

ABSTRACT ESTIMATE

Jal Jeevan Mission (JJM)-WSS - to Santhanpara, Rajakumary (Part) and Senapathy (Part)
Panchayaths in Idukki District-Package V-Supply, erection, testing and commissioning of Raw
water pump set ,Clear water pump sets
,Supply and installation of flow meters ,Electrical and allied works-General Civil Work

SI No	Specification	Quantity	Rate	Amount
1 Supply and installation of flow meters at WTP compound				
1.001	OD254483/2022-2023 Supplying 350mm 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 wireless transfer through GSM. The manufacture should have the calibration standards as per ISO 17023 and the product shall have sufficient warranty provisions.			
	Net Total	1.0001 nos	@190900.00/1 nos	190900.00
1.002	OD254489/2022-2023 Labour for cutting DI pipes 350mm Dia			
	Net Total	2.000no	@378.03/no	756.06
1.003	OD254492/2022-2023 Fabricating and fixing 350 mm MS flange			
	Net Total	4.000no	@5105.14/no	20420.56
1.004	OD254493/2022-2023 conveying and fixing 350 mm mechanical flow meter			
	Net Total	1.000no	@3616.26/no	3616.26
1.005	OD254495/2022-2023 Supplying 250mm 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			

SI No	Specification	Quantity	Rate	Amount
	be coupled with HART for data acquisition and transfer with provision for wireless transfer through GSM. The manufacture should have the calibration standards as per ISO 17023 and the product shall have sufficient warranty provisions			
	Net Total	1.0001 nos	@156400.00/1 nos	156400.00
1.006	OD254516/2022-2023			
	Labour for cutting DI pipes 250mm Dia			
	Net Total	2.000no	@274.74/no	549.48
1.007	OD254504/2022-2023			
	Fabricating and fixing 250 mm MS flange			
	Net Total	4.000no	@3594.00/no	14376.00
1.008	OD254508/2022-2023			
	conveying and fixing 250 mm mechanical flow meter			
	Net Total	1.000no	@2304.80/no	2304.80
1.009	OD254521/2022-2023			
	Supplying a mechanical flow meter of WOLTMAN type confirming to ISO 4064 class B of ARAD/ZENNER/REYCHEM RPG/ITRON make and the flowmeter shall be tested and certified by FCRI - Palakkad. Flow meter should be calibrated with physical measurement at site after installation. : 200 mm diameter			
	Net Total	2.000no	@34500.00/no	69000.00
1.010	OD254524/2022-2023			
	Labour for cutting DI pipes 200mm Dia			
	Net Total	2.000no	@223.11/no	446.22
1.011	OD254510/2022-2023			
	Fabricating and fixing 200 mm MS flange			
	Net Total	4.000no	@2924.43/no	11697.72
1.012	OD254511/2022-2023			
	conveying and fixing 200 mm mechanical flow meter			
	Net Total	2.000no	@1625.85/no	3251.70
1.013	OD254531/2022-2023			
	Supplying and fixing mechanical flow meter of WOLTMAN type confirming to ISO 4064 class B of ARAD/ZENNER/REYCHEM RPG/ITRON make and the flowmeter shall be tested and certified by FCRI - Palakkad. Flow meter should be calibrated with physical measurement at			

SI No	Specification	Quantity	Rate	Amount
	site after installation. : 150 mm diameter			
	Net Total	1.000no	@30003.33/no	30003.33
1.014	OD254533/2022-2023			
	Labour for cutting DI pipes 150mm Dia			
	Net Total	2.000no	@171.45/no	342.90
1.015	OD254534/2022-2023			
	Fabricating and fixing 150 mm MS flange			
	Net Total	4.000no	@2192.13/no	8768.52
Heading Total(Rs)				512833.55
2	Electrical and allied works			
2.001	OD112108/2023-2024			
	Supply of all materials and providing 11KV Double pole structure using 2nos. 175x85mm. ISMB joist of 9.5M height, 100x50mm. GI chanel cross arms, 1set 3 pole of 400A, 11KV gang operated AB switch with operating handles of required length, 1 set of 9.6KV, 6KA Lightning Arrestors, 1 sets (3 nos) of 11KV, D.O fuses, Pin insulators, Disc insulators and inter connections of the above items using 8mm dia copper wire with proper copper sockets , including all associated civil works and painting of all structurers with two coats of zinchromate primer and aluminium paint etc. and earthing using 5 nos of 3m GI earthing pipes and inter connection complete as per standard construction practices approved by Kerala Electrical Inspectorate and relevant standards			
	Net Total	1.000set	@142864.50/set	142864.50
2.002	OD254553/2022-2023			
	OUTDOOR HT BREAKER PANEL (LBS) Supply, Installation, Testing & Commissioning of 11kV Outdoor HT Breaker Panel with the following components. 11kV Load Break Swich 11kV, 350 MVA, 630A, LBS unit - 1 set Voltmeter (0 - 11kV) - 3 Nos LED Pilot Indication - LBS ON / OFF - 1 Set Trip Push buttons - 1 set 2NO+2NC Aux contacts - 1 Set 230V AC Shunt Trip Coil - 1 No Aluminium Busbar - 1 Set Seal off Bushings - 3 Nos Space Heater Element with Thermostat & wiring - 1 Nos Inspection Lamp LED with switch & wiring - 1 set Metering Chamber PT - 100 VA, 11kV/110V, CL 0.2S - 1 No CT - */5A, 15VA, CL 0.2S - 3 Nos Provisions for mounting 3 phase, 4wire, HT CT/PT operated, bi-directional TOD meter with accuracy class 0.2S including wiring and test terminal block, site glass etc. - 1 set "Voltage Circuit: The active & apparent power consumption of voltage circuit including power supply of meter at reference voltage, reference temperature & frequency shall not exceed 1.0 Watt & 4.0 VA per phase			

SI No	Specification	Quantity	Rate	Amount
	" Current Circuit: The apparent power taken by current circuit at basic current, reference frequency & reference temperature shall not exceed 1.0 VA/phase. (The Quoted rate shall be inclusive of necessary control wiring, components working on LT supply should be prewired completely with necessary controls as specified till the connection point for feeding LT Supply from outside, Cable end box for receiving incoming and outgoing cables and suitable civil foundation etc as required.)			
	Net Total	1.000set	@296778.02/set	296778.02
2.003	OD254554/2022-2023 HT Bidirectional TOD Meter Supply & Providing 3 phase, 4wire, HT CT/PT operated, bi-directional with accuracy class 0.2S for both Active and Reactive energy, -/5A, HT static tri vector meter with TOD register, DLMS compliant & AMR compatible with optical port and RS232 port having ISI Marking, suitable for measurement of active kWh, reactive energy kVARh and apparent energy kVAh and kVA MD, kW MD at nominal frequency in the range of 47.5 Hz to 52.5 Hz in balanced as well as unbalanced load conditions in the existing outdoor Meter cubicle including testing & commissioning etc. complete.			
	Net Total	1.000set	@50505.56/set	50505.56
2.004	OD254555/2022-2023 HT Equipment Pinth, Substation Yard Fencing & Levelling Providing, fabricating and fixing 2m high chainlink fencing over 4mm thick barbed wire with a framework of 50x50x6mm MS angle between vertical posts of ISMC 75 at 2400mm interval, Earthing as per KSEI/KSEB standards shall be done around the periphery of the fencing. The MS framework for chainlink fencing shall be Hot Dip Galvanised. The rate shall be inclusive of all materials, labour, lead, lift etc including escalation works and fabrication and assembly works including all nuts, bolts and other miscallaneous items etc complete as per drawing and as directed by the Engineer in Charge.			
	Net Total	20.000metre	@1388.88/metre	27777.60
2.005	OD254558/2022-2023 HT Equipment Pinth, Substation Yard Fencing & Levelling Supplying and filling the substation yard with 40mm size blue jelly of 150mm thick including cost and conveyance of all materials, labour charges etc complete			
	Net Total	5.000cum	@3348.66/cum	16743.30
2.006	OD254560/2022-2023 HT Equipment Pinth, Substation Yard Fencing & Levelling Supply & erection of 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) upto plinth level with : Cement mortar 1:6 (1 cement : 6 coarse sand).			
	Net Total	2.000cum	@6269.13/cum	12538.26
2.007	OD254561/2022-2023 Transformer Supply, installation, testing and commissioning of one number 500 kVA, DYn11, 3Ph, 50Hz, 11/0.433 kV, ONAN cooled, copper wound outdoor distribution			

