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GOVERNMENT OF TRIPURA



SCHEDULE OF RATES, 2023 PUBLIC WORKS DEPARTMENT (WATER RESOURCES)

Conserve Water – Save Life.

PREFACE AND FOREWARD

PWD (Water Resources), Tripura is happy to publish the '**Schedule of Rates, 2023 Public Works Department (Water Resources)**'.

The Schedule of Rates (SoR) for Water Resources (WR) works was last published in the year 2020. By this time the rates of labour, materials and usages charges as well as the cost of some materials like petroleum products, electrical and mechanical devices have been increased appreciably. Thus, the revision of Schedule of Rates for WR works has become necessary.

A committee was constituted vide NO.F. 1(10)/CE/PWD/WR(S)/5370-77, dated-23rd February, 2023 for revision of the SoR, 2023 of WR works. The items of this SoR have been analyzed largely based on study of prevailing market rates in the State during August, 2023 and considering the views of stakeholders. The items already available in SoR, 2023 of other Wings of PWD, Tripura requiring for WR works are not included in this SoR of PWD(WR). All the members of the committee have rendered their sincere contribution to formulate this SoR.


I am sure that this SoR, 2023 for WR works will be useful to all concerned.

Further, I do hope that PWD(WR) will continue to get feedback on the application of this SoR, 2023 for WR works so that the Department can look forward to improve the same in future.

Due care has been taken to revise this **Schedule of Rates, 2023 Public Works Department (Water Resources) "SoR, 2023 PWD(WR)"** incorporating some new item of works and materials as per present needs. It is however, possible that some errors/omissions will have crept in. In case any error or omission is noticed, it may be brought to the notice of the Additional Chief Engineer, P&D Unit, PWD(WR), Kunjaban, Agartala.

Suggestions for improvement are always welcome.

Agartala, Tripura
October, 2023


(Er. S. Chakraborty)
Chief Engineer
PWD(Water Resources)
Kunjaban, Agartala.

SCHEDULE OF RATES, 2023

BASIC RATES

**PUBLIC WORKS DEPARTMENT
(WATER RESOURCES)**

BASIC RATES

a. Labour

S.L No	Description/Particulars	Unit	PWD COMMON BASIC RATE
1	Bandhani(Helper)	Day	₹ 391.00
2	Bar Bender	Day	₹ 512.00
3	Belder (Skilled)	Day	₹ 447.00
4	Bhisti/waterman	Day	₹ 391.00
5	Blacksmith(1st Class)	Day	₹ 512.00
6	Blacksmith(2nd Class)	Day	₹ 475.00
7	Carpenter 1st class	Day	₹ 512.00
8	Carpenter 2nd class	Day	₹ 475.00
9	Chowkidar	Day	₹ 391.00
10	Coolie/helper(2nd Class)	Day	₹ 391.00
11	Coolie(Female)	Day	₹ 391.00
12	Coolie(Male)	Day	₹ 391.00
13	Electrician	Day	₹ 475.00
14	Fitter (Gr-I)	Day	₹ 512.00
15	Fitter (2nd class)	Day	₹ 447.00
16	Foreman	Day	₹ 512.00
17	Glazier	Day	₹ 512.00
18	Helper	Day	₹ 447.00
19	Helper(Technician)	Day	₹ 447.00
20	Mason (1st Class)	Day	₹ 512.00
21	Mason (2nd Class)	Day	₹ 475.00
22	Mate	Day	₹ 391.00
23	Mechanic	Day	₹ 699.00
24	Mistry	Day	₹ 475.00
25	Mistry(2nd Class)	Day	₹ 450.00
26	Nozzleman/Gunman	Day	₹ 512.00
27	Ordinary Coolie	Day	₹ 375.00
28	Pump operator	Day	₹ 512.00
29	Painter	Day	₹ 475.00
30	Plumber	Day	₹ 475.00
31	Plumber (Helper)	Day	₹ 450.00
32	Sewer man	Day	₹ 447.00
33	Special machine operator(JDredger/Rig)	Day	₹ 512.00
34	Technician	Day	₹ 850.00
35	Welder	Day	₹ 512.00

Note:

1. The Rates of Labour has been considered as per present Market rate.
2. The rates are exclusive of overhead, contractor's profit, loading & unloading, Stacking, haulage and applicable GST.

