

Tender No.

TMC/ACTREC/ENGG/RJD/ET-24/DDTANK/RRU/2021

27/01/2021

Sub : Construction of Delay Decay Tank for RRU Building at ACTREC, Kharghar

## Schedule of Quantities.

Name of Agency							
FINANCIAL BID							
Sr.No.	Item Code	Description	HSN/SAC code	Qty.	Unit	Rate	Amount
1		In areas designated to be grubbed, remove materials to a depth of not less than 300 mm below the original ground surface, roots, stumps and other debris, brush and refuse embedded in or protruding through the ground surface. Rake, disk or plough the area to a depth of not less than 150 mm and remove to a depth of 300 mm all roots and other debris thereby exposed as per detailed specifications. Clearing & grubbing also includes removal from project site & disposal of debris resulting from clearing & grubbing operations, surface dressing for taking grid levels, etc as per direction of the Engineer - In - Charge. When permitted, burning shall strictly comply with applicable local regulations. Cutting of wild trees (along with roots) including removal of stumps and roots shall be considered to be included in clearing and grubbing operation. (Measurment for payment: Surface area = Footprint of Building + 05 m periphery all round)		1000	Sqm		-
2		Excavation in all types of soil including dense soil, clay / silty sand/Gravel/ Brownish dense clay sand/disintegrated/ weathered/Laterite/ soft rock (Poclainable) by Manual / Mechanical means.Rate shall include for materials, labours, equipment, tools & plant, transportation, site clearances, setting out, shoring, strutting, dewatering, bailing out or pumping out of water in the excavation from rain / sub soil, slips and falls in excavation, slinging or supporting pipes electric cables etc met during excavation,manual excavation for leveling, dressing the edges, with all leads inside and outside and lifts including getting out the excavated soil and disposal of surplus excavated soil within the construction site including necessary compaction in layers of 150mm thick each etc complete as directed and dressing to proper level and graded as required etc removal of slurry generated while excavation and keeping the area free of water required for keeping earth in position etc.,					
		Note: Working space and Provision of slopes if required for execution shall not be paid seperately.Rate to include all royalties,Seignorage, taking statutory approvals as necessary to carry out the works etc., complete.					
	a	Excavation lift upto 1.5 M depth		450	cum		-
	b	Excavation lift from 1.5 M to 3.0 M depth		300	cum		-
	c	Excavation lift from 3.0 M to 4.5 M depth		200	cum		-
	d	Excavation lift from 4.5 M to 6.0 M depth		150	cum		-
	e	Excavation lift from 6 M to 7.5 M depth		50	cum		-
3		Excavation in Hard rock / boulders (more than 1/2 Cum in size -Un poclainable) by chiseling/ wedging to required level to the required depth including all leads and lifts, stacking excavated material within project site at approved location,dressing, grading, cleaning, excavating loose pockets and compacting them after backfilling as directed etc. as per detailed specification and conforming to safety rules of Authority during the progress of work.Rate shall include for materials, labours, equipment, tools & plant, transportation, site clearances, setting out, shoring, strutting, dewatering, bailing out or pumping out of water in the excavation from rain / sub soil, slips and falls in excavation, slinging or supporting pipes electric cables etc met during excavation,manual excavation for leveling, dressing the edges, with all leads inside and outside and lifts.Rate to include all royalties, Seignorage, taking statutory approvals as necessary to carry out the works etc., complete.(Blasting prohibeated)					
		Note: In the case of Hard rock / Boulders, if required by the Client / Architect , the excavated material shall be properly stacked with in the construction site .The quantity of these stacks shall be measured and payment will be based on the net quantities after deducting 40% for voids from the measured stack quantities.Excavation in hard rock shall not commences unless occurrence of hard rock is shown to Client / Architect and agreed upon. Only thereafter excavation in hard rock can commence. Rate to include all royalties, Seignorage, taking statutory approvals as necessary to carry out the works etc., complete					
	a	Excavation lift upto 1.5 M depth		100	cum		-
	b	Excavation lift from 1.5 M to 3.0 M depth		200	cum		-
	c	Excavation lift from 3.0 M to 4.5 M depth		300	cum		-
	d	Excavation lift from 4.5 M to 6.0 M depth		350	cum		-
	e	Excavation lift from 6 M to 7.5 M depth		400	cum		-
4		"Disposal of moorum/ building rubbish/ malba/ similar unserviceable, dismantled or waste material by mechanical transport including loading, transporting, unloading outside ACTREC premises at the risk and cost of contractor.		1100	cu m		-
5		Providing dry/ trap/ granite/ quartzite/ gneiss rubble stone soling 23 cm thick including hand packing and compacting etc. complete.		160	cu m		-