SI No	Specification	Quantity	Rate	Amount
	transformer with tappings from +5% to -10% in steps of 2.5% with OFTC. The HT side & LT side shall have cable end box for XLPE cable. The transformer shall have suitable enclosure for The HT side & LT side. The transformer shall be complete with all standard accessories and fittings & conform to IS:2026. The rate shall be inclusive of all materials, lead, lift, first fill of oil, necessary civil works for mounting to the existing transformer foundation complete as per single line schematic diagram & particular specifications.			
	Net Total	1.000no	@1167000.00/no	1167000.00
2.008	OD254562/2022-2023 NEUTRAL CT Supply & Providing 5P10 Protection Class 150/5A, 15VA Neutral CT in a suitable enclosure including giving connections to Transformer Neutral etc. complete			
	Net Total	1.000no	@5044.65/no	5044.65
2.009	OD254563/2022-2023 MSB for 500KVA Transformer Supply, fabrication, erection, testing and commissioning of cubicle type fully compartmentalised, dust tight, vermin proof, water proof 800A LT- Main MV Panel falling to IP54 category fabricated out of 16 SWG CRCA Sheet Steel painted as per standards with Aluminium Busbars of suitable size, earth bus of adequate capacity, double earth connection to all switches, internal rigid connection etc. including suitable chambers, front open, top cable entry with water proof shrouding, free standing panel consisting of the following as per standards (All switches shall confirm to conforming to IEC 60947-2 standards). Incommer 800A FP Microprocessor based MCCB (36kA) - 1 Nos. Earth Fault Relay - 1 Set 800A TPN best conductivity Aluminium busbar with SMC supports, heat shrinkable sleeves etc. as per ISS - 1set RYB indicators (LED Pilot type) with 2A Control MCB and toggle switches - 4 Set Multifunction Digital Panel meter to read V, A, F, PF, kW, kVA, kVAR, kWh, kVAh, kVARh Class 1.0 - 1 Set 800/5A CL 1.0, 15VA Metering CTs - 1 Set Outgoing : 250A FP Microprocessor based MCCB (36kA) – 4Nos 125A FP Microprocessor based MCCB (36kA) – 4Nos "Surge Protection Pluggable type surge arrester with potential free contact, thermal disconnecter & provision for inbuilt common remote indication for defective arresters to connect between Line and Neutral and one number Spark Gap type arrester to connect between Neutral and Earth of following ratings including base element & pluggable arresters. Nominal voltage 230V, 50Hz, Nominal Discharge current 30 kA (8/20 sec) for Line to Neutral & 50 kA (8/20 sec) for Neutral to Earth, Maximum Discharge Current I _{max} 50 kA (8/20 sec) -1Set" Supports The panel shall be supported to ground using framework fabricated out of MS Flats / Angles etc. painted with two coats of Zinc Chromate primer and two coats of enamel paint. The framework shall be firmly supported to ground using suitable cement concrete plinth. The Panel Board shall be provided with 25 x 3mm copper earth bus for the full length. Painting letters / identifications for the incoming and outgoing switches, cable,			

SI No	Specification	Quantity	Rate	Amount
	fuse sizes, etc., in white enamel paint. The board shall be fabricated in such a way that future extension be possible.			
	Net Total	1.000no	@243915.00/no	243915.00
2.010	<p>OD254564/2022-2023</p> <p>SSB Supply, fabrication, erection, testing and commissioning of cubicle type fully compartmentalised, dust tight, vermin proof, water proof 200A MV Panel falling to IP54 category fabricated out of 16 SWG CRCA Sheet Steel painted as per standards with Aluminium Busbars of suitable size, earth bus of adequate capacity, double earth connection to all switches, internal rigid connection etc. including suitable chambers, front open, top cable entry with water proof shrouding, free standing panel consisting of the following as per standards (All switches shall confirm to conforming to IEC 60947-2 standards). Incoming : 250A(36KA) MCCB FP Micro processor based, TPN best conductivity Aluminium busbar with SMC supports, heat shrinkable sleeves etc. as per ISS - 1set Multifunction Digital Panel meter to read V, A, F, PF, kW, kVA, kVAR, kWh, kVAh, kVARh Class 1.0 - 1 Set RYB indicators (LED Pilot type) with 2A Control MCB and toggle switches - 1 Set 100/5A CL 1.0, 15VA Metering CTs - 1 Set Outgoings: 250A, 36kA FP MP MCCB - 4 Nos. 160A, 36kA FP MP MCCB - 4 Nos. 20A TP D curve MCB (10kA) - 4 Nos. Supports The panel shall be supported to ground using framework fabricated out of MS Flats / Angles etc. painted with two coats of Zinc Chromate primer and two coats of enamel paint. The framework shall be firmly supported to ground using suitable cement concrete plinth. The Panel Board shall be provided with 25 x 3mm copper earth bus for the full length. Painting letters / identifications for the incoming and outgoing switches, cable, fuse sizes, etc., in white enamel paint. The board shall be fabricated in such a way that future extension be possible.</p>			
	Net Total	1.000set	@46892.11/set	46892.11
2.011	<p>OD254565/2022-2023</p> <p>APFC PANEL Automatic Power Factor Correction Panel of total 85 KVAR capacity with Auto / Manual mode operation to be fabricated out of 14 guage CRCA sheet steel Powder coated with provision for capacitor mounted inside the panel with adequate number of louvers and powder coated with approved shade and having following specific components(refer particular specification) with Aluminium Busbars of suitable size, earth bus of adequate capacity, double earth connection to all switches, internal rigid connection etc. including suitable chambers, front open, top cable entry , free standing panel consisting of the following as per standards. Incomer 200A TPN Isolator - 1 No. 200 A TPN best conductivity Aluminium busbar with SMC supports, heat shrinkable sleeves etc. as per ISS - 1set Multifunction Digital Panel meter to read V, A, F, PF, kW, kVA, kVAR, kWh, kVAh, kVARh Class 1.0 - 1 Set</p>			