BASIC RATES

b. Materials

S.L No	Description/Particulars	Unit	Rate
1	Asbestos Rope as per IS:4687(1995)		
	a) 6 to 8mm thick	Kg	₹ 170.00
	b) 10 to 12mm thick	Kg	₹ 160.00
2	Ball Bearing (TATA/SKF):		
	a) 6206	No	₹ 500.00
	b) 6305	No	₹ 410.00
	c) 6306	No	₹ 480.00
	d) 6308	No	₹ 960.00
	e) 6309	No	₹ 1,150.00
	f) 6310	No	₹ 1,300.00
	g) 6311	No	₹ 2,398.00
	h) 6312	No	₹ 3,000.00
3	Bus Bar 200 Amps (600X450X100mm width copper strips)	No	₹ 4,000.00
4	Capacitor (ISI marked):		
	a) 12.5 KVAR Power capacitor	No	₹ 4,200.00
	b) 15.0 KVAR Power capacitor	No	₹ 5,200.00
	c) 20.0 KVAR Power capacitor	No	₹ 9,000.00
	d) 25.0 KVAR Power capacitor	No	₹ 11,250.00
	e) 30.0 KVAR Power capacitor	No	₹ 13,500.00
5	Casing ring as per IS: 6595		
	a) 150 mm dia		
	i) 8 mm thick	No	₹ 950.00
	ii) 10 mm thick	No	₹ 1,500.00
	b) 200 mm dia		
	i) 8 mm thick	No	₹ 2,400.00
	ii) 10 mm thick	No	₹ 2,800.00
6	Centrifugal Pump & Motor as per IS: 6595		
	a) 60LPS with 22 m head	Set	₹ 1,67,800.00
7	Circuit board for Osco starter of Backelite make	No.	₹ 1,400.00
8	CI coupling of centrifugal pump as per IS: 6595		
	a) 150 mm dia.	Pair	₹ 1,800.00
	b) 190 mm dia.	Pair	₹ 2,500.00
	c) 225 mm dia.	Pair	₹ 3,000.00
9	CI coupling of Diversion/ Barrage	No	₹ 12,000.00
10	CI foot valve weight (125/150mm dia)	No	₹ 350.00
11	CI foot valve ring (125/150mm dia)	No	₹ 450.00
12	CI foot valve net (125/150 mm dia).	No	₹ 1,180.00
13	CI tail piece:		
	a) 150 mm dia.	No	₹ 1,000.00
	b) 125 mm dia.	No	₹ 775.00
14	Control Relay for AC Control Std. Coil Voltage 24, 110, 240, 415V, 50Hz		
	a) MX0 13E (Cat. No. CS94043)	No	₹ 1,620.00

