



मुख्य अभियंता, पुणे प्रादेशिक विभाग पुणे,

नवीन प्रशासकीय इमारत, पुणे लष्कर पा.पु. केंद्र आवार,
४६३ स्टेव्हली रोड, सेंट मेरी चर्च शेजारी, कॅंप, पुणे-४११००१
दूरध्वनी : कार्यालयीन ०२०-२९७०६०६४/२९७०६०६८

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जा.क्र./ मु.अ.(पुणे)/चिशा / दरसुची २०२१-२२/शुध्दीपत्रक क्र. ८/७०६

दि.१०/०३/२०२२

शुध्दीपत्रक क्र ८

विषय :- सन २०२१-२२ च्या मजीप्राच्या दरसुचीमध्ये जलशुध्दीकरण केंद्र, ईएसआर आणि जीएसआर बाबींच्या बांधकामाच्या दरांच्या वाढी बाबत
संदर्भ:- अधीक्षक अभियंता(मु),मजीप्रा, मुंबई यांचे पत्र क्र.मजीप्रा/सस/तांशा ३/३२६ दि.१०/०३/२०२२

मजीप्राची सन २०२१-२२ ची दरसुची दि.१५/०६/२०२१ पासून लागू करण्यात आली आहे. बाजारातील स्टील ,सिमेंट, पिंग आयर्न आणि डीझेलच्या दरांमध्ये वाढ होत असल्याने कंत्राटदार संघटने कडून दरसुचीतील जलशुध्दीकरण केंद्र, ईएसआर आणि ईतर वॉटर रिटेनिंग स्ट्रक्चर्सच्या बांधकामांच्या दरसुचीतील दरांमध्ये वाढ होणेसाठी मागणी होत आहे. यामुळे बाजारभावानुसार दरवाढीस मा.सदस्य सचिव कार्यालयाने संदर्भीय पत्रान्वये मंजूरी दिलेली आहे.

या नुसार मजीप्राच्या सन २०२१-२२ मधील जलशुध्दीकरण केंद्र, ईएसआर आणि जीएसआर या बाबींचे सुधारित दर सोबत जोडले आहे.सदरील दर हे दि.१०/०३/२०२२ पासून लागू राहातील.

सोबत:- वरील प्रमाणे पान क्र.१ ते १५

amner 90.3.22
(रा.सा.राहाणे)

अध्यक्ष ,दरसुची समिती
तथा मुख्य अभियंता
मजीप्रा प्रादेशिक विभाग, पुणे

प्रत: मा. सदस्य सचिव, मजीप्रा ,मुंबई यांना माहिती करिता सविनय सादर

प्रत:-मुख्य अभियंता, मजीप्रा , प्रादेशिक विभाग ठाणे/नाशिक/ औरंगाबाद/ अमरावती/ नागपुर यांना माहिती करिता अग्रेषित

प्रत:- अधीक्षक अभियंता मजीप्रा (मुख्यालय) / अधीक्षक अभियंता मध्यवर्ती नियोजन व सनियंत्रण कक्ष , मजीप्रा मुंबई यांना माहितीस्तव

प्रत:- अधीक्षक अभियंता मजीप्रा मंडळ पुणे / सांगली यांना माहितीस्तव.

प्रत:- उप अभियंता, अद्यावत तंत्रज्ञान कक्ष, मजीप्रा, मुंबई यांना माहितीसाठी व मजीप्राच्या संकेतस्थळावर upload करण्यासाठी

Sr. No.	Description	Unit	Rate (Rs. in Lakhs) SSR 2021-22		Rate (Rs. in Lakhs) SSR 2021-22 (Corrigendum No. 8)	
			Complete	Labour	Complete	Labour
	Water Treatment Plant (WTP)					
1	<u>Designing (aesthetically), providing and constructing high rate Unconventional Water Treatment Plant</u> i.e. Simplified Water Treatment Plant consisting of Civil, Mechanical and Electrical works including cost of providing and applying epoxy paint to inside surface of water retaining structures in contact with chlorine and providing anti-termite treatment to entire structure below ground level, mechanical and electrical components of various sub-works as given below, including necessary hydraulic testing, structural testing and trial run for 3 months, etc. complete as directed by Engineer-in-charge (turnkey job) works.					
1)	Aeration fountain					
2)	Inlet arrangements					
3)	Mixing channel with ventury flume and flow measuring arrangement					
4)	Inlet channel					
5)	Flocculator - Conforming to I.S. 72081974 (Type-C) with detention period of 30 minutes					
6)	Tube settlers - Designing, fabricating and constructing Tube Settlers with square or any other shaped tube like Circular, Chevron, Hexagonal etc. having proven performance.					
7)	Rapid sand gravity filters					
8)	Filter house					
9)	Chemical house					
10)	Alum tanks - 2 Nos. with mixing, carrying and dosing arrangements with piping.					
11)	Gravity feed gas chlorinator with 100% standby.					
12)	TCL solution tank with mixing, carrying and dosing arrangement with piping.					
13)	Bypass arrangement					
14)	External and internal electrification					
15)	Laboratory equipments					
16)	Wash water tanks of capacity equal to 2% of designed quantity of filtered water in a day (+)10%.					
17)	Wash water pumps with 100% standby.					
18)	Air blowers capable of delivering 600 LMP per square metre of free air of filter area at 0.4 Kg/ sqcm at the under drains (100% standby).					