6	Providing and laying in position ready mixed plain cement concrete <b>M-15 grade</b> plain cement concrete , using fly ash and cement content as per approved design mix and manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for plain cement concrete work, including pumping of R.M.C. from transit mixer to site of laying and curing,including formwork and finishing, including cost of curing, 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 the Engineer-in-charge.sand and aggregate derived from natural sources. (cement content considered @ 240 kg/cum)		180	cum		-
7	Providing and laying in position machine batched and machine mixed design mix <b>M-30</b> grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying,including the cost of centering, shuttering, finishing but excluding 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 @ 340 kg/cum."Excess/ less cement used as per design mix is payable/recoverable separately).		325	cum		-
8	<b>Steel works :-</b> Supplying, fabricating and fixing in position TMT bars ( <b>Grade of reinforced steel - Fe 500D - TMT bars</b> ) conforming to IS-432/ High yield strength deformed bars (TMT) conforming to IS-1786:1985 of Fe 500D Grade of all dia for reinforcement in all RCC in situ works including flooring and precast works at all levels and heights above finished floor level and for foundations, roof slab, beams, columns, pedestal, water tanks, equipment foundations, drains & trenches, pits, tunnels, lift pits etc., below finished floor level including cost of straightening, cutting, bending to shape fabricating and tying with 18 gauge GI binding wire of double fold, providing and fixing cement cover blocks, dewatering wherever necessary etc., all complete as per drawings and specifications and as directed by the Engineer. The rate to include cost of binding wire, cement cover blocks, all cuts and wastes which will not be measured. Only laid weight will be measured including authorised laps.		75000	kg		-
	Note : Unless noted otherwise the measurements in accordance with IS 1200. However reinforcement shall be measured only in lengths of bars as actually placed in position on standard weight basis, no allowance being made in the weight for rolling margin. Authorised laps and approved make of splices only will be measured. Chairs of any shape & profile, Spacer bar of any shape & profile, cover block, wastage and binding wire will not be measured and shall be included in the quoted rates. Quoted rate shall be deemed to have considered the above stipulation. Quoted rate to include lead, lift, placing at all levels and as directed. Cuts and wastes will not be measured for payment.					
9	Supplying, fabricating, erecting, fixing and aligning in position Structural Steel Work at all levels comprising of ISMB / ISMC / angles/ tees / flats / pipes / tubes / brackets / plates / runners including cutting, welding and painting with one coat of red oxide zinc chromate paint of approved quality etc. complete.		2500	kg		-
10	Providing and Placing in position suitable PVC water stops conforming to IS:12200 for construction/ expansion joints between two RCC members and fixed to the reinforcement with binding wire before pouring concrete etc. complete : Serrated with central bulb (225 mm wide, 8-11 mm thick)		230	Rmt		-
11	Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in - charge. 15.2.1 Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)		45	cum		-
12	Demolishing brick work/CC block 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.		85	cum		-
13	<b>G.I. SHEET:</b> Providing & fixing GI sheet (GI sheet roofing 22 gauge) close fitted serrated adjustable GI sheets including overlaps, ridges if required including supplying & fixing necessary J or L hook bolts, nuts or self tapping screws with necessary GI washer and bitumen washers with scaffolding etc. complete all as directed by the engineer in charge.		50	Sqm		-
14	12mm thick cement plaster of mix in 1:6 (1 cement: 6 fine sand) / readymade plaster of approved make include providing & laying approved 22 SWG G.I.chicken mesh 250mm wide over concrete / wall surface by nailing or by drilling, double scaffolding, surface preparation,line & level, curing etc. alongwith providing conduits for electrical & plumbing works etc. as per specifications.		300	Sqm		-
15	20 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:4(1 cement: 4 coarse sand) and a top layer 8 mm thick readymade plaster of approved make finished rough with sponge including double scaffolding, surface preparation,line & level, curing etc. providing & laying approved 22 SWG G.I.chicken mesh 250mm wide at all joints & on all conduits for electrical & plumbing works etc at all level & height etc. Complete.		300	Sqm		-
16	Painting (two or more coats) with synthetic enamel paint, having VOC (Volatile Organic Compound) content less than 150 grams/ litre, of approved brand and manufacture, including applying additional coats wherever required to achieve even shade and colour.		300	Sqm		-