S.L No	Description/Particulars	Unit	Rate
15	Copper Cable (PVC insulated)		
	a) 7/16 copper wire	mtr	₹ 180.00
	b) 1 sqmm Multistrand wire	mtr	₹ 13.50
16	Copper Strip for Busbar (500X50X5mm)	No.	₹ 650.00
17	Cork Mastic Filler	Sqm.	₹ 1,615.00
18	Cotton (waste)	Kg	₹ 100.00
19	Coupling Nut with Washer/bush		
	a) For LI	No.	₹ 50.00
	b) For HPLI	No.	₹ 70.00
20	Coupling Washer/bush		
	a) For LI	No.	₹ 30.00
	b) For HPLI	No.	₹ 40.00
21	DIN Type Fuse Links Type HN (200A)		
	a) Suitable for Type FN 400/ FNX 400 S-D-F & for HB 800 Fuse base (Cat. No. SF94332)	No	₹ 925.00
22	Electronics Timer Type ST100	No	₹ 1,600.00
23	Fan for 20/25 HP Horizontal Motor	No	₹ 750.00
24	Foot valve leather washer (6mm Thick)		
	a) 125mm	No	₹ 220.00
	b) 150 mm	No	₹ 360.00
	c) 200 mm	No	₹ 600.00
	d) 250 mm	No	₹ 900.00
25	Gasket	No	₹ 50.00
26	Gate hoist roller with pin housing	No	₹ 15,000.00
27	GI Flange with washer 40 mm dia	No	₹ 185.00
28	GI Hydrant (50mm X 80mm X 125mm) Medium	No	₹ 900.00
29	GI Pipe Bend (Medium Class)		
	a) 200 mm dia	No	₹ 1,900.00
	b) 250 mm dia	No	₹ 2,500.00
	c) 300 mm dia	No	₹ 3,100.00
30	GI Plug (125/150 mm)	No	₹ 300.00
31	GI Wire Crates		
	a) Machine made PVC coated cage chain link type 12/10 SWG GI wire.	Kg	₹ 140.00
	b) 4 mm GI Wire	kg	₹ 120.00
32	Gland IS :(6595)		
	a) For LI	No	₹ 500.00
	b) For HPLI	No	₹ 1,500.00
33	Gland Nut / Stag nut		
	a) For LI	No	₹ 60.00
	b) For HPLI	No	₹ 115.00
34	GM Bush	No.	₹ 3,000.00
35	Grease (all purpose) as per IS 507:1993	Kg	₹ 250.00
36	Gypsum as coagulant	Kg	₹ 12.50

S.L No	Description/Particulars	Unit	Rate
37	Hiring charge of Safety Boat	Day	₹ 480.00
38	Hiring charge of welding machine	day	₹ 1,000.00
39	Horizontal pump motor set (Centrifugal)		
	a) 20 HP mortar with 60 LPS 18 m head pump	No	₹ 1,56,780.00
	b) 25 HP mortar with 60 LPS 22 m head pump	No	₹ 1,67,800.00
	c) 50 HP mortar with 125 LPS 22 m head pump	No	₹ 4,02,540.00
	d) 60 HP mortar with 125 LPS 25 m head pump	No	₹ 4,36,440.00
	e) 75HP mortar with 150 LPS 25 m head pump	No	₹ 5,59,320.00
40	Hydraulic Oil for amphibian dredger	Ltr.	₹ 250.00
41	Impeller / Coupling Key (Stainless Steel)	No	₹ 100.00
42	Kit cut (male & female for main & sub-main switch):		
	a) 63 Amps	No	₹ 350.00
	b) 100 Amps	No	₹ 750.00
	c) 200 Amps	No	₹ 1,500.00
43	Lantern Ring	No	₹ 175.00
44	Motor vernish	Ltr	₹ 500.00
45	MS Flange (10 mm thick)		
	a) 200 mm dia.	No	₹ 650.00
	b) 250 mm dia.	No	₹ 1,100.00
	c) 300 mm dia.	No	₹ 1,450.00
46	MS Nuts & Bolts for all size	Kg	₹ 110.00
47	MS Pulley	No.	₹ 3,000.00
48	MS Tail Piece (Medium Class)		
	a) 80 mm dia	No	₹ 450.00
	b) 100 mm dia	No	₹ 500.00
	c) 125 mm dia	No	₹ 700.00
	d) 150 mm dia	No	₹ 850.00
	e) 200 mm dia	No	₹ 1,350.00
	f) 250 mm dia	No	₹ 1,700.00
	g) 300 mm dia	No	₹ 2,500.00
49	M-Seal - 100 gm	Pkt	₹ 40.00
50	Oil immersed starter for 30 HP (Manually operated)	No	₹ 10,600.00
	a) OSCO / BCH make		
51	Oil Seal of Gate Roller	No	₹ 610.00
52	Oven Jute Geotextile (JGT) pore size (O90) 300 to 400 micron & untreated waight 760 gsm/	Kg	₹ 85.00
53	Over load Coil /Magnet Coil	No	₹ 600.00
54	Poly Ammonium Chloride	Kg	₹ 700.00
55	Petrol	Ltr	₹ 79.59
56	Potash Alum	Kg	₹ 60.00
57	Power contactor (3 pole):		
	a) Type ML1.5	No	₹ 3,810.00
	b) Type ML2.0	No	₹ 5,340.00
	c) Type ML3.0	No	₹ 8,425.00
	d) Type ML4.0	No	₹ 13,770.00
	e) Type ML6.0	No	₹ 21,740.00