SI No	Specification	Quantity	Rate	Amount
	<p>RYB indicators (LED Pilot type) with 2A Control MCB and toggle switches- 1 Set 200/5A 15VA CL 1.0 Metering CTs - 3 Sets Microprocessor based intelligent, 8 step IPFC relay with PF display - 1 No. Out goings 63A, 10kA C Curve TP MCB - 1 Nos 16A, 10kA C Curve TP MCB - 6 Nos Capacitor duty contactors working on 3 Phase 415V AC supply of the following ratings wired with Pilot LED indication for ON & OFF, Push Buttons for Manual ON & OFF operation using suitable NO / NC contacts for all the stages 25 kVAR- 1 Nos 10 kVAR- 6 Nos 480 V, 50 Hz Double di-electric polypropylene (MPP heavy duty) Capacitors of the following ratings including fixed compensation for low load losses. 25 kVAR- 1 Nos 10 kVAR- 6 Nos Supports The panel shall be supported to ground using framework fabricated out of MS Flats / Angles etc. painted with two coats of Zinc Chromate primer and two coats of enamel paint. The framework shall be firmly supported to ground using suitable cement concrete plinth. The Panel Board shall be provided with 25 x 3mm copper earth bus for the full length. Painting letters / identifications for the incoming and outgoing switches, cable, fuse sizes, etc., in white enamel paint.</p>			
	Net Total	1.000set	@163793.15/set	163793.15
2.012	<p>OD254566/2022-2023</p> <p>Supply, installation, testing & commissioning of best quality sheet steel, phosphatised and painted, dust and vermin proof enclosure (IP43) Vertical TPN Double door DB including copper bus bar, neutral link, earth bus and DIN rail suitable for fixing RCCB + Isolator (8 module)as incommer and SP/TP MCB as outgoings etc. on wall using suitable anchor bolts or fixed in recess including cutting hole on the wall , making good the damages, colour washing, dressing the DB including termination etc. as required. (Including closing vaccant slots using Dummy)</p>			
	Net Total	1.000job	@10629.69/job	10629.69
2.013	<p>OD254568/2022-2023</p> <p>Supply and providing the following MCCB/ RCCB / MCB / MCB Isolators/COS etc. to the existing DBs / MCS / Junction Boxes etc. including giving proper termination using suitable Bananna copper lugs, sleeves, insulation etc. complete. 63A, 100mA 3Ph RCCB</p>			
	Net Total	1.000no	@6515.22/no	6515.22
2.014	<p>OD254572/2022-2023</p> <p>Supply and providing the following MCCB/ RCCB / MCB / MCB Isolators/COS etc. to the existing DBs / MCS / Junction Boxes etc. including giving proper termination using suitable Bananna copper lugs, sleeves, insulation etc. complete. 63A, 4P MCB Isolator</p>			
	Net Total	1.000no	@907.53/no	907.53
2.015	<p>OD254573/2022-2023</p>			

SI No	Specification	Quantity	Rate	Amount
	Supply and providing the following MCCB/ RCCB / MCB / MCB Isolators/COS etc. to the existing DBs / MCS / Junction Boxes etc. including giving proper termination using suitable Bananna copper lugs, sleeves, insulation etc. complete. 6A to 32A , 10kA SP MCB			
	Net Total	36.000no	@215.57/no	7760.52
2.016	OD254574/2022-2023 HT Power Cables "Supply & laying 11KV stranded compact circular aluminium conductor, conductors screened with extruded semi conducting compound XLPE insulated, insulation screened with extruded semi conducting compound in combination with copper tape (0.3 kA for 1 sec.), cores laid up, inner sheath of PVC tape, galvanized steel flat strip armoured, and overall PVC sheathed cable of the following sizes in the existing cable trench conforming to IS: 7098 part II 1985 with latest amendments." 3C x 300 Sqm			
	Net Total	25.000metre	@2225.01/metre	55625.25
2.017	OD254575/2022-2023 "Supply & laying 11KV stranded compact circular aluminium conductor, conductors screened with extruded semi conducting compound XLPE insulated, insulation screened with extruded semi conducting compound in combination with copper tape (0.3 kA for 1 sec.), cores laid up, inner sheath of PVC tape, galvanized steel flat strip armoured, and overall PVC sheathed cable of the following sizes in the existing cable trench conforming to IS: 7098 part II 1985 with latest amendments." 3C x 150 Sqm			
	Net Total	25.000metre	@1393.80/metre	34845.00
2.018	OD254578/2022-2023 HT Cable Terminations "Supplying and making Outdoor cable end jointing with heat shrinkable jointing kit, including lugs and other jointing materials, for for following sizes, XLPE aluminium conductor cable of 11 KV grade as required." 3C x 150 Sqmm			
	Net Total	2.000set	@9524.30/set	19048.60
2.019	OD254586/2022-2023 HT Cable Terminations "Supplying and making Outdoor cable end jointing with heat shrinkable jointing kit, including lugs and other jointing materials, for for following sizes, XLPE aluminium conductor cable of 11 KV grade as required." 3C x 300 Sqmm			
	Net Total	2.000set	@11034.25/set	22068.50

SI No	Specification	Quantity	Rate	Amount
2.020	OD254590/2022-2023			
	LT Power Cables Supply & laying UG A2XFY,PVC insulated and PVC sheathed Aluminium conductor armoured power cable of 1.1 KV grade of following sizes through trench/wall/ ceiling. 4C x 400 Sqmm			
	Net Total	50.000metre	@3144.91/metre	157245.50
2.021	OD254591/2022-2023			
	LT Power Cables Supply & laying UG A2XFY,PVC insulated and PVC sheathed Aluminium conductor armoured power cable of 1.1 KV grade of following sizes through trench/wall/ ceiling. 3.5C x 185 Sqmm			
	Net Total	25.000metre	@1361.31/metre	34032.75
2.022	OD254592/2022-2023			
	LT Power Cables Supply & laying UG A2XFY,PVC insulated and PVC sheathed Aluminium conductor armoured power cable of 1.1 KV grade of following sizes through trench/wall/ ceiling. 3.5C x 50 Sqmm			
	Net Total	40.000metre	@433.10/metre	17324.00
2.023	OD254599/2022-2023			
	LT Power Cables Supply & laying UG A2XFY,PVC insulated and PVC sheathed Aluminium conductor armoured power cable of 1.1 KV grade of following sizes through trench/wall/ ceiling. 3.5C x 35 Sqmm			
	Net Total	30.000metre	@297.26/metre	8917.80
2.024	OD254594/2022-2023			
	LT Power Cables Supply & laying UG A2XFY,PVC insulated and PVC sheathed Aluminium conductor armoured power cable of 1.1 KV grade of following sizes through trench/wall/ ceiling. 4C x 16 Sqmm			
	Net Total	30.000metre	@218.51/metre	6555.30
2.025	OD254595/2022-2023			
	LT Power Cables Supply & laying UG A2XFY,PVC insulated and PVC sheathed Aluminium conductor armoured power cable of 1.1 KV grade of following sizes through trench/wall/ ceiling. 4C x 6 Sqmm			
	Net Total	35.000metre	@151.58/metre	5305.30
2.026	OD254597/2022-2023			
	LT Power Cables			