17	Providing and applying two coats of Premium plastic emulsion paint of Asian/ Nerolac brand to give an even shade without Cement Primer including preparation of the surfaces, application of Birla white putty wherever required and scaffolding etc. complete, as per specifications and as directed by Engineer-in-charge.		300	Sqm		-
18	Finishing walls with Acrylic exterior paint of required shade on New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/ 10 sqm) Finishing walls with 100% Premium acrylic emulsion paint having VOC less than 50 gm/litre and UV resistance as per IS 15489:2004, Alkali & fungal resistance, dirt resistance exterior paint of required shade (Company Depot Tinted) with silicon additives. 13.48A.1 New work (Two or more coats applied @ 1.43 litre/ 10 sqm. Over and including priming coat of exterior primer applied @ 0.90 litre/10 sqm.		300	Sqm		-

19		Providing and laying autoclaved aerated cement blocks masonry with 150mm/200mm/300 mm thick AAC blocks in sub/ super structure at all level and height including double scaffolding, raking of joints, curing etc. with approved block laying polymer modified adhesive mortar all complete as per direction of Engineer- in-Charge.	90	cum		-
20		Providing and fixing G.I. chain link fabric fencing of required width in mesh size 50x50 mm including strengthening with 2 mm dia wire or nuts, bolts and washers as required complete as per the direction of Engineer-in-charge. Made of G.I. wire of dia 4 mm	300	Sqm		-
21		Providing and applying integral crystalline slurry of hydrophilic in nature for waterproofing treatment to the RCC structures like retaining walls of the basement, water tanks, roof slabs, podiums, reservoir, sewage & water treatment plant, tunnels / subway and bridge deck etc., prepared by mixing in the ratio of 5 : 2 (5 parts integral crystalline slurry : 2 parts water) for vertical surfaces and 3 : 1 (3 parts integral crystalline slurry : 1 part water) for horizontal surfaces and applying the same from negative (internal) side with the help of synthetic fiber brush. The material shall meet the requirements as specified in ACI-212-3R-2010 i.e by reducing permeability of concrete by more than 90% compared with control concrete as per DIN 1048 and resistant to 16 bar hydrostatic pressure on negative side. The crystalline slurry shall be capable of self-healing of cracks up to a width of 0.50mm. The work shall be carried out all complete as per specification and the direction of the engineer-incharge. The product performance shall carry guarantee for 10 years against any leakage. <b>For vertical surface two coats @ 0.70 kg per sqm</b>	1100	Sqm		-
22		Providing and laying integral cement based treatment for water proofing on horizontal surface at all depth below ground level for under ground structures as directed by Engineer-in-Charge and consisting of : (i) 1st layer of 22 mm to 25 mm thick approved and specified rough stone slab over a 25 mm thick base of cement mortar 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound conforming to IS:2645 in the recommended proportion over the leveling course (leveling course to be paid separately). Joints sealed and grouted with cement slurry mixed with water proofing compound. (ii) 2nd layer of 25 mm thick cement mortar 1:3 (1 cement: 3 coarse sand) mixed with water proofing compound in recommended proportions. (iii) Finishing top with stone aggregate of 10 mm to 12 mm nominal size spreading @ 8 cum/sqm thoroughly embedded in the 2nd layer. Using rough kota stone.	250	Sqm		-
23		Providing and laying integral cement based treatment for water proofing on the vertical surface by fixing specified stone slab 22 mm to 25 mm thick with cement slurry mixed with water proofing compound conforming to IS:2645 in recommended proportions with a gap of 20 mm (minimum) between stone slabs and the receiving surfaces and filling the gaps with neat cement slurry mixed with water proofing compound and finishing the exterior of stone slab with cement mortar 1:3 (1 cement : 3 coarse sand) 20 mm thick with neat cement punning mixed with water proofing compound in recommended proportion complete at all levels and as directed by Engineer-in-charge : Using rough Kota stone	700	Sqm		-
24		Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 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				
	a	Pipes, cables etc. exceeding 80 mm dia. but not exceeding 300 mm dia	300	Rmt		-
	b	Pipes, cables etc. exceeding 300 mm dia but not exceeding 600 mm	45	Rmt		-
25		Removing the GI sheet from the roof and refixing its structural members	1	Lump sum		-
		Taking out doors, windows and clerestory window shutters (steel or wood) including stacking within 50 metres lead : 15.13.1 Of area 3 sq. metres and below				
		Removing steel work in built up sections in angles, tees, flats and channels including all gusset plates, bolts, nuts, cutting rivets, welding etc. including dismembering and stacking within 50 metres lead.				