S.L No	Description/Particulars	Unit	Rate
58	Pulley Pin	No.	₹ 1,000.00
59	Pump Cooling Pipe	No	₹ 290.00
60	Pump Shaft (For Horizontal Pump)	No	₹ 5,500.00
61	Quick Lime	Kg	₹ 60.00
62	Rope Drum & Pinium Assembly	Set	₹ 1,80,000.00
63	Rubber flange washer (6mm thick):		
	a) 300mm dia	No	₹ 280.00
	b) 250mm dia	No	₹ 230.00
	c) 200mm dia	No	₹ 140.00
	d) 150mm dia	No	₹ 70.00
	e) 125mm dia	No	₹ 50.00
	f) 100mm dia	No	₹ 45.00
	g) 80mm dia	No	₹ 40.00
	h) 65mm dia	No	₹ 35.00
64	Rubber Inersion (3mm thick):		
	a) 300mm dia	Pair	₹ 250.00
	b) 250mm dia	Pair	₹ 200.00
	c) 200mm dia	Pair	₹ 150.00
	d) 150mm dia	Pair	₹ 50.00
	e) 125mm dia	Pair	₹ 45.00
	f) 100mm dia	Pair	₹ 40.00
	g) 80mm dia	Pair	₹ 30.00
65	Rubber Seal with MS Flat and Nut Bolt		
	a) L-shaped	Mtr.	₹ 3,500.00
	b) Flat shaped	Mtr.	₹ 3,100.00
	c) Musical Rubber	Mtr.	₹ 3,500.00
66	Safety Clamp with nuts & bolts		
	a) 80 mm dia	No	₹ 850.00
	b) 100 mm dia	No	₹ 921.00
	c) 125 mm dia	No	₹ 998.00
	d) 65 mm dia	No	₹ 750.00
67	Selector Switch	No	₹ 350.00
68	Shaft Sleeve Bush		
	i) For HPLI		
	a) Cast Iron (CI)	No	₹ 1,200.00
	b) Stainless Steel(SS)	No	₹ 3,000.00
	ii) For LI		
	a) Cast Iron (CI)	No	₹ 450.00
	b) Stainless Steel(SS)	No	₹ 1,450.00
69	Shaft Sleeve Nut / Jam Bush		
	a) Cast Iron (CI)	No	₹ 300.00
	b) Stainless Steel(SS)	No	₹ 600.00
70	Sluice Valve (CIDF)		
	a) 600 mm dia.	No.	₹ 80,000.00