SI No	Specification	Quantity	Rate	Amount
	Supply & laying UG A2XFY,PVC insulated and PVC sheathed Aluminium conductor armoured power cable of 1.1 KV grade of following sizes through trench/wall/ ceiling. 4C x 4 Sqmm			
	Net Total	110.000metre	@119.11/metre	13102.10
2.027	OD254593/2022-2023 LT Power Cables Supply & laying UG A2XFY,PVC insulated and PVC sheathed Aluminium conductor armoured power cable of 1.1 KV grade of following sizes through trench/wall/ ceiling. 3C x 35 Sqmm			
	Net Total	60.000metre	@297.26/metre	17835.60
2.028	OD254605/2022-2023 LT Power Cables Supply & laying UG A2XFY,PVC insulated and PVC sheathed Aluminium conductor armoured power cable of 1.1 KV grade of following sizes through trench/wall/ ceiling. 3C x 25 Sqmm			
	Net Total	100.000metre	@226.39/metre	22639.00
2.029	OD254606/2022-2023 LT Power Cables Supply & laying UG A2XFY,PVC insulated and PVC sheathed Aluminium conductor armoured power cable of 1.1 KV grade of following sizes through trench/wall/ ceiling. 3C x 16 Sqmm			
	Net Total	50.000metre	@167.33/metre	8366.50
2.030	OD254607/2022-2023 LT Power Cables Supply & laying UG A2XFY,PVC insulated and PVC sheathed Aluminium conductor armoured power cable of 1.1 KV grade of following sizes through trench/wall/ ceiling. 3C x 6 Sqmm			
	Net Total	45.000metre	@126.97/metre	5713.65
2.031	OD254608/2022-2023 LT Power Cables Supply & laying UG A2XFY,PVC insulated and PVC sheathed Aluminium conductor armoured power cable of 1.1 KV grade of following sizes through trench/wall/ ceiling. 3C x 4 Sqmm			
	Net Total	180.000metre	@101.37/metre	18246.60
2.032	OD254609/2022-2023 Supply & laying UG 2XFY,PVC insulated and PVC sheathed Copper conductor armoured Power / Control cable of 1.1 KV grade of the following sizes through trench/wall/ ceiling 4C x 2.5 Sqmm			
	Net Total	50.000metre	@237.21/metre	11860.50

SI No	Specification	Quantity	Rate	Amount
2.033	OD254611/2022-2023			
	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required. 3.5C x 185 Sqmm			
	Net Total	2.000job	@758.90/job	1517.80
2.034	OD254612/2022-2023			
	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required. 3.5C x 50 Sqmm			
	Net Total	2.000job	@356.32/job	712.64
2.035	OD254613/2022-2023			
	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required. 3.5C x 35 Sqmm			
	Net Total	2.000job	@324.83/job	649.66
2.036	OD254614/2022-2023			
	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required. 4C x 16 Sqmm			
	Net Total	30.000job	@270.69/job	8120.70
2.037	OD254615/2022-2023			
	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required. 4C x 6 Sqmm			
	Net Total	2.000job	@237.21/job	474.42
2.038	OD254616/2022-2023			
	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required. 4C x 4 Sqmm			
	Net Total	10.000job	@237.21/job	2372.10
2.039	OD254619/2022-2023			
	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required. 3C x 35 Sqmm			
	Net Total	2.000job	@306.12/job	612.24
2.040	OD254620/2022-2023			

SI No	Specification	Quantity	Rate	Amount
	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required. 3C x 25 Sqmm			
	Net Total	8.000job	@240.17/job	1921.36
2.041	OD254621/2022-2023			
	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required. 3C x 16 Sqmm			
	Net Total	4.000job	@240.17/job	960.68
2.042	OD254622/2022-2023			
	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required. 3C x 6 Sqmm			
	Net Total	4.000job	@228.37/job	913.48
2.043	OD254623/2022-2023			
	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required. 3C x 4 Sqmm			
	Net Total	16.000job	@228.37/job	3653.92
2.044	OD254624/2022-2023			
	Supplying and making end termination with brass compression gland and copper lugs for following size of PVC insulated and PVC sheathed / XLPE copper conductor cable of 1.1 KV grade as required. 4C x 2.5 Sqmm			
	Net Total	6.000job	@265.77/job	1594.62
2.045	OD254630/2022-2023			
	Supply & drawing the following size of FR Multi-core PVC Insulated and PVC sheathed Copper conductor round flexible wire manufactured with bright annealed bare copper conductor as per IS 8130/1984 Insulated and sheathed with electrical grade PVC compound as per IS 5831/1984 generally conforming to IS 694/1990 for working voltage up to and including 1100 V through existing PVC conduit / casing capping wall. 3C x 0.5 Sqmm			
	Net Total	100.000metre	@51.18/metre	5118.00
2.046	OD254632/2022-2023			
	Supply & drawing the following size of FR Multi-core PVC Insulated and PVC sheathed Copper conductor round flexible wire manufactured with bright annealed bare copper conductor as per IS 8130/1984 Insulated and sheathed with electrical grade PVC compound as per IS 5831/1984 generally conforming to IS 694/1990 for working voltage up to and including 1100 V through existing PVC conduit / casing capping wall.			

SI No	Specification	Quantity	Rate	Amount
	3C x 1.5 Sqmm			
	Net Total	100.000metre	@85.63/metre	8563.00
2.047	OD254633/2022-2023			
	Supply and providing the following size of ISI Marked rigid PVC conduits with specials confirming to IS 9537/1983 on surface / concealed position making good the damages made etc.complete. 20mm dia 1.5mm thick			
	Net Total	400.000metre	@90.55/metre	36220.00
2.048	OD254634/2022-2023			
	Supply and providing the following size of ISI Marked rigid PVC conduits with specials confirming to IS 9537/1983 on surface / concealed position making good the damages made etc.complete. 25mm dia 1.5mm thick			
	Net Total	300.000metre	@97.44/metre	29232.00
2.049	OD254635/2022-2023			
	Supply and providing the following size of ISI Marked rigid PVC conduits with specials confirming to IS 9537/1983 on surface / concealed position making good the damages made etc.complete. 32mm dia 1.5mm thick			
	Net Total	150.000metre	@99.42/metre	14913.00
2.050	OD254638/2022-2023			
	Supply & providing Capping / Casing of good quality of the following sizes. 20 mm			
	Net Total	100.000metre	@66.93/metre	6693.00
2.051	OD254640/2022-2023			
	Supply & providing Capping / Casing of good quality of the following sizes. 25 mm			
	Net Total	100.000metre	@77.75/metre	7775.00
2.052	OD254643/2022-2023			
	UG Cable Tamper Protection "Providing, laying and fixing following dia G.I. pipe (medium class) in ground complete with G.I. fittings including trenching (75 cm deep)and re-filling etc as required" 50 mm			
	Net Total	20.000metre	@579.76/metre	11595.20
2.053	OD254650/2022-2023			
	"Providing, laying and fixing following dia G.I. pipe (medium class) in ground complete with G.I. fittings including trenching (75 cm deep)and re-filling etc as required" 80 mm			
	Net Total	20.000metre	@868.16/metre	17363.20
2.054	OD254651/2022-2023			

SI No	Specification	Quantity	Rate	Amount	
	"Providing, laying and fixing following dia G.I. pipe (medium class) in ground complete with G.I. fittings including trenching (75 cm deep) and re-filling etc as required" 100 mm				
		Net Total	20.000metre	@1203.82/metre	24076.40
2.055	OD254652/2022-2023 Circuit Mains Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required. 2 X 4 sq. mm + 1 X 4 sq. mm earth wire				
		Net Total	150.000metre	@216.55/metre	32482.50
2.056	OD254653/2022-2023 Circuit Mains Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required. 2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire				
		Net Total	300.000metre	@181.11/metre	54333.00
2.057	OD254655/2022-2023 Circuit Mains Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required. 2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire				
		Net Total	500.000metre	@157.49/metre	78745.00
2.058	OD254656/2022-2023 Supplying and installing following size of perforated painted with powder coating M.S. cable trays with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc as required 150 mm width X 50 mm depth X 1.6 mm thickness				
		Net Total	50.000metre	@573.85/metre	28692.50
2.059	OD254657/2022-2023 Supplying and installing following size of perforated painted with powder coating M.S. cable trays with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc as required 300 mm width X 50 mm depth X 1.6 mm thickness				
		Net Total	50.000metre	@671.30/metre	33565.00
2.060	OD254658/2022-2023 Supplying and installing following size of perforated painted with powder coating M.S. cable trays with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc as required				