		Removing roofing including ridges, hips, valleys and gutters etc., and stacking the material within 50 metres lead of: 15.28.1 G.S. Sheet				
		Removing old and refixing 6mm thick new G.I..sheet Pannel existing ceiling including necessary rectification and required material aluminium angle etc.such as 6mm A.C.sheet M.S.angle welding etc.all complete as per specifications and directed by Engineer-In-Charge.				
26		Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including appropriate priming coat, preparation of surface, etc. complete. <b>on concrete work</b>	1000	Sqm		-
27		<b>Excavation for Roadway by Mechanical Means:-</b> Earthwork in excavation for road way by mechanical means in earth soil of all sorts sand, gravel, soft murum and hard murum, hard murum with boulders including dressing section to the required grade, camber and side slopes and conveying the excavated material with all lifts and lead and spreading for embankment or stacking, etc. as directed. (Clause 301 of MORTH). From existing Ground level up to 1.5 m deep	573	cum		-
28		<b>Earthwork in Filling for Subgrade:-</b> Earth work in filling for subgrade and shoulders by using mechanical means with approved material obtained from borrow areas outside ROW having 4 days soaked CBR equal to or more than 8%, laying in layers not exceeding 250 mm loose, breaking clods, dressing to the required lines, curves, grades, watering to OMC and compacting to 97% modified Proctor density with vibratory rollers having minimum 80 - 100 KN static weight including all leads and lifts etc. complete. (Clause 305 of MORTH)	210	cum		-
29		Providing dry/ trap/ granite/ quartzite/ gneiss rubble stone soling 15 cm to 20 cm thick including hand packing and compacting etc. complete.	18	cum		-
30		Protective Works:- Providing & laying in position machine mixed and machine vibrated <b>M15 grade controlled cement concrete</b> in all locations, at all levels, of any shape and size as per drawings, conforming to IS 456-2000; rate to include mix design, production, pouring concrete with pump, vibrating, finishing, curing, testing complete as per specifications, drawings and instructions. Rate to also include rectification and repairing of defects as per specifications and instructions as directed.	7	cum		-

31		Reinforced cement concrete :- Providing & laying in position machine mixed and machine vibrated M20 grade controlled cement concrete for RCC members at all locations, of any shape and size as per drawings and as directed, conforming to IS 456-2000; rate to include mix design, production, pouring concrete with pump, vibrating, finishing, curing, testing complete including concreting in delayed pour strip as per specifications, drawings & instructions.		31	cum		-
32		<b>REINFORCEMENT:-</b> Providing & laying Thermo-mechanically Treated (TMT) bars ( Fe 500 D) of approved quality of different diameters,lengths and shapes for RCC members at all locations. Rate to include straightening, cutting, bending to required sizes and shapes, placing in position with cover blocks of approved size, tying with binding wire of 18 SWG soft black annealed GI wire complete as per technical specifications, approved drawings and as directed. Rate to also include, cost of cover blocks, binding wire, transport, loading, unloading, storing, rolling margin, pins, spacers, chairs, laps and wastage of 3% over the approved measured quantity. <b>Note :-</b> Scope of work under this item requires the contractor to submit a bar bending schedule and carry out the work as per approved bar bending schedule only.		2600	kg		-
33		<b>SWD:-</b> Providing and fixing factory made precast RCC perforated drain covers, having concrete of strength not less than M-25, of size 900 x 450x50 mm, reinforced with 8 mm dia four nos longitudinal & 9 nos cross sectional T.M.T. hoop bars, including providing 50 mm dia perforations @ 100 to 125 mm c/c, including providing edge binding with M.S. flats of size 50 mm x 1.6 mm complete, all as per direction of Engineer-in-charge.		89	No		-