S.L No	Description/Particulars	Unit	Rate
71	Sluice Valve Spindle		
	a) 125 mm dia	No	₹ 1,200.00
	b) 150 mm dia	No	₹ 1,500.00
	c) 200 mm dia	No	₹ 2,500.00
	d) 250 mm dia	No	₹ 4,000.00
72	Spare Coil:		
	a) Type ML1.5	No	₹ 600.00
	b) Type ML2.0	No	₹ 970.00
	c) Type ML3.0	No	₹ 1,350.00
	d) Type ML4.0 & ML6.0	No	₹ 2,600.00
73	Spare Contact Kit:		
	a) Type ML1.5	No	₹ 1,500.00
	b) Type ML2.0	No	₹ 2,000.00
	c) Type ML3.0	No	₹ 5,750.00
	d) Type ML4.0	No	₹ 9,000.00
	e) Type ML6.0	No	₹ 15,800.00
74	Spare parts of Panel of Submersible Pump		
	a) 30A Amps Meter	No	₹ 210.00
	b) 300A Voltmeter	No	₹ 210.00
	c) 2 Pole Contactor	No	₹ 1,525.00
	d) Capacitor	No	₹ 425.00
	e) Green Push Button	No	₹ 170.00
	f) Red Push Button	No	₹ 130.00
	g) 5 Way Connector	No	₹ 130.00
	h) Voltmeter Switch	No	₹ 85.00
	i) Panel Indicator	No	₹ 85.00
	j) Relay (Fixed)	No	₹ 210.00
	k) Overload Relay	No	₹ 765.00
75	Spocket Chain (3/4")	Mtr.	₹ 1,600.00
76	Star Bush		
	a) 150 mm dia	No.	₹ 140.00
	b) 190 mm dia	No.	₹ 170.00
	c) 225 mm dia	No.	₹ 220.00
	d) 300 mm dia	No	₹ 300.00
77	Starter (Osc)/parts.		
	a) Stand finger	No	₹ 250.00
	b) Gola finger	No	₹ 250.00
	c) CT Coil	No	₹ 1,000.00

S.L No	Description/Particulars	Unit	Rate
78	Submersible Pump Motor for DTW:		
77	12.50 LPS 50m head	No.	₹ 54,150.00
b)	15.00 LPS 50m head	No.	₹ 57,030.00
c)	18.50 LPS 50m head	No.	₹ 59,660.00
d)	10.00 LPS 40m head	No.	₹ 45,080.00
e)	12.50 LPS 40m head	No.	₹ 49,150.00
f)	15.00 LPS 40m head	No.	₹ 53,640.00
g)	18.50 LPS 40m head	No.	₹ 58,050.00
h)	25.00 LPS 40m head	No.	₹ 65,170.00
i)	6.50 LPS 30m head	No.	₹ 40,050.00
j)	Column nut	No	₹ 150.00
k)	Coupling	Pair	₹ 1,450.00
l)	Impeller (Brass made)(12.5 to 30 HP)	No	₹ 3,500.00
m)	Impeller Key	No	₹ 60.00
n)	Motor Bush (brass make)	No	₹ 900.00
o)	Neck ring	No	₹ 600.00
p)	Pump Bush (brass make)	No	₹ 450.00
q)	Pump sleeve (Steel)	No	₹ 600.00
r)	Safety Clamp	No	₹ 2,200.00
s)	Sand Guard	No	₹ 1,050.00
t)	Shaft	No	₹ 3,500.00
u)	Thrust bearing with plate	No	₹ 3,000.00
79	Submersible Pump Motor for SBTW:		
a)	2HP 230V 50HZ Borewell Submerssible Pump Set (Lubi Make)	No	₹ 19,822.00
b)	2HP 230V 50HZ Borewell Submerssible Pump Set (Crompton Make)	No	₹ 22,593.00
c)	3HP 230V 50HZ Borewell Submerssible Pump Set (Lubi Make)	No	₹ 24,432.00
d)	3HP 230V 50HZ Borewell Submerssible Pump Set (Crompton Make)	No	₹ 29,661.00
e)	2HP Submerssible Panel (Lubi Make)	No	₹ 4,406.00
f)	2HP Submerssible Panel (C&S Make)	No	₹ 5,313.00
g)	3HP Submerssible Panel (Lubi Make)	No	₹ 5,381.00
h)	3HP Submerssible Panel (C&S Make)	No	₹ 6,254.00
i)	32A DP Main Switch (C&S Make)	No	₹ 2,347.00
80	Tar Paper	Sqm.	₹ 215.00
81	Terminal Plate for 20/25 HP Horizontal Motor	No	₹ 700.00
82	Thermal Timers Type GT 200		
	Operating Voltages 230/250V, 400/440V, 500V 50Hz for 5-18 secs. Range.	No.	₹ 2,800.00
83	Thermal Overload Relay (range 20-32 & 28-42)	No	₹ 1,800.00