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Sr. No.	Description	Unit	Rate (Rs. in Lakhs) SSR 2021-22		Rate (Rs. in Lakhs) SSR 2021-22 (Corrigendum No. 8)	
19)	Pure water sump of capacity equal to 1 hour pumping capacity.					
20)	Pure water pump house over the sump / by the side pump.					
21)	Drainage arrangements					
22)	Alum store					
23)	Sanitary block with necessary water supply and drainage arrangements and internal WBM roads.					
24)	These rates are applicable for seismic zones 2, 3 and 4.					
25)	Rates given below are inclusive of uplift pressure if any and dewatering during the entire work.					
26)	All RCC structures shall be constructed in M-300.					
27)	Unconventional Treatment Plants less than 1 MLD capacity shall not be constructed.					
28)	Up to 3 MLD capacity no air blower will be required.					
29)	Up to 5 MLD WTP, 100 kg. and for above 5 MLD WTP 900 kg. Chlorine Tonner supply shall be provided.					
30)	i) Glandless valves shall be provided. ii) Stainless steel railing shall be provided. (32 mm dia.(SS316) as per relevant standard) iii) All WTP & its components outside faces shall be painted by Acrylic Emulsion with silicon additives paint only. iv) Ceramic tiles shall be provided for flooring and Dado.					
	Note : Conditions from Sr. No. 1 to 30 shall form a part and parcel of the tender and must be included in draft tender papers for the work of unconventional treatment plants.					
	Unconventional Water Treatment Plant					
1)	Fixed cost for 1 MLD	Job	63.71	25.42	82.82	33.05
2)	Add for capacity above 1 MLD upto 2 MLD	MLD	28.21	10.99	36.68	14.28
3)	Cost of 2 MLD treatment plant	Job	91.92	36.41	119.50	47.33
4)	Add for capacity above 2 MLD upto 5 MLD	MLD	21.36	6.35	27.77	8.25
5)	Cost of 5 MLD treatment plant	Job	156.01	55.45	202.81	72.09
6)	Add for capacity above 5 MLD	MLD	16.72	7.83	21.74	10.18
7)	Cost of 10 MLD treatment plant	Job	239.63	94.60	311.52	122.98

Sr. No.	Description	Unit	Rate (Rs. in Lakhs) SSR 2021-22		Rate (Rs. In Lakhs) SSR 2021-22 (Corrigendum No. 8)	
2	Designing (aesthetically), providing, constructing and commissioning Conventional Water Treatment Plant consisting of all Civil, Mechanical and Electrical works including cost of providing and applying epoxy paint to inside surface of water retaining structures in contact with chlorine and providing anti-termite treatment to entire structure below ground level, mechanical and electrical components of various sub-works as given below, including necessary hydraulic testing, structural testing, equipment testing and trial run for a period of 3 months, etc. complete as directed by Engineer-in-charge (turn-key job).					
1)	Aeration Fountain - Plan area not less than 0.625 square metre per MLD					
2)	Ventury Flume - With necessary devices, consisting of simple mechanical indicator. (Pedestal type gauge)					
3)	Flash Mixer - Rapid mixing device, detention time 60 seconds to give velocity gradient 300 to 400 sec-1, vane mixer type conforming to I.S. 7090 of 1985.					
4)	Flocculator - Conforming to I.S. 72081974 (Type-C) with detention period of 30 minutes.					
5)	Clarifier - Horizontal flow circular tank, detention period 2-5 hours, overflow rate 30 cubic metre per square metre per day (to be specified), Weir loading not more than 300 cubic metre per metre per day, with mechanical sludge scraper conforming to I.S. No. 103131982.					
6)	Rapid Sand Filters and Filter House -Filter designed for filtration rate of 5,000 litres per square metre per hour, minimum 2 beds for plant upto 10 MLD, for larger plants as specified, filters to be located in filter house with roof slab, pipe gallery and platform minimum 5.5 metre in width.					
a)	Filter Sand - Effective size 0.45 to 0.70 mm, uniformity coefficient not more than 1.7, nor less than 1.3, depth of water over sand 0.75 M, free board 50 cm, gravel 0.45 M in depth, sand and gravel conforming to I.S. 8491(i)-77, backwash by air wash, standard appurtenances (to be specified), rate of flow controller, filter gauge, sand expansion gauge, etc.					
b)	Wash Water Tank - Capacity to be specified and suitable to supply water to wash 2 filter units at a time where the units are 4 or more.					
c)	Wash Water Pumps - Capacity to fill water tank in 1 hour with 100% standby.					