34		<b>Road / Pavement Granular Sub Base (GSB) :-</b> Providing and laying Granular Sub Base (GSB) conforming to Grading- VI of Table 400-1 of compacted thickness of maximum 150mm with specified graded stone metal and sand mixed in place and laid with mechanical means spreading with motor grader and compacting with vibratory roller having minimum 80-100 KN static weight to achieve desired density of 98% of MDD (IS 2720 part-8). The strength of each GSB layer shall be evaluated by conducting CBR (IS 2720 part-16 & 31) or plate load test using 750mm dia. plate, (IS 9214) for obtaining equivalent CBR value @ one test per 3000Sq.m compacted surface area as per the grading, including all material, labour, machinery with all leads & lifts etc. complete as per drawing & as directed. (Clause 401 of MORTH)		65	cum		-
35		<b>Wet Mix Macadam (WMM):-</b> Providing and laying Wet Mix Macadam (WMM) with paver finisher in specified thickness, each layer not exceeding 200mm compacted thickness including premixing in pug mill/plant well graded crushed stone aggregate with watering and spreading by mechanical means to required profile and compacting with vibratory roller having minimum 80-100 KN static weight to achieve desired density of 98% of MDD (IS 2720 part-8) including all material, labour, machinery with all leads and lifts etc. complete. (Clause 406 of MORTH)		114	cum		-
36		<b>Prime Coat:-</b> Providing and applying Prime Coat using slow setting grade bituminous emulsion complying to IS - 8887 over prepared surface of granular base with emulsion at a temperature between 20 - 70 degree centigrade and applying a uniform coat with the aid of self propelled bitumen pressure sprayer with self heating arrangement and spraying bar with nozzles of constant volume or pressure system at the rate of 1.0 Kg / Sqm including all material, machinery, labour with all leads lifts etc. complete. (Clause 502 of MORTH)		420	Sqm		-
37		<b>Tack coat:-</b> Providing and applying Tack Coat using rapid setting grade bituminous emulsion complying to IS - 8887 over existing bituminous or primed granular surface preparatory to the superimposition of a bituminous mix at a temperature between 20 - 70 degree centigrade and applying a uniform coat with the aid of self propelled bitumen pressure sprayer with self heating arrangement and spraying bar with nozzles of constant volume or pressure system at the rate of 0.3 Kg / Sqm including all material, machinery, labour with all leads lifts etc. complete. (Clause 503 of MORTH)		840	Sqm		-
38		<b>Dense Bituminous Macadam (DBM):-</b> Providing and laying Dense Graded Bituminous Macadam in a single layer of 50 mm to 100 mm compacted thickness on prepared surface using VG30 grade bitumen @ 4.5% of bitumen by weight of mix including providing necessary aggregates with specified gradation mixing with mechanical means in hot mix plant of suitable capacity of batch mix type and electronically controlled mixing of the specified temperature, transporting and laying the mix with self propelled paver finisher with electronic sensor device and initial compaction with minimum 80 - 100 KN static weight vibratory roller / pneumatic tyred roller having minimum 150 – 250 KN weight having a tyre pressure of atleast 0.7 MPa and finished with minimum 60 – 80 KN weight smooth wheeled tandem roller to achieve desired density including all material, labour, machinery with all leads and lifts (excluding tack coat) complete. (Clause 501 & 505 of MORTH)		21	cum		-
39		<b>Bituminous Concrete (BC):-</b> Providing and laying Bituminous Concrete (BC) in a single layer of 30 mm to 50 mm compacted thickness on prepared surface using VG40 grade bitumen @ 5.5% of bitumen by weight of mix including providing necessary aggregates with specified gradation mixing with mechanical means in hot mix plant of suitable capacity of batch mix type and electronically controlled mixing to the specified temperature, transporting and laying the mix with self propelled paver finisher with electronic sensor device and initial compaction with minimum 80 - 100 KN static weight smooth wheeled roller followed by intermediate rolling with minimum 80 - 100 KN static weight vibratory roller / pneumatic tyred roller having minimum 150 - 250 KN weight having a tyre pressure of atleast 0.7 MPa and finished with minimum 60 - 80 KN weight smooth wheeled tandem roller to achieve desired density including all material, labour, machinery with all leads and lifts etc. complete (excluding tack coat) and including cement filler @ 3% by weight of mix. (Clause 501 & 507 of MORTH)		11	cum		-