SI No	Specification	Quantity	Rate	Amount
	600 mm width X 50 mm depth X 2 mm thickness			
	Net Total	30.000metre	@827.82/metre	24834.60
2.061	OD254659/2022-2023			
	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 11 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required. Above 120 sq. mm and upto 400 sq. mm			
	Net Total	50.000metre	@521.69/metre	26084.50
2.062	OD254660/2022-2023			
	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 11 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required. Upto 35 sq. mm			
	Net Total	640.000metre	@349.43/metre	223635.20
2.063	OD254661/2022-2023			
	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 11 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required. Above 35 sq. mm and upto 95 sq. mm			
	Net Total	40.000metre	@365.17/metre	14606.80
2.064	OD254663/2022-2023			
	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 11 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required. Above 95 sq. mm and upto 185 sq. mm			
	Net Total	25.000metre	@380.93/metre	9523.25
2.065	OD254665/2022-2023			
	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on wall surface as required. Upto 35 sq. mm (clamped with 1mm thick saddle)			
	Net Total	10.000metre	@42.32/metre	423.20
2.066	OD254666/2022-2023			
	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on wall surface as required. Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)			
	Net Total	10.000metre	@112.22/metre	1122.20
2.067	OD254667/2022-2023			
	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on wall surface as required. Above 95 sq. mm and upto 185 sq. mm (clamped with 25/40x3mm MS flat clamp)			
	Net Total	10.000metre	@131.89/metre	1318.90
2.068	OD254668/2022-2023			

SI No	Specification	Quantity	Rate	Amount
	Supply and erection of 6mm MS Chequered Plates for covering cable trench. (Rate for 10 Sq.m)			
	Net Total	100.000kg	@226.39/kg	22639.00
2.069	OD254670/2022-2023			
	Supply route marker with 10cmx10cm GI plate 5mm thick with inscriptions there on bolted / welded to 35x35x6mm angle iron 60cm long and fixing the same in ground as required.			
	Net Total	50.000no	@572.87/no	28643.50
2.070	OD254673/2022-2023			
	Supply route marker with 10cmx10cm GI plate 5mm thick with inscriptions there on bolted / welded to 35x35x6mm angle iron 60cm long and fixing the same in ground as required.			
	Net Total	25.000no	@414.39/no	10359.75
2.071	OD254674/2022-2023			
	Earthing with 1200x1200x12.5 mm CI - Plate Earthing thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required.			
	Net Total	8.000set	@12882.20/set	103057.60
2.072	OD254676/2022-2023			
	Earthing with G.I. earth pipe 4.5 metre long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. (but with charcoal/ coke and salt) as required.			
	Net Total	6.000set	@5741.55/set	34449.30
2.073	OD254677/2022-2023			
	Supply and clamping the following size of strips on surface of wall/ parapet/ existing cable tray using clamps fabricated from 20 X 3 mm GI flat duly painted or heavy duty GI spacer saddles spacing of clamps not exceeding 1 m, making good the damages, colour washing etc. as required (for horizontal run) 25 x 3 mm copper strip			
	Net Total	650.000metre	@611.26/metre	397319.00
2.074	OD254678/2022-2023			
	Supply and drawing bare earthing conductors of the following sizes along with wiring/ cables and giving connection as required 2.65 mm copper conductor (12 SWG)			
	Net Total	350.000metre	@57.09/metre	19981.50
2.075	OD254680/2022-2023			
	Supply and drawing bare earthing conductors of the following sizes along with wiring/ cables and giving connection as required 3.15 mm copper conductor (10 SWG)			
	Net Total	450.000metre	@80.71/metre	36319.50
2.076	OD254684/2022-2023			
	Supply and drawing bare earthing conductors of the following sizes along with wiring/ cables and giving connection as required			

SI No	Specification	Quantity	Rate	Amount
	4.00 mm copper conductor (8 SWG)			
	Net Total	650.000metre	@126.97/metre	82530.50
2.077	OD254685/2022-2023			
	Supply and drawing bare earthing conductors of the following sizes along with wiring/ cables and giving connection as required 4.75 mm copper conductor (6 SWG)			
	Net Total	100.000metre	@168.31/metre	16831.00
2.078	OD254686/2022-2023			
	Supply and providing 6 mm thick & 1 m wide electrical grade chequered type rubber mat to withstand 3.3 KV dielectric strength conforming to IS 5429/ 1969.			
	Net Total	10.000sqm	@1744.22/sqm	17442.20
2.079	OD254688/2022-2023			
	Supply and providing 12 mm thick & 1 m wide electrical grade chequered type rubber mat to withstand 15 KV dielectric strength conforming to IS 5429/ 1969 in front of the HT Breaker Panel.			
	Net Total	4.000sqm	@3109.46/sqm	12437.84
2.080	OD254689/2022-2023			
	Supply and providing 5 Kg. Dry Chemical Powder type Fire Extinguisher with hose and clamps including fixing it to wall as required.			
	Net Total	4.000no	@11741.95/no	46967.80
2.081	OD254690/2022-2023			
	Supply and providing 9 Litre capacity GI Fire Bucket painted in post office red with primer coat of red oxide and written with white paint 'FIRE'; mounted on MS angle frame work/ wall bracket filled with fine sand, painting the bracket/ floor stand including making good the damages, colour washing etc. as required.			
	Net Total	6.000no	@6550.66/no	39303.96
2.082	OD254691/2022-2023			
	Supply and providing First Aid Chart duly framed and placed in a conspicuous location for clear vision.			
	Net Total	2.000set	@524.64/set	1049.28
2.083	OD254692/2022-2023			
	Supply and providing Laminated Electrical Schematic diagram framed and placed in a conspicuous location for clear vision.			
	Net Total	2.000set	@756.94/set	1513.88
2.084	OD254693/2022-2023			
	Supply & providing Aluminium anodised Danger Notice Board of size 200 x 150 mm. with inscriptions (both in English and Malayalam) and conventional Skull and Bone in Red colour at locations as directed by the Engineer in Charge			
	Net Total	15.000no	@640.79/no	9611.85
2.085	OD254694/2022-2023			
	Preparation and submission of latest scheme drawings, Voltage drop calculations,			