Sr. No.	Description	Unit	Rate (Rs. in Lakhs) SSR 2021-22		Rate (Rs. in Lakhs) SSR 2021-22 (Corrigendum No. 8)	
d)	Air Blowers - Capable of delivering 600 LMP per square metre of free air, of filter area at 0.4 kg/sqcm at the underdrains (100% standby).					
7)	Chemical House in Two Storeys					
a)	Ground floor to accommodate 7 days' alum requirement and sundry storage.					
b)	First floor to accommodate alum and lime tanks. etc.					
c)	Solution tanks - Minimum 3 tanks (one for preparation, second for dosing and third as standby), each tank capable of giving 8 hours maximum dose without interruption, minimum free board 0.30 M, trays for dissolving, level indicator, mechanical agitation devices, solution feed and drain lines, solution feed device (constant head device, strength of solution upto 10% only) conforming to I.S. 9222 Part-I 1979.					
8)	Pure Water Sump and Sump House.					
a)	Capacity of sump - One hour of designed flow.					
b)	Pump House - Pump house of required size over the sump or by the side.					
9)	Store House - Suitable for alum storage of three months' requirement in monsoon with 10% extra capacity for other sundry articles.					
10)	Vacuum feed type Chlorinators - Make to be approved by MJP.					
a)	Conforming to I.S. 10533 - A Part-II 1983.					
b)	Rate for withdrawal					
	Temperature Kg. of Chlorine discharge Degree 'C' per day (Cylinders)					
	45 67 Tonnes					
	10 6.35 9.50 110					
	15 10.75 16.10 130					
	20 14.50 21.24 254					
	27&Above 18.70 28.12 315					
c)	Chlorinator equipment and container room to conform to I.S. 10553 Part-I 1983.					
d)	100% standby shall be provided.					
11)	By pass arrangements - C.I. or M.S. pipes.					
12)	Drainage arrangements - RCC pipes upto plot boundary.					
13)	Electrical installation - Both internal and external including entire plant area.					
14)	Laboratory equipment - As per requirement (to be specified during tendering).					
15)	Sanitary blocks - Carpet area - 15 square metre minimum upto 25 Mld and 25 square metre above 25 Mld.					
16)	Administrative block and internal road -To accommodate office room, chlorine room, laboratory room, panel board room, blower room etc. and WBM road to connect all units from main gate of plot.					