40		Road Markings / Signages					
	a	<b>Edge Markings:-</b> Providing and applying thermo plastic reflective paint of approved colour or compound for Edge Marking strips of 150 mm wide and 2.5 mm thick of pigment 10%, on clean, dry and good road surface with 30-40% glass beads, 20% binder and 40% filler material etc. complete as per drawing & as directed. (Clause 803 of MORTH)		25	Sqm		-

	b	<b>Cautionary / Warning Signs:-</b> Providing and fixing Cautionary/Warning sign Board of shape of equilateral triangle of 90 cm sides made out 12 gauge (3mm) thick aluminium sheet including frame of 35 x 35 x 3mm M.S. angle with grey stove enamel / powder coating on back side and front side bonded with white retroreflective sheeting of high intensity grade encapsulated lense type (honey comb design) having pressure sensitive heat activated adhesive, high intensity grade retroreflective red coloured border black coloured cut-out symbols of non reflective sheeting having pressure sensitive adhesive including two M.S. angle iron posts of size 65 x 65 x 6mm, 3.65 mm long welded together to form box or tee, painted with one coat of epoxy primer and two coats of epoxy finish paint having black and white bands of 25 cm width including G.I. fixtures, etc. and fixing the boards in M15 grade concrete block of size 60 cm x 60 cm x 75 cm including transportation, etc. complete. Retro reflective sheeting should be with seven years written warranty from the manufacturer / authorised sole distributor for satisfactory field performance sheeting and warranty in original should be submitted as directed. (Clause 801 of MORTH)		2	No		-
	c	<b>Mandatory / Regulatory Signs:-</b> Providing and fixing Mandatory / Regulatory sign board 60 cm diameter made out 12 gauge (3mm) thick aluminium sheet including frame of 35 x 35 x 3mm M.S. angle with grey stove enamel / powder coating on back side and front side bonded with white retroreflective sheeting of high intensity grade encapsulated lense type (honey comb design) having pressure sensitive heat activated adhesive, high intensity grade retroreflective red coloured border black coloured cut-out symbols of non reflective sheeting having pressure sensitive adhesive including two M.S. angle iron posts of size 65 x 65 x 6mm, 3.65 mm long welded together to form box or tee, painted with one coat of epoxy primer and two coats of epoxy finish paint having black and white bands of 25 cm width including G.I. fixtures, etc. and fixing the boards in M15 grade concrete block of size 60 cm x 60 cm x 75 cm including transportation, etc. complete. Retro reflective sheeting should be with seven years written warranty from the manufacturer / authorised sole distributor for satisfactory field performance sheeting and warranty in original should be submitted as directed. (Clause 801 of MORTH)		2	No		-
41		Supplying, fixing, testing and commissioning of butterfly valve of PN 1.6 rating with bronze/gunmetal seat duly ISI marked complete with nuts, bolts, washers, gaskets conforming to IS 13095 of following sizes as required :					
	a	100 mm dia		8	Set		-
	b	150 mm dia		4	Set		-
42		Providing, installation, testing and commissioning of non-return valve of following sizes confirming to IS: 5312 complete with rubber gasket, GI bolts, nuts, washers etc.as required : 100mm dia		8	Each		-
43		Supplying and installing <b>pressure gauge</b> of 100 mm dia., 0-300 PSI or 0-14 kg per cm square fitted with 12/15 mm dia. pad cock valve, and G.I. pipe, elbow etc. complete as per specification no. FF-FFA/PG		8	Each		-
44		Providing and fixing of RCC NP3, ISI marked, with 100 mm PCC encasing, Excavation refilling complete work Providing and fixing with pipe fittings, support, including cost of all materials, labour charges, HOM of equipment and testing complete as per specifications. The pipe will be laid on 100 mm PCC bed & excavation & refilling for laying the pipes SIZE 200 MM		130	Rmt		-