S.L No	Description/Particulars		Unit	Rate
84	Thrust Bearing (SKF 222/9C)		No	₹ 9,500.00
85	Transformer Oil		Ltr	₹ 120.00
86	U Bolt and Nut			
	a)	12 mm	No	₹ 80.00
	b)	16 mm	No	₹ 120.00
	c)	20 mm	No	₹ 500.00
87	UPVC Pipe (4.00 Kg/Cm²) pressure			
	a)	90 mm dia.	Mtr.	₹ 180.00
	b)	110 mm dia.	Mtr.	₹ 255.00
	c)	125 mm dia.	Mtr.	₹ 360.00
	d)	140 mm dia.	Mtr.	₹ 440.00
	e)	160 mm dia.	Mtr.	₹ 570.00
	f)	200 mm dia.	Mtr.	₹ 910.00
	g)	250 mm dia.	Mtr.	₹ 1,450.00
	h)	315 mm dia.	Mtr.	₹ 2,240.00
88	Wire Rope			
	a)	10 mm thick	Mtr.	₹ 150.00
	b)	12 mm thick	Mtr.	₹ 200.00
	c)	16 mm thick	Mtr.	₹ 350.00
	d)	20 mm thick	Mtr.	₹ 650.00
89	Z-Type Sheet Piles as per IS 2314(1986).		mtr	₹ 6,250.00

SCHEDULE OF RATES, 2023

CHAPTER – 1 **PIPELINE**

PUBLIC WORKS DEPARTMENT
(WATER RESOURCES)

CHAPTER-1

PIPELINE

Item No.	Brief Description of item	Unit	Rate
1.1	Providing and fitting fixing of different dia rigid UPVC unequal Tee (including earth cutting & backfilling all socketted) suitable for pipes as per IS specification of working pressure 4.0 kg/sq.cm confirming to IS: 10124 (part-V) as per CPWD Specification & direction of Engineer-in-charge.		
	Unequal Tee		
1.1.1	315x315x250 mm dia	No.	₹ 4,443.50
1.1.2	315x315x200 mm dia	No.	₹ 3,844.73
1.1.3	315x315x160 mm dia	No.	₹ 3,572.16
1.1.4	315x315x140 mm dia	No.	₹ 3,452.94
1.1.5	315x315x110 mm dia	No.	₹ 2,819.89
1.1.6	315x315x90 mm dia	No.	₹ 3,182.64
1.1.7	250x250x200 mm dia	No.	₹ 2,945.63
1.1.8	250x250x160 mm dia	No.	₹ 2,718.01
1.1.9	250x250x140 mm dia	No.	₹ 2,464.64
1.1.10	250x250x110 mm dia	No.	₹ 2,378.10
1.1.11	250x250x90 mm dia	No.	₹ 2,304.84
1.1.12	200x200x160 mm dia	No.	₹ 2,134.16
1.1.13	200x200x140 mm dia	No.	₹ 1,950.46
1.1.14	200x200x110 mm dia	No.	₹ 1,832.66
1.1.15	200x200x90 mm dia	No.	₹ 1,774.76
1.1.16	160x160x140 mm dia	No.	₹ 1,569.78
1.1.17	160x160x110 mm dia	No.	₹ 1,490.83
1.1.18	160x160x90 mm dia	No.	₹ 1,458.82
1.1.19	140x140x110 mm dia	No.	₹ 1,335.19
1.1.20	140x140x90 mm dia	No.	₹ 1,290.66
1.1.21	110x110x90 mm dia	No.	₹ 1,086.32
1.2	Providing and fitting fixing of different dia rigid UPVC equal Tee (including earth cutting & backfilling all socketted) suitable for pipes as per IS specification of Working pressure 4.0 kg/sq.cm confirming to IS: 10124 (Part-V) as per CPWD Specification & direction of Engineer-in-charge.		
	Equal Tee		
1.2.1	315x315x315 mm dia	No.	₹ 3,775.02
1.2.2	250x250x250 mm dia	No.	₹ 2,763.53
1.2.3	200x200x200 mm dia	No.	₹ 2,072.13
1.2.4	160x160x160 mm dia	No.	₹ 1,614.06
1.2.5	140x140x140 mm dia	No.	₹ 1,345.29
1.2.6	110x110x110 mm dia	No.	₹ 1,125.59
1.2.7	90x90x90 mm dia	No.	₹ 1,012.70