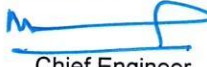
Sr. No.	Description	Unit	Rate (Rs. in Lakhs) SSR 2021-22		Rate (Rs. in Lakhs) SSR 2021-22 (Corrigendum No. 8)	
17)	Rates given below are inclusive of uplift pressure if any and dewatering during entire work.					
18)	These rates are applicable for seismic zones 2, 3 and 4.					
19)	All RCC structures shall be constructed in M-300.					
20)	Upto 5 MLD WTP , 100 kg. & for above 5MLD WTP , 900 kg. Chlorine Tonner supply shall be provided.					
21)	i) Glandless valves shall be provided. ii) Stainless steel railing shall be provided. (32 mm dia.(SS316) as per relevant standard) iii) All WTP & its components outside faces shall be painted by Acrylic Emulsion with silicon additives paint only. iv) Ceramic tiles shall be provided for flooring and Dado.					
	Note : Conditions from Sr. No.1 to 21 shall form a part and parcel of the tender and must be included in draft tender papers of conventional treatment plants.					
	Conventional Water Treatment Plant					
1)	Upto 5 MLD	MLD	39.35	15.62	51.16	20.30
2)	Cost of 5 MLD treatment plant	Job	196.77	78.09	255.80	101.52
3)	Add for capacity above 5 MLD upto 10 MLD	MLD	28.24	11.16	36.71	14.51
4)	Cost of 10 MLD treatment plant	Job	337.98	133.89	439.37	174.06
5)	Add for capacity above 10 MLD upto 20 MLD	MLD	18.05	8.35	23.47	10.85
6)	Cost of 20 MLD treatment plant	Job	518.5	217.35	674.05	282.56
7)	Add for capacity above 20 MLD upto 50 MLD	MLD	16.73	6.31	21.75	8.21
8)	Cost of 50 MLD treatment plant	Job	1020.39	406.71	1326.51	528.72
9)	Add for capacity above 50 MLD upto 100 MLD	MLD	14.12	5.29	18.36	6.87
10)	Cost of 100 MLD treatment plant	Job	1726.51	671.06	2244.46	872.38
11)	Add for capacity above 100 MLD	MLD	10.29	3.39	13.38	4.41
3	Designing (aesthetically), providing, fabricating Package Water Treatment Plant at the shop, transporting to site, installing, testing and commissioning at the site, giving necessary one month's free test and trail run with guarantee for one year, etc. complete.					
	Prefabricated Package Water Treatment Plant comprising following :					
1)	Rapid mixing channel in M.S. sheets and M.S. baffle.					
2)	Flocculator not less than 10 minutes detention, in M.S. prefabricated box, flocculation being achieved either by glass pebbles of graded size or PVC tetrapod or equivalent arrangement to ensure good floc formation.					
3)	Plate or tube settlers of not less than 30 minutes detention in M.S. prefabricated box, the plates / tubes mounted in the settler basin with inclination of not less than 60 degree to horizontal.					

Sr. No.	Description	Unit	Rate (Rs. in Lakhs) SSR 2021-22		Rate (Rs. in Lakhs) SSR 2021-22 (Corrigendum No. 8)	
4)	Rapid sand gravity filter in M.S. prefabricated box with filter sand not less than 500 mm thick, supported on false floor below with polypropylene nozzles spaced at not more than 500 mm centres in either direction.					
5)	Backwashing, inlet & outlet facilities shall be provided.					
#	Air blowers - Air Blowers are not required for WTP having capacity less than and equal to 3 MLD, for WTP having capacity more than 3 MLD air blowers capacity of delivering 600 LPM per sqm of free air of filter area 0.4 kg/sqcm at underdrain (100% standby)					
#	Wash water tank capacity equal to 2 % of designed quantity of filter water in a day + 10 %					
#	wash water pump with 100 % standby (Minimum 3 HP with all accessories)					
#	Backwash with water not less than 0.6 cum/sqm of filter bed area in filter box.					
#	Piping of outlet upto sump					
6)	Laboratory equipments					
7)	External & Internal electrification					
8)	TCL solution tank with mixing, carrying and dosing arrangement with piping.					
9)	Gravity feed gas chlorinator with 100% standby.					
10)	Four alum storage unit					
11)	Drainage arrangement					
12)	Providing room with RCC roof for office and Lab space with necessary water supply & drainage arrangement & internal roads					
13)	RCC sump of one hour cap. and pump house on it.					
14)	Internal Road					
15)	Wire fencing with gate for WTP premises.					
16)	All civil works for foundation, consisting of raised RCC platform above G.L. or walls in B.B. masonry or UCR masonry shall be provided as per needs at site.					
17)	Bypass in the form of pipes or M.S. channels included in the design, effecting bypass of such new tank and filter individually or both. (Limit upto 5.0 M. from W.T.P. face)					
18)	The entire M.S. fabricated tank provided with FRP lining (5 mm thick) to inside face in contact with water epoxy painting- two coats with one coat of primer on outside. The thickness of plates employed shall not be less than 6 mm					