45		Providing and Constructing Valve chamber in brick masonry of approved thk. In CM 1:5 with 230 mm thk. 1:3:6 PCC bedding, and 20 mm thk. cement plaster in CM 1:4 on both sides with RCC cover in coping 1:2:4 ,etc complete as required as directed by Engineer -in charge with necessary excavation in earth or Murom, refilling the earth back in layers, ramming and consolidating, removing away the surplus earth or dumping it on site as required (depth as per drawing )					
	a	2.5 M x 2M x 2M DEEP		2	No		-
	b	1 M x 1M x 1M DEEP		4	No		-
46		Supply, Installation testing and commissioning of approved make heavy tubes (Class 'C') confirming to as per IS1239 Part- I (25mm Nominal bore 4.05mm thick@ 2.97 Kg/m, 32mm Nominal bore 4.05mm thick @ 3.84 Kg/m, 40mm Nominal bore 4.05mm thick@ 4.43 Kg/m,50mm Nominal bore 4.47mm thick@ 6.17 Kg/m, 65mm Nominal bore 4.47mm thick @ 7.90 Kg/m, 80mm Nominal bore 4.85mm thick @ 10.10 Kg/m, 100mm Nominal bore5.40mm thick@ 14.40 Kg/m,150mm Nominal bore 5.40mm thick@ 21. 20 Kg/m, Such as Tees elbows check nuts unions, Flanger, Nipples etc. including cutting welding, Trending fixing on walls, ceiling (Using 41-Tech pipe/M.S.angle supports work includes two coats of metal primer and two coats of Red enamel paint etc. including cost of materials, labour, HOM complete as per specifications.					
	a	-do- Galvanized Iron Pipes 200 mm dia		8	Rmt		-
	b	-do- Galvanized Iron Pipes 150 mm dia		4	Rmt		-
	c	-do- Galvanized Iron Pipes 100 mm dia		30	Rmt		-
47		Constructing brick masonry DryInspection chamber with air tight cover on top for pipeline with three or more inlets, using table moulded non-modular bricks of class designation 50 in cement mortar 1*5, C. I cover with frame (Heavy duty) total weight of cover with frame to be not less than 125 kg. R.C.C. top slab with cement concrete M 15 with 20mm and downsize granite metal , foundation concrete M 5 with 40mm and downsize granite metal inside plastering 12mm thick with cement mortar 1:3, finished smooth with a floating coat of cement on walls and bed concrete complete as per standard design including cost of materials, labour charges, curing complete as per specifications. (Depth up to 600- 1500 mm)					
	a	internal dimensions 2 x 1.2 m, (clear inside dimension)		3	No		-
	b	internal dimensions 1.5 x 1.2 m, (clear inside dimension)		5	No		-

48		Constructing brick masonry inspection chamber including 100 mm PCC & excavation internal dimensions 450x900mm, (clear inside dimension) for pipeline with three or more inlets, using table moulded non-modular bricks of class designation 50 in cement mortar 1:5, C. I cover with frame (Heavy duty) total weight of cover with frame to be not less than 125 kg R.C.C. top slab with cement concrete M 15 with 20mm and downsize granite metal , foundation concrete M 5 with 40mm and downsize granite metal inside plastering 12mm thick with cement mortar 1:3, finished smooth with a floating coat of cement on walls and bed concrete complete as per standard design including cost of materials, labour charges, curing complete as per specifications. (Depth up to 600- 1500 mm)		7	No		-
49		<b>Transfer Pump (Delay decay tank tank)</b> Supply, installation, testing & commissioning of Submersible <b>pumps ( 1 working + 1 standby)</b> with 10 mm thick solid handling capacity with C.I body with built in strainer & SS 304 impeller, coupled to motor suitable for operation on 430 V 3 pH 50 Cycle A/C power supply and lifting arrangement including complete as required. Automatic Electric control panel with sequential change over switch, Ammeter, voltmeter, over load/under load protection with indicator lamp, single phase preventor, relays, electrical wiring, cabling from panel to pumps, level controller complete with all accessories as per manufacturer specifications. Accessories like NRV's valves on discharge and valve and strainer in suction line, header for suction and delivery side, required cut pieces of pipes, fittings, flanges, pressure gauge, base frame and concrete foundation included and complete as required. The automatic panel with float level controller to run the pump in auto arrangement to be considered.					