Item No.	Brief Description of item	Unit	Rate
1.3	Providing and fitting fixing rigid UPVC Reducing socket (one size lower at one end, both end socketted) suitable for pipes of Working pressure 4.0 kg/sq.cm. as per CPWD Specification & direction of Engineer-in-charge.		
1.3.1	315x250 mm dia	No.	₹ 2,100.50
1.3.2	250x200 mm dia	No.	₹ 1,532.87
1.3.3	200x160 mm dia	No.	₹ 1,157.30
1.3.4	160x140 mm dia	No.	₹ 888.49
1.3.5	140x110 mm dia	No.	₹ 731.31
1.3.6	110x90 mm dia	No.	₹ 597.61
1.4	Providing & fitting fixing rigid UPVC bend(30 degree,45 degree,60 degree, 90 degree) for UPVC pipes as per IS specification of Working pressure 4.0 kg/sq.cm as per CPWD Specification & direction of Engineer-in-charge.		
1.4.1	315 mm dia	No.	₹ 5,632.94
1.4.2	250 mm dia	No.	₹ 3,947.12
1.4.3	200 mm dia	No.	₹ 2,760.68
1.4.4	160 mm dia	No.	₹ 1,434.49
1.4.5	140 mm dia	No.	₹ 1,249.54
1.4.6	110 mm dia	No.	₹ 940.88
1.4.7	90 mm dia	No.	₹ 838.59
1.5	Dismantalling of existing PVC pipe from underground including necessary earth cutting etc.and dismantalled pipes,couplers,tees,etc properly stacking in safe site as per CPWD Specification & direction of Engineer-in-charge.		
	a) Pipes,cables etcexceeding 75 mm dia but not exceeding 315 mm dia.	Mtr.	₹ 211.81
1.6	Labour charge for laying different dia rigid UPVC pipes of Working Pressure 4.0 kg/ sq.cm. complete with necessary coupler and solvent cement joints.(pipes, coupler and solvent cement will be issued free of cost) as per CPWD Specification & direction of Engineer-in-charge.		
1.6.1	90 mm dia	Mtr.	₹ 14.53
1.6.2	110 mm dia	Mtr.	₹ 14.81
1.6.3	140 mm dia	Mtr.	₹ 15.23
1.6.4	160 mm dia	Mtr.	₹ 15.52
1.6.5	200 mm dia	Mtr.	₹ 18.92
1.6.6	250 mm dia	Mtr.	₹ 19.06
1.6.7	315 mm dia	Mtr.	₹ 25.06
1.7	Providing and fitting fixing of G.I hydrant suitable for PVC pipes as per standard specification complete as per direction of Engineer-in-charge (Rate excluding the cost of NTP control valve). 80X50 mm dia		
		No.	₹ 2,864.55