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Sr. No.	Description	Unit	Rate (Rs. in Lakhs) SSR 2021-22		Rate (Rs. in Lakhs) SSR 2021-22 (Corrigendum No. 8)	
19)	Alum dosing and mixing arrangements to be provided in twin tanks, each of 8 hours capacity, capable of importing does of 20 ppm with 5% solution. The alum tanks provided with a dose in steps of 5 ppm and entire unit mounted on the top of flocculator / settler box, in the form of prefabricated structure, with access platform and ladder. Alum boxes with FRP lining (5 mm thick) inside and epoxy paint two coats with one coat of primer on outside.					
20)	Both flocculator and settling basins provided with hopper bottom with slope not less than 45 degrees to the horizontal drain pipes and valves provided to both flocculator and settling basin.					
21)	Flow ratings to conform following parameters :					
a)	Velocities in channels not to exceed 0.6 M./Second.					
b)	Velocities in filter outlet pipes and valves not to exceed 1 M./Second.					
c)	Velocities in interconnecting pipe and controls not to exceed 1M./Second.					
d)	Backwash with air : Not required.					
e)	Backwash with water : Not less than 50.5 M./ Sqm. of filter bed area in filter box.					
23)	Free board for all units not less than 300 mm					
23)	Rates as above include all taxes, octroi and duties which would be specific to the site locations.					
Package Water Treatment Plant						
1)	21 Cum/Hr. (0.50 MLD)	Each	32.25	9.97	41.93	12.96
2)	34 Cum/Hr. (0.80 MLD)	Each	39.94	11.96	51.92	15.55
3)	42 Cum/Hr. (1.00 MLD)	Each	45.02	13.48	58.53	17.52
4)	63 Cum/Hr. (1.50 MLD)	Each	56.39	16.92	73.31	22.00
5)	83 Cum/Hr. (2.00 MLD)	Each	66.79	20.13	86.83	26.17
6)	125 Cum/Hr. (3.00 MLD)	Each	85.51	25.90	111.16	33.67
	Note : Depending upon the capacity required for the scheme, one of the above capacities should be chosen.					

 10.3.22
 Chief Engineer
 Maharashtra Jeevan Pradhikaran
 Pune Region , Pune


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Sr. No.	Description	Unit	Rate (Rs.) SSR 2021-22		Rate (Rs.) SSR 2022-2023 Corrigendum No. 8	
			Complete	Labour	Complete	Labour
1	<u>Designing (aesthetically), and constructing RCC ground service reservoirs / RCC sumps in M-300 mix</u> of required capacity including excavation in all types of strata, foundation concrete, container walls, bottom slab top RCC roof slab / or dome, 20 mm thick cement plaster with water proofing compound in CM 1:3 proportion to inside face of the container, including epoxy paint from inside including refilling and disposing of surplus stuff within lead of 50 M, all labour and material charges, for laying and jointing of pipe assembly for inlet, outlet washout, over flow and bypass arrangement consisting of C.I. M.S. D/F. pipes, specials and valves of given diameters, providing and fixing accessories such as M.S. ladder inside and outside, C.I. Manhole frame and cover, water top slab, B.B. masonry chamber for all valves, ventilating shafts, including giving satisfactory hydraulic test and water tightness test as per IS code and providing three coats of cement paints to all exposed surface of structure including roof surface etc. complete as per design data, criteria, obligatory requirements and detailed specifications. Anti-termite treatment shall be given for Notes					
1)	The design shall be in accordance with various relevant I.S. specification (I.S. 456/1978, I.S. 875 - 1987, I.S. 3370 -1965 or revised.)					
2)	Only M.S. bars grade I conforming to I.S. 432 part-I or high yield strength deformed bars conforming to I.S. 1786 or I.S. 1139 shall be used. Grade -II M.S. bars shall not be used.					
3)	Entire structure shall be in M-300 only.					
4)	The scope of pipe assembly work shall be upto 5 metre beyond outside face of the wall, cost of pipes valves and specials is not included in the rate but labour cost for laying and jointing is included.					
5)	The G.S.R. / Sump above 15 lakh litres capacity shall be in two compartment					
6)	The Job includes designing the structure for uplift pressure and dewatering if required during entire execution and disposal of surplus excavated stuff within lead of 50 metres as directed by Engineer-in-charge. If uplifts considered in design, then these rates shall be increased by 7.5%.					