	a	A)Flow rate : 800 LPM (1 Working +1 Standby) B) Head : 30 Mts Purpose: Sewage Transfer from Delay decay tank Location : 95 m3 2 nos delay decay tank		4	Each		-
	b	A)Flow rate : 800 LPM (1 Working +1 Standby) B) Head : 30 Mts Purpose : Sewage Transfer from Delay decay tank Location : 75 m3 2 nos delay decay tank		4	Each		-
50		<b>CABLES &amp; TERMINATION</b> :-Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size direct in ground including excavation and refilling the trench etc as required, but excluding sand cushioning and protective covering					
	a	3.5 core 50sq.mm AL Cable		100	Rmt		-
	b	3.5 core 6 sq.mm CU Cable		40	Rmt		-
51		<b>Termination</b> :-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					
	a	3½ X 50 sq. mm (35mm)		2	No		-
	b	3½ X 6 sq. mm (35mm)		8	No		-
52		Earth Strip & Earth Pit Unit :-Providing and fixing 1C X 4 mm dia copper wire on surface or in recess for earthing along with connection existing surface/ recessed conduit/ cable as required upto ground lvl.		30	Rmt		-
53		Earthing with copper earth plate 600 mm X 600 mm X 3 mm 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.		1	No		-
54		Providing and fixing 25 mm X 5 mm G.I. strip on surface or in recess for connections etc. as required.		10	Rmt		-
55		<b>POINT WIRING USING COPPER WIRE</b> :- 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		30	Rmt		-
56		Conduit :- Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required. 25 mm		60	Rmt		-
57		<b>SWITCH, SOCKETES &amp; ACCESSORIES</b> :- Supplying and fixing modular blanking plate & 6A switch box with G.I Back box modular as required		1	No		-
58		<b>Light Fixture &amp; Accesories</b> :- Supplying & erecting LED 20W tube light fitting (4 feet) with aluminium housing, heat sink, integrated HF electronic driver complete		2	No		-
59		<b>Hume Pipe</b> :-Supplying and laying (including excavation of suitable width & depth up to 90 cm) 200 mm outside dia, double wall corrugated pipes (DWC) of HDPE for enclosing cable below ground/road surface, to required depth complete.		140	Rmt		-
60		<b>ISOLATOR</b> :-SITC OF SFU 100A FPMCCB in provided Enclouser		1	No		-
61		<b>ISOLATOR</b> :-SITC OF FPMCB 32A in provided Enclouser		4	No		-
62		SITC OF 3C X 6 sq. mm CU flat Strip Cable from control panel to Pumps		100	Rmt		-
63		SITC OF 4C X 2.5 sq. mm CU flat Strip Cable for Float Switch		80	Rmt		-
64		Cable Tray:- Supplying and installing following size of perforated Hot Dipped Galvanised Iron cable tray (Galvanisation thickness not less than 50 microns) with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with G.I. suspenders including G.I. bolts & nuts, etc. as required. 150 mm width X 50 mm depth X 1.6 mm thickness		20	Rmt		-
Total Cost inclusive of All Taxes and duties excluding GST							-

NOTE:

- 1 The agency is requested to visit the site to know actual scope of work.
- 2 Rate shall be quoted inclusive of all taxes Excluding GST which will be paid extra as applicable on submission of challan. FOR TMC/ACTREC applicable rate of GST is 12%. Agency has to consider GST at rate specified.
- 3 Material required at site should be assessed by the agency and bill will not be settled for excess/supplied items.
- 4 Bill will be settled as per actual measurement after supply of material at site.
- 5 Deviations/suggestions may be put on separate page in order to attain higher quality performance. Competent authority reserves full right to accept or reject any kind of changes.
- 6 Agency will have to prepare detailed drawing/ plan of work & obtained approval before execution. Agency will have time bound work schedule for carrying out the work.
- 7 Payment will be released for consumed quantity on satisfactory completion on providing necessary certifications/documentation.
- 8 All above items of this schedule shall have standard make as specified in Tender and approved before installation.
- 9 Agency has to get a sample approved from Engineer-in-charge in writing before any supply of item.
- 10 ACTREC reserves the right to reject any sample and rescind the work order if the samples are found to be unsatisfactory and if the agency is unable to meet the requirement of ACTREC.