SI No	Specification	Quantity	Rate	Amount
	Earthing design & fault level calculations to the Electrical Inspectorate including all MV additions recently made and obtaining approval, arranging inspection for entire installation, obtaining sanction orders for the electrical installation, complete (Including all incidental and statutory expenses).			
	Net Total	2.000L.S	@73824.15/L.S	147648.30
2.086	<p>OD94736/2023-2024</p> <p>MSB Supply, fabrication, erection, testing and commissioning of cubicle type fully compartmentalised, dust tight, vermin proof, water proof 250A LT- Main MV Panel falling to IP54 category fabricated out of 16 SWG CRCA Sheet Steel painted as per standards with Alumimium Busbars of suitable size, earth bus of adequate capacity, double earth connection to all switches, internal rigid connection etc. including suitable chambers, front open, top cable entry with water proof shrouding, free standing panel consisting of the following as per standards (All switches shall confirm to conforming to IEC 60947-2 standards) Incommer 250A FP Microprocessor based MCCB (26kA) - 1 Nos. Restricted Earth Fault Relay - 1 Set 250A TPN best conductivity Aluminium busbar with SMC supports, heat shrinkable sleeves etc. as per ISS - 1set RYB indicators (LED Pilot type) with 2A Control MCB and toggle switches - 4 Set Multifunction Digital Panel meter to read V, A, F, PF, kW, kVA, kVAR, kWh, kVAh, kVARh Class 1.0 - 1 Set 200/5A CL 1.0, 15VA Metering CTs - 1 Set Outgoings: 100A, 16kA FP MP MCCB - 4 Nos. &quot;Surge Protection Pluggable type surge arrester with potential free contact, thermal disconnecter &amp; provision for inbuilt common remote indication for defective arresters to connect between Line and Neutral and one number Spark Gap type arrester to connect between Neutral and Earth of following ratings including base element &amp; pluggable arresters. Nominal voltage 230V, 50Hz, Nominal Discharge current 30 kA (8/20 sec) for Line to Neutral &amp; 50 kA (8/20 sec) for Neutral to Earth, Maximum Discharge Current I_{max} 50 kA (8/20 sec) - 1Set&quot; Supports The panel shall be supported to ground using framework fabricated out of MS Flats / Angles etc. painted with two coats of Zinc Chromate primer and two coats of enamel paint. The framework shall be firmly supported to ground using suitable cement concrete plinth.</p>			

SI No	Specification	Quantity	Rate	Amount
	The Panel Board shall be provided with 25 x 3mm copper earth bus for the full length. Painting letters / identifications for the incoming and outgoing switches, cable, fuse sizes, etc., in white enamel paint. The board shall be fabricated in such a way that future extension be possible. Supply and installing 50 kvar APP capacitor for no load compansation			
	Net Total	1.000job	@120105.10/job	120105.10
2.087	OD94737/2023-2024 SSB Supply, fabrication, erection, testing and commissioning of cubicle type fully compartmentalised, dust tight, vermin proof, water proof 200A MV Panel falling to IP54 category fabricated out of 16 SWG CRCA Sheet Steel painted as per standards with Alumimium Busbars of suitable size, earth bus of adequate capacity, double earth connection to all switches, internal rigid connection etc. including suitable chambers, front open, top cable entry with water proof shrouding, free standing panel consisting of the following as per standards (All switches shall confirm to conforming to IEC 60947-2 standards). Incoming : 100A TPN Isolator - 1 No. 200A TPN best conductivity Aluminium busbar with SMC supports, heat shrinkable sleeves etc. as per ISS - 1set Multifunction Digital Panel meter to read V, A, F, PF, kW, kVA, kVAR, kWh, kVAh, kVARh Class 1.0 - 1 Set RYB indicators (LED Pilot type) with 2A Control MCB and toggle switches - 1 Set 100/5A CL 1.0, 15VA Metering CTs - 1 Set Outgoings: 10A TP D curve MCB (10kA) - 1 Nos. Supports The panel shall be supported to ground using framework fabricated out of MS Flats / Angles etc. painted with two coats of Zinc Chromate primer and two coats of enamel paint. The framework shall be firmly supported to ground using suitable cement concrete plinth. The Panel Board shall be provided with 25 x 3mm copper earth bus for the full length. Painting letters / identifications for the incoming and outgoing switches, cable, fuse sizes, etc., in white enamel paint. The board shall be fabricated in such a way that future extension be possible			
	Net Total	1.000job	@57062.68/job	57062.68
2.088	OD94738/2023-2024 Supply, installation, testing && commissioning of best quality sheet steel, phosphatised and painted, dust and vermin proof enclosure (IP43) Vertical TPN Double door DB			

SI No	Specification	Quantity	Rate	Amount
	including copper bus bar, neutral link, earth bus and DIN rail suitable for fixing RCCB + Isolator (8 module)as incommer and SP/TP MCB as outgoing etc. on wall using suitable anchor bolts or fixed in recess including cutting hole on the wall , making good the damages, colour washing, dressing the DB including termination etc. as required. (Including closing vaccant slots using Dummy)			
	Net Total	1.000job	@10812.96/job	10812.96
2.089	OD94739/2023-2024			
	Supply and providing the following MCCB/ RCCB / MCB / MCB Isolators/COS etc. to the existing DBs / MCS / Junction Boxes etc. including giving proper termination using suitable Bananna copper lugs, sleeves, insulation etc. complete.			
	Net Total	1.000job	@10182.09/job	10182.09
	Heading Total(Rs)			4599084.72
3	Supply erection,testing and commissioning of centrifugal pump set for CWPM from WTP to Kuruvilacity discharge of 25 lps for a head of 110 m.			
3.001	OD34959/2023-2024			
	Supply erection,testing and commissioning of CF pumpset having a discharge of 25 lps for a head of 110 m from WTP to Kuruvilacity. Supply and erection of CF pump set with the following specification
1. Pump
Supply, erection, testing and commissioning of KWA pre-qualified reputed make Centrifugal pump sets with Bronze/SS impeller, SS shaft and CI pump casing with suitable type base plate with coupling, coupling guard foundation bolts & nuts etc. complete suitable for coupling the pump and motor above the base plate etc. complete including providing suitable concrete foundation including cost of cement sand and metal etc. complete;The duty condition is as follows;Discharge - 25 lps;Total head - 110 mtrs;Size of pumping main pipe - 200 mm DI, Length-2615 m;Speed- Less than 1500 rpm. 2. Motor : Supply, erection, testing and commissioning of KWA pre qualified reputed make horizontal solid shaft foot mounted TEFC squirrel cage induction motor suitable for the above pump working 3 phase 50 Hz AC supply, working voltage 415 V/3300V (select the suitable). The motor shall confirm to IE2/IE3 as per IS12615-2018 including providing suitable concrete foundation including cost of cement sand and metal etc. complete For 3300v motors digital motor protection relay shall be included in starter as per present CEA regulation. Flexible coupling shall be used for coupling of pumps and motors 3.Starter:Supply, erection, testing and commissioning of suitable rating Soft starter suitable for the above motor with over voltage and under voltage protection, single phase preventer, over load relay with motor protection relay with main contactor and bypass contactor as per CEA regulation and code of practice etc. complete			

SI No	Specification	Quantity	Rate	Amount
	<p>4. Panel board (suitable for operating two pump sets but one pump set at a time: Supply, erection, testing and commissioning of cubical type floor mounted MS fabricated dust and vermin proof common control panel board consisting of 1 No. suitable capacity MCCB as incomer and 2 Nos of suitable capacity MCCB as out going (the two MCCBs are interlocking with each other) providing suitable size Aluminium bus bar inter connect the above MCCBs and fitted with 3 Nos of indicator lamps, 1 No. volt meter with selector switch, 1 No. Ammeter with selector switch etc. Complete and provided with a common earth bus for the entire panel and inter connect with the MCCBs as per CEA regulation and code of practice. The panel shall be fitted on a common base frame on suitable foundation with provision to accommodate 2 soft starters. (Specification may be modified if there is only one pump set by changing 2 Nos of out going as one out going and the provision of interlocking may be avoided)</p> <p>5. Cabling work : Supply, laying, testing and commissioning of suitable size XLPE cables for the above pump set from panel board to starter and from starter to motor. considering energy conservation.</p> <p>6. Earthing :Supply of all materials and providing suitable earthing by using suitable size pipe/plate earthing GI/copper strip buried in ground and giving double earthing to motor, starter, panel board etc. as per IE standards.</p> <p>7. Capacitor: Supply, erection, testing and commissioning of heavy duty APP capacitor for the motor to get a power factor above 0.95. The capacitor shall confirm to IS 2834.</p> <p>8. Valves;Supply of suitable size best quality heavy duty ISI marked CI double flanged sluice valve and Non return valve with suitable pressure rating. Fitting of valves shall include proper RCC support especially for Non return valves. In case of positive suction pump set sluice valve should be in suction as well as delivery sides for easy repair works.&lt;br&gt;9. Suction and delivery pipe connections;Supply and fitting of suitable size best quality GI/MS pipe of thickness not less than 8mm for a total length of 10 m. suitable for the above pump set and suitable size foot valve and connecting the suction pipe and valve with suitable flanges, nut and bolts IR sheet etc. complete and connecting the delivery side of the pump with the valves and suitable specials to connect with the pumping main.&lt;br&gt;If the dia of suction pipe is above 80 mm CI pipes & specials shall be provided.&lt;br&gt;.Also two year Warrantee and Supply of ELCB/RCCB to be added at panel for safety.</p>			
	Net Total	2.000no	@1850752.01/no	3701504.02
3.002	OD90424/2023-2024			
	Approval from Electrical Inspectorate /KSEB L			
	Net Total	1.000L.S	@9756.60/L.S	9756.60
	Heading Total(Rs)			3711260.62
4	Supply erection,testing and commissioning of centrifugal pump set for CWPM from WTP to Swargamedu discharge of 9.5 lps for a head of 165 m.			