Sr. No.	Description	Unit	Rate (Rs.) SSR 2021-22		Rate (Rs.) SSR 2022-2023 Corrigendum No. 8	
			Complete	Labour	Complete	Labour
7)	G.S.R. outlets shall be with bell mouth of approved pattern in bottom slab and cost of designing bell mouth is included in the rate. Sump well includes cost of suction pit required at bottom.					
8)	For pipe diameters upto 300 mm only CI pipes and CI specials shall be used. For pipe diameters above 300 mm, M.S. pipes and specials minimum 10 mm thick shall be used with proper anticorrosive epoxy treatment from inside and outside.					
9)	Cost of pump house is not included in these rates.					
10)	Above rates are applicable for Seismic Zones 2, 3 and 4.					
11)	75% part rate shall be payable for reinforcement, concrete and plastering items of all types of G.S.R.s and sumps till satisfactory hydraulic testing for water tightness test is given and till that work shall be treated as incomplete.					
	Note : Conditions from Sr. No. 1 to 11 shall form a part and parcel of tender and must be included in the draft tender papers for work of R.C.C. GSRs and sumps.					
	<u>Rates for RCC GSRs and Sumps</u>					
1)	Upto 25,000 litres	Lit	14.88	5.84	19.35	7.59
2)	Cost of 25,000 litres capacity	Job	372114	145990	483748	189787
3)	Add for capacity above 25,000 upto 50,000 litres	Lit	8.83	3.37	11.48	4.38
4)	Cost of 50,000 litres capacity	Job	592832	230132	770682	299172
5)	Add for capacity above 50,000 upto 75,000 litres	Lit	7.18	2.79	9.33	3.62
6)	Cost of 75,000 litres capacity	Job	772215	299787	1003880	389723
7)	Add for capacity above 75,000 upto 1,00,000 litres	Lit	6.35	2.49	8.26	3.24
8)	Cost of 1,00,000 litres capacity	Job	930990	362104	1210287	470735
9)	Add for capacity above 1,00,000 upto 1,50,000 litres	Lit	6.19	2.43	8.04	3.16
10)	Cost of 1,50,000 litres capacity	Job	1240373	483796	1612485	628935
11)	Add for capacity above 1,50,000 upto 2,00,000 litres	Lit	5.40	2.13	7.02	2.77
12)	Cost of 2,00,000 litres capacity	Job	1510446	590471	1963580	767612

Sr. No.	Description	Unit	Rate (Rs.) SSR 2021-22		Rate (Rs.) SSR 2022-2023 Corrigendum No. 8	
			Complete	Labour	Complete	Labour
13)	Add for capacity above 2,00,000 upto 3,00,000 litres	Lit	4.99	1.96	6.49	2.54
14)	Cost of 3,00,000 litres capacity	Job	2009910	786097	2612883	1021926
15)	Add for capacity above 3,00,000 upto 5,00,000 litres	Lit	4.05	1.60	5.27	2.08
16)	Cost of 5,00,000 litres capacity	Job	2820143	1106299	3666186	1438189
17)	Add for capacity above 5,00,000 upto 10,00,000 litres	Lit	3.59	1.42	4.67	1.85
18)	Cost of 10,00,000 litres capacity	Job	4614766	1817671	5999196	2362972
19)	Add for capacity above 10,00,000 upto 15,00,000 litres	Lit	2.80	1.09	3.64	1.42
20)	Cost of 15,00,000 litres capacity	Job	6016568	2363967	7821538	3073157
21)	Add for capacity above 15,00,000 litres	Lit	2.27	0.92	2.95	1.20
	Note : 10% shall be added over the cost of GSR for sump where overhead pump house is proposed.					




 10.3.22
 Chief Engineer
 Maharashtra Jeevan Pradhikaran
 Pune Region , Pune

Sr. No.	Description	Unit	Rate (Rs.) SSR 2021-22		Rate (Rs.) SSR 2022-2023 Corrigendum No. 8	
			Complete	Labour	Complete	Labour
1	Designing (aesthetically), and constructing RCC elevated service reservoirs of following capacity with RCC staging consisting of columns, internal and external bracings spaced vertically not more than 4.5 metres centre to centre for ESR having capacity upto 500 cum and not more than 6 m c/c for ESRs having capacity above 500 Cum including excavation in all types of strata, foundation concrete, cement plaster with water proofing compound to the inside face of the container including refilling disposing off the surplus stuff within a lead of 50 metres, all labour and material charges including lowering, laying, erecting, hoisting and jointing of pipe					
	assembly of inlet, outlet, washout, overflow and bypass arrangements as per departmental design, providing and fixing accessories such as M.S. ladder, C.I. manhole frame and covers, water level indicators, lightening conductor, G.I. pipe railing around walk way and top slab, providing spiral stair case from ground level to roof level, M.S. grill gate of 2 M height with locking arrangement of approved design, B.B. masonry chambers for all valves, ventilating shafts, providing and applying three coats of cement paint to the structure including roof slab, epoxy painting to internal surface and anti-termite treatment for underground parts of the structure and giving satisfactory water tightness test as per I.S. code. The job to include painting the name of the scheme and other details on the reservoir as per the directions of Engineer-in-Charge.					
	Notes					
1)	The design of the structure be in accordance with relevant I.S. specification (I.S. 3370 - 1965 or revised.)					
2)	The design shall satisfy the stipulations as per I.S. 1893 - 1984 and I.S. 13920 / 1993 for seismic force and I.S. - 11682 / 1985 for R.C.C. staging of overhead tanks.					

