, Thiruvananthapuram
The Registrar, University of Kerala/Cochin/Kozhikode/Kottayam
The Nodal Officer, www.finance.kerala.gov.in
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Section Officer





GOVERNMENT OF KERALA

Abstract

Finance Department – Calculation of Additional Performance Guarantee – Clarification – Modified Orders issued

FINANCE (INDUSTRIES & PUBLIC WORKS - B) DEPARTMENT

G.O.(P) No.168/2019/Fin.

Dated, Thiruvananthapuram, 07.12.2019

Read :-1) G.O.(P) No.19/2016/Fin dated 03.02.2016

2) G.O.(P) No.124/2016/Fin dated 29.08.2016

3) G.O.(P) No.01/2019/Fin dated 10.01.2019

4) Letter No. CE/Admin/IT/General/2018-19 dated 02.11.2019 from the Chief Engineer, PWD (NH & Admin)

5) U.O.(f) No. PWD-H3/344/2019-PWD

ORDER

As per rules, Additional Performance Guarantee will be required if works quoted amount falls below 10% of estimated PAC. As per Government Order read as 1st paper above, if the quoted amount of L1 is @ X% below estimated PAC, the Additional Performance Guarantee Amount will be @ (X-10)% of the quoted amount. As per Government Order read as 2nd paper above, Government also lifted the restrictions stipulated in Kerala PWD Manual 2012 to award of works if quoted amount is less than 75% of estimated PAC. As per the Government Order read as 3rd paper above, guidelines regarding the mode of remittance of Additional Performance Guarantee were issued.

2) Now, vide letter read as 4th paper above, the Chief Engineer, PWD (NH & Admin) has pointed out that in the case of item rate contracts, the stipulation that the bidder has to quote for each and every item of work in the bid of the application of the above rule, as such, does not serve the required purpose and hence suggested certain modifications to the existing rules on calculation of Additional Performance Guarantee.



3) Government have examined the matter in detail and are pleased to modify the Government Orders read as 1st and 2nd papers above, as follows:-

(i) For Percentage Rate Contracts – If the quoted amount of lowest bidder (L1) is X% below Estimated PAC, the Additional Performance Guarantee amount shall be (X-10)% of Estimated PAC.

(ii) For Items Rate Contracts – If the rate quoted by the bidder for an Item of work is “X%” below estimate cost where 'X' lies above 10%, the Additional Performance Guarantee for that item of work is equal to (X-10)% of the estimate amount for that Item of work. The total of Additional Performance Guarantee for the whole work is the total of individual Additional Performance Guarantee for each item of work calculated as above.

**By Order of the Governor,
MANOJ JOSHI IAS
Additional Chief Secretary (Finance)**

To

The Principal Accountant General (A&E) Kerala, Thiruvananthapuram
The Principal Accountant General (G&SSA) Kerala, Thiruvananthapuram
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The Nodal Officer, www.finance.kerala.gov.in
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