SI No	Specification	Quantity	Rate	Amount
4.001	<p>OD90897/2023-2024</p> <p>Supply erection, testing and commissioning of CF pumpset having a discharge of 9.5 lps for a head of 165 m from WTP-Swargamedu. Supply and erection of CF pump set with the following specification; 1. Pump&lt;br&gt;Supply, erection, testing and commissioning of KWA pre-qualified reputed make Centrifugal pump sets with Bronze/SS impeller, SS shaft and CI pump casing with suitable type base plate with coupling, coupling guard foundation bolts & nuts etc. complete suitable for coupling the pump and motor above the base plate etc. complete including providing suitable concrete foundation including cost of cement sand and metal etc. complete&lt;br&gt;The duty condition is as follows&lt;br&gt;Discharge - 9.5 lps; Total head - 165 mtrs; Size of pumping main pipe - 150 mm DI, Length-2710 m; Speed- Less than 1500 rpm.</p> <p>2. Motor : Supply, erection, testing and commissioning of KWA pre qualified reputed make horizontal solid shaft foot mounted TEFC squirrel cage induction motor suitable for the above pump working 3 phase 50 Hz AC supply, working voltage 415 V/3300V (select the suitable). The motor shall confirm to IE2/IE3 as per IS12615-2018 including providing suitable concrete foundation including cost of cement sand and metal etc. complete For 3300v motors digital motor protection relay shall be included in starter as per present CEA regulation. Flexible coupling shall be used for coupling of pumps and motors</p> <p>3. Starter: Supply, erection, testing and commissioning of suitable rating Soft starter suitable for the above motor with over voltage and under voltage protection, single phase preventer, over load relay with motor protection relay with main contactor and bypass contactor as per CEA regulation and code of practice etc. complete</p> <p>4. Panel board (suitable for operating two pump sets but one pump set at a time: Supply, erection, testing and commissioning of cubical type floor mounted MS fabricated dust and vermin proof common control panel board consisting of 1 No. suitable capacity MCCB as incomer and 2 Nos of suitable capacity MCCB as out going (the two MCCBs are interlocking with each other) providing suitable size Aluminium bus bar inter connect the above MCCBs and fitted with 3 Nos of indicator lamps, 1 No. volt meter with selector switch, 1 No. Ammeter with selector switch etc. Complete and provided with a common earth bus for the entire panel and inter connect with the MCCBs as per CEA regulation and code of practice. The panel shall be fitted on a common base frame on suitable foundation with provision to accommodate 2 soft starters. (Specification may be modified if there is only one pump set by changing 2 Nos of out going as one out going and the provision of interlocking may be avoided)</p> <p>5. Cabling work : Supply, laying, testing and commissioning of suitable size XLPE cables for the above pump set from panel board to starter and from starter to motor. considering energy conservation.</p> <p>6. Earthing : Supply of all materials and providing suitable earthing by using suitable size pipe/plate earthing GI/copper strip buried in ground and giving double earthing to motor, starter, panel board etc. as per IE standards.</p> <p>7. Capacitor: Supply, erection, testing and commissioning of heavy duty APP capacitor for the motor to get a power factor above 0.95. The capacitor shall confirm to IS 2834.</p> <p>8. Valves&lt;br&gt;Supply of suitable size best quality</p>			

SI No	Specification	Quantity	Rate	Amount
	<p>3. Starter: Supply, erection, testing and commissioning of suitable rating Soft starter suitable for the above motor with over voltage and under voltage protection, single phase preventer, over load relay with motor protection relay with main contactor and bypass contactor as per CEA regulation and code of practice etc. complete</p> <p>4. Panel board (suitable for operating two pump sets but one pump set at a time: Supply, erection, testing and commissioning of cubical type floor mounted MS fabricated dust and vermin proof common control panel board consisting of 1 No. suitable capacity MCCB as incomer and 2 Nos of suitable capacity MCCB as out going (the two MCCBs are interlocking with each other) providing suitable size Aluminium bus bar inter connect the above MCCBs and fitted with 3 Nos of indicator lamps, 1 No. volt meter with selector switch, 1 No. Ammeter with selector switch etc. Complete and provided with a common earth bus for the entire panel and inter connect with the MCCBs as per CEA regulation and code of practice. The panel shall be fitted on a common base frame on suitable foundation with provision to accommodate 2 soft starters. (Specification may be modified if there is only one pump set by changing 2 Nos of out going as one out going and the provision of interlocking may be avoided)</p> <p>5. Cabling work : Supply, laying, testing and commissioning of suitable size XLPE cables for the above pump set from panel board to starter and from starter to motor. considering energy conservation.</p> <p>6. Earthing : Supply of all materials and providing suitable earthing by using suitable size pipe/plate earthing GI/copper strip buried in ground and giving double earthing to motor, starter, panel board etc. as per IE standards.</p> <p>7. Capacitor: Supply, erection, testing and commissioning of heavy duty APP capacitor for the motor to get a power factor above 0.95. The capacitor shall confirm to IS 2834.</p> <p>8. Valves: Supply of suitable size best quality heavy duty ISI marked CI double flanged sluice valve and Non return valve with suitable pressure rating. Fitting of valves shall include proper RCC support especially for Non return valves. In case of positive suction pump set sluice valve should be in suction as well as delivery sides for easy repair works..</p> <p>9. Suction and delivery pipe connections: Supply and fitting of suitable size best quality GI/MS pipe of thickness not less than 8mm for a total length of 10 m. suitable for the above pump set and suitable size foot valve and connecting the suction pipe and valve with suitable flanges, nut and bolts IR sheet etc. complete and connecting the delivery side of the pump with the valves and suitable specials to connect with the pumping main .If the dia of suction pipe is above 80 mm CI pipes specials shall be provided;. Also two year Warrantee and Supply of ELCB/RCCB to be added at panel for safety.</p>			
	Net Total	2.000no	@2857147.16/no	5714294.32
5.002	OD90436/2023-2024			
	Approval from Electrical Inspectorate /KSEB L			
	Net Total	1.000L.S	@9756.60/L.S	9756.60
	Heading Total(Rs)			5724050.92
6	Supply erection, testing and commissioning of centrifugal pump set for CWPM from WTP to Poopara discharge of 38 lps for a head of 146 m.			
6.001	OD90914/2023-2024			
	Supply erection, testing and commissioning of CF pumpset having a discharge of 38 lps for a			