Sr. No.	Description	Unit	Rate (Rs.) SSR 2021-22		Rate (Rs.) SSR 2022-2023 Corrigendum No. 8	
			Complete	Labour	Complete	Labour
3)	For design having more than 6 columns, provision of internal bracing is obligatory. External bracings is also obligatory.					
4)	The entire structure shall be in M-300 mix only.					
5)	Plain round mild steel bars grade-I conforming to I.S. 432 part-I or high yield strength deformed bars conforming to I.S. 1786 or I.S. 1139 shall be used, grade-II mild steel bars will not be allowed.					
6)	Irrespective of the type of foundation proposed in the design, one set of bracing be provided at the ground level.					
7)	These rates include providing M.S. ladder for E.S.R.s upto 2 lakh litres capacity and providing spiral staircase for E.S.R. above 2 lakh litres capacity.					
8)	Staging shall have to be designed with stresses of M-200 concrete for ESR. However all RCC construction should be done in M-300.					
9)	These rates are including the cost of uplift pressure if any and entire dewatering during execution. In case of water logging area where water is stretch at shallow depth, extra provision of dewatering shall be made as per site condition.					
10)	All conditions given in the Member Secretary's Circular No. MJP / TSE / 350 / 1668 dt. 2-8-97 and MJP / S / 350 / 2127 dt. 13-7-99 shall be strictly followed and additional cost, if any, due to these conditions is included in the rates mentioned below.					
11)	75% part rate shall be payable for reinforcement concrete and plastering items of containers of E.S.R. till satisfactory hydraulic testing for water tightness is given; and till that work shall be treated as incomplete.					




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Sr. No.	Description	Unit	Rate (Rs.) SSR 2021-22		Rate (Rs.) SSR 2022-2023 Corrigendum No. 8	
			Complete	Labour	Complete	Labour
12)	The rates indicated in the table are excluding the cost of pipes, specials and valves required for inlet, outlet, washout, overflow and bypass arrangement. The scope of work, however, includes cost of erecting, laying and jointing of pipes and valves including cost of jointing materials upto 5 M beyond outer face of outermost column.					
13)	For ESR upto 500 cum capacity C.I. double flanged pipes upto 300 mm dia shall be provided and C.I. specials shall be used. For ESR above 500 cum capacity C.I./M.S. pipe assembly with minimum 8 mm thickness upto 500 mm dia and minimum 10 mm thickness above 500 mm dia can be used with proper anti-corrosive epoxy treatment from inside and outside.					
14)	Below mentioned rates are for foundations with individual footing with bearing capacity of 20 tonnes per square metre. For raft foundations, these rates shall be increased by 7.5% where safe bearing capacity (SBC) is 5 MT per sqm and by 5% where SBC is more than 5 MT/sqm and upto 10 MT/sqm. This % of 5% or 7.5% is applicable for estimation of amount of lumpsum item of ESR. For extra item due to change from individual foundation to raft, actual increase in concrete and steel be paid as per relevant DSR item.					
15)	The rate shall be increased by 30% for bearing piles upto depth of 10 M and for further increased in depth by 5 M each, it shall be increased by another 10%. These rates are applicable where raft is not feasible. For pile foundations sulphate resistant cement shall only be used. Single pile for the column is not permitted, group of piles shall be designed with pile cap for each column of ESR.					
16)	The rates are applicable for staging height of 12 M. These rates shall be increased or decreased for per metre variation in this staging height as below					
	12 to 16 M staging - 2% per metre					