Item No.	Brief Description of item	Unit	Rate
1.8	Providing & fitting fixing MS tail piece with MS flange suitable for pipes complete as per CPWD Specification & direction of Engineer-in-charge.		
1.8.1	80 mm dia PVC Pipe	No.	₹ 759.11
1.8.2	100 mm dia PVC Pipe	No.	₹ 830.24
1.8.3	125 mm dia PVC Pipe	No.	₹ 1,121.88
1.8.4	150 mm dia PVC Pipe	No.	₹ 1,348.59
1.8.5	200 mm dia PVC Pipe	No.	₹ 2,074.13
1.8.6	250 mm dia PVC Pipe	No.	₹ 2,572.06
1.8.7	300 mm dia PVC Pipe	No.	₹ 3,710.17
1.9	Providing and laying different dia rigid UPVC pipes of Working Pressure 4.0 kg/ sq.cm. complete with necessary coupler and solvent cement as per CPWD Specification & direction of Engineer-in-charge.		
1.9.1	90 mm dia	Mtr.	₹ 272.69
1.9.2	110 mm dia	Mtr.	₹ 380.54
1.9.3	140 mm dia	Mtr.	₹ 646.30
1.9.4	160 mm dia	Mtr.	₹ 826.43
1.9.5	200 mm dia	Mtr.	₹ 1,313.52
1.9.6	250 mm dia	Mtr.	₹ 2,081.88
1.9.7	315 mm dia	Mtr.	₹ 3,211.76
1.10	Providing and fitting fixing of M.S shore manifold made with 3mm thick MS sheet of size one way 315 mm dia & three way 125 mm dia made with suitable flange(all end) including coating with steel primer(tailpiece if required will be paid separately) including proper alignment with pipe line & earth cutting, backfilling complete as per direction of Engineer-in-charge.		
		No.	₹ 19,892.74
1.11	Labour charge for repairing of leakage in existing UPVC distribution system including required earth cutting and fitting fixing of necessary coupler etc. complete and refilling the trench with available excavated earth as per direction of the Engineer-in-charge. (Payment of couplers, tees, reducers etc will be made separately)		
1.11.1	315 mm dia	No.	₹ 2,199.87
1.11.2	250 mm dia to 110 mm dia.	No.	₹ 1,360.80
1.11.3	90 mm dia.	No.	₹ 806.08

SCHEDULE OF RATES, 2023

CHAPTER – 2 PUMP HOUSE

**PUBLIC WORKS DEPARTMENT
(WATER RESOURCES)**

CHAPTER-2

PUMP HOUSE

Item No.	Brief Description of item	Unit	Rate
2.1	Providing & fixing of fabricated post made of 100mm dia medium class MS pipe (9.75 kg/mtr) 3.00 mtr long fitted with 3 nos. 75X45X6 mm cleat and 2 nos. 200 X200X10mm gusset plate at top and bottom including cutting making necessary holes in the gusset plates, welding etc. complete (excluding nuts & bolts) as per direction of the Engineer - in- Charge.	No.	₹ 6,311.05
2.2	Fabricating and supplying at site of work, steel tublar trusses of M.S pipe conforming to IS specification, complete with purlin, bracing and other necessary fittings such as cleat gusset plate etc of thickness not less than 6.00 mm including applying a primming coat (two or more coats)as per direction of the Engineer - in- Charge and approved standard design. (Member used in trusses as rafter, bottom tie and purlin are of 40.00 mm dia and struts etc are of 20.00 mm dia and bottom runner are of 25.00 mm dia conforming to IS 1239 part-II /1990 light class) . One set comprising of 4(four) nos trusses with 6(six) nos. purlin and 4.00 mtr span as per approved drawing and design etc complete excluding nuts & bolts.	Kg	₹ 164.54
2.3	Fabricating and supplying at site of work steel tublar trusses of M.S pipe conforming to IS Specification, complete with purlin, bracing and other necessary fittings such as cleat gusset plate etc of thickness not less than 6.00 mm thick including applying a primming coat (two or more coats) as per direction of the Engineer - in- Charge and approved standard design.(Member used in trusses as rafter, bottom tie and purlin are of 40.00 mm dia and struts etc are of 20.00 mm dia and bottom runner are of 25.00 mm dia conforming to IS 1239 part-II /1990 light class) . One set comprising of 3(three) nos trusses with 5(five) nos. purlin and 3.00 mtr span as approved drawing and design etc complete.	Kg	₹ 159.49
2.4	Providing and fitting G.C.I sheet (0.63 mm thick) for walling including Vertical/curved surface fixed with galvanized