SI No	Specification	Quantity	Rate	Amount
	<p>coupled with suitable vertical hollow motor specified in item No. 2. Casing: Cast&amp;lt;br&amp;gt;iron&amp;lt;br&amp;gt;Speed: below 1500 rpm Impeller : Enclosed type Bronze LTB 2 dynamically balanced as per&amp;lt;br&amp;gt;ISO1940 grade 3 standards&amp;lt;br&amp;gt;Sleeve: SS 304 &amp;lt;br&amp;gt;Colum shaft - SS 410 &amp;lt;br&amp;gt; Pump shaft - SS 316&amp;lt;br&amp;gt; Bowl Casing ring: Bronze LTB 2Epoxy painted MS Column pipe 10 mm Thick flanged ends each having length below 1.5 Meter. Strainer fabricated with SS 304 Bearings for spider and bowl synthetic Rubber with outer brass/CI shell &amp;lt;br&amp;gt;Discharge Head Bearing - Thrust / angular roller &amp;lt;br&amp;gt;Ratchet&amp;lt;br&amp;gt;assembly unlocking Centrifugally action &amp;lt;br&amp;gt;&amp;lt;br&amp;gt;Minimum Efficiency: suitable to achieve minimum 70% efficiency for pump &amp;amp;lt;br&amp;gt; motor&amp;lt;br&amp;gt;(Vibrations should be limited as per HIS 9.6.4.3 standards.&amp;lt;br&amp;gt;Pump performance tolerance should be subject to Hydrate Institute standard class A - No negative&amp;lt;br&amp;gt;tolerance is applicable in efficiency and no positive tolerance in power). Supply, erection, testing and commissioning of suitable rating high efficiency Kirlosker/crompton/BHEL/Marthon/Alstom or equivalent KWA approved make EF1 squirrel cage Induction,SPDP,Vertical hollow shaft motor suitable for direct&amp;lt;br&amp;gt;coupling with the above pump having RPM below 1500 or nearest capable to operate on voltage of&amp;lt;br&amp;gt;415V(+/-10%)50 hz(+/-3%)AC 3 phase,50 degree Ambient temp.rise. conforming to relevant IS. Motor&amp;lt;br&amp;gt;shall be energy efficient and supporting certificates to prove EF1 or EF2.&amp;lt;br&amp;gt; Design, supply, erection, testing and commissioning of medium voltage sheet steel clad, totally enclosed, dust tight and vermin proof, indoor floor mounted cubicle type switch board fabricated out of 16 swg. Mild steel sheet for operation 3 phase, 415 volts 50 Hz, AC supply system. The panel board for one working a a time with 500 A SFU as incomer, change over switch for pumpsets, incoming main and 2 nos 250 Amps TPN SFU with HRC fuse as outgoing. The panel board consisting of voltmeter with selector switch, Ammeter CTS with selector switch, indication lamps necessary control&amp;lt;br&amp;gt;fuse</p>			

SI No	Specification	Quantity	Rate	Amount
	<p>purposes, with MS/CI cover etc. as per IE standards conforming of IS 3043/87.&lt;br&gt; Supply, laying and giving earthing connections to motors, starters, capacitors, panel boards etc. using suitable size copper flat as per IE rules.&lt;br&gt; Supply, laying, termination and connecting of (Suitable size) (AYFY/XLPE) insulated armoured Copper cable for working voltage up to 1100 volt confirming to relevant IS specification to lead cable from panel board to starter and starter to motor and starter to capacitor including terminations materials such as gland, socket, gland earth etc. as per IE rules.&lt;br&gt; Erecting the above motor pump set in suitable concrete foundation including fixing the starter, motor, cubical panel board including cost of all materials etc...Installing the electrical items, wiring and earthing, giving connection etc.as directed by the departmental officers as per IE rules and ISI specifications, fitting suction and delivery pipes and specials, Sluice valve, Reflux valve, Gauges etc. including clamping wherever necessary etc. complete and trial run for a period of one week to the satisfaction of the authority officers&lt;br&gt;Including cost of all &lt;br&gt; the components specified above including 2 year warrantee</p>			
	Net Total	2.000no	@1931703.38/no	3863406.76
7.002	OD85432/2023-2024			
	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with			
	Net Total	2.000set	@7242.38/set	14484.76
7.003	OD85447/2023-2024			
	Earthing strip of 50 x 6 mm GI strip			
	Net Total	2.000metre	@8364.50/metre	16729.00
7.004	OD85452/2023-2024			
	Submitting application to KSEBLfor power connection and power extension			
	Net Total	1.000L.S	@3000.01/L.S	3000.01
	Heading Total(Rs)			3897620.53
8	Supply Erection ,testing and commissioning of 5 Ton capacity crane at CW pump house			
8.001	OD94754/2023-2024			
	Design manufacture and supply of HOT overhead travers trolley crane 5 ton capacity			

SI No	Specification	Quantity	Rate	Amount
	chain-pully block and geared roley having wall to wall horizontal movement etc. for smooth functioning of the crane as per IS Specification including all fittings and all incidental charges including painting the exposed surface with following specifications Type and construction of crane Single girder HOT (Design code IS 3832) Hook IS 8610 Load chain IS 6216(Alloy steel Grade 80) Hand chain IS 2420 MS Grade 30 brake type self actuating screw friction and disc type.			
		Net Total	1.000set @138474.03/set	138474.03
8.002	OD94753/2023-2024 Erection and commissioning of HOT over head crane including providing and fixing suitable size 45 x 45 MS base plate 18mm thick over the existing RCC shade 8 Nos brackets by drilling, fixing belt of suitable size and grouting with CM and welding LT grider ISHB 250 x 125 with MS base plate and also fixing the ends of the LT grider to the size suitably and also providing LT rail with suitable end stoppage. This also included provision for box type fabricated from rolled steel section and carriages of suitable construction with all good quality accessories line gears, wheels, axils, rubber buffers, bearing etc., the work also consists of all tools and equipment, labour supervision, load testing all safety devices and clarification of crane after completion of work. The rate inclusive of MS base plate and steppers and carriages etc.			
		Net Total	1.000L.S @134734.00/L.S	134734.00
8.003	OD94752/2023-2024 Supply, Fabrication and erection of long travel (LT) girder 300 mm depth fixing to the base plate at the 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 labor charges and conveyance of all materials etc., complete and as directed by the departmental officers.			
		Net Total	0.600tonne @124861.25/tonne	74916.75
8.004	OD94751/2023-2024 OD68953/2023-2024 Supply, Fabrication and erection of long travel(LT rains polished square bars of size 80 x 80mm thick to the LT girder and painting to the exposed surface as detailed in above item complete			
		Net Total	1.500quintal @10453.50/quintal	15680.25
		Heading Total(Rs)		363805.03
		Total Estimation PAC		28769176.47
SI No	Description	Percentage/LS	Amount	
9 Lumsum Heading				
9.001	LS Amount for Electrification			
		0.00	0.00%	
			6400000.00	
		Total Lumsum Amount		6400000.00
10 Extra Charges				
9.001	Provision for GST			

SI No	Specification	Quantity	Rate	Amount
		28769176.47	18.00%	5178451.76
			Grand Total	40347628.23
			Round off	2371.77
			Rounded Total(Rs)	40350000.00
	Rupees Four Crore Three Lakh Fifty Thousand			