Sr. No.	Description	Unit	Rate (Rs.) SSR 2021-22		Rate (Rs.) SSR 2022-2023 Corrigendum No. 8	
			Complete	Labour	Complete	Labour
	16 to 20 M staging - 3% per metre					
	20 M and above - 4% per metre					
	For 17 M staging height, percentage calculation will be like below :					
	12 to 16 M --- $4 \times 2 = 8\%$					
	16 & 17 M --- $1 \times 3\% = 3\%$ Total = 11%					
	For 21 M staging height, percentage calculation will be like below :					
	12 to 16 M --- $4 \times 2 = 8\%$					
	16 to 20 M --- $4 \times 3\% = 12\%$					
	20 & 21 M --- $1 \times 4\% = 4\%$ Total = 24%					
17)	Following rates are for seismic zone III. For zone IV, these rates shall be increased by 5% and for zone II, these rates shall be decreased by 5%. Concerned Executive Engineer shall confirm the seismic zone for the scheme from seismic zones plan before estimation and adopt appropriate rates as per actual seismic zones. (Seismic maps attached in this CSR).					
	Notes					
1)	Conditions from Sr. No. 1 to 11 shall form a part and parcel of the tender and must be included in the draft tender papers for works of R.C.C. E.S.R.					
2)	Conditions from Sr. No. 12 to 17 are for estimation purpose only and shall not appear in the tender.					
	Rates for RCC ESRs					
1)	Upto 25,000 litres	Lit	30.01	10.01	39.02	13.02
2)	Cost of 25,000 litres capacity	Job	750358	250357	975465	325464
3)	Add for capacity above 25,000 upto 50,000 litres	Lit	15.68	4.99	20.39	6.49
4)	Cost of 50,000 litres capacity	Job	1142482	375182	1485227	487737
5)	Add for capacity above 50,000 upto 75,000 litres	Lit	11.07	3.57	14.40	4.64
6)	Cost of 75,000 litres capacity	Job	1419311	464454	1845104	603790
7)	Add for capacity above 75,000 upto 1,00,000 litres	Lit	10.3	8.41	13.40	10.93
8)	Cost of 1,00,000 litres capacity	Job	1676925	674661	2180003	877059
9)	Add for capacity above 1,00,000 upto 1,50,000 litres	Lit	8.13	2.63	10.57	3.42
10)	Cost of 1,50,000 litres capacity	Job	2083287	806296	2708273	1048185
11)	Add for capacity above 1,50,000 upto 2,00,000 litres	Lit	7.4	2.93	9.62	3.80
12)	Cost of 2,00,000 litres capacity	Job	2453410	952599	3189433	1238379
13)	Add for capacity above 2,00,000 upto 2,50,000 litres	Lit	6.56	2.35	8.53	3.06
14)	Cost of 2,50,000 litres capacity	Job	2781462	1070324	3615901	1391421

Sr. No.	Description	Unit	Rate (Rs.) SSR 2021-22		Rate (Rs.) SSR 2022-2023 Corrigendum No. 8	
			Complete	Labour	Complete	Labour
15)	Add for capacity above 2,50,000 upto 3,00,000 litres	Lit	5.94	2.49	7.73	3.24
16)	Cost of 3,00,000 litres capacity	Job	3078655	1195021	4002252	1553527
17)	Add for capacity above 3,00,000 upto 4,00,000 litres	Lit	5.83	2.23	7.58	2.90
18)	Cost of 4,00,000 litres capacity	Job	3661543	1418022	4760006	1843429
19)	Add for capacity above 4,00,000 upto 5,00,000 litres	Lit	5.27	1.93	6.85	2.51
20)	Cost of 5,00,000 litres capacity	Job	4188846	1611238	5445500	2094609
21)	Add for capacity above 5,00,000 upto 7,50,000 litres	Lit	5.13	2.01	6.67	2.62
22)	Cost of 7,50,000 litres capacity	Job	5472126	2114580	7113764	2748954
23)	Add for capacity above 7,50,000 upto 10,00,000 litres	Lit	5.19	2.08	6.75	2.71
24)	Cost of 10,00,000 litres capacity	Job	6769303	2635520	8800094	3426176
25)	Add for capacity above 10,00,000 upto 15,00,000 litres	Lit	4.63	1.78	6.02	2.32
26)	Cost of 15,00,000 litres capacity	Job	9082863	3526225	11807722	4584093
27)	Add for capacity above 15,00,000 upto 20,00,000 litres	Lit	4.25	1.66	5.52	2.16
28)	Cost of 20,00,000 litres capacity	Job	11206530	4357484	14568489	5664729
29)	Add for capacity above 20,00,000 upto 25,00,000 litres	Lit				
30)	Cost of 25,00,000 litres capacity	Job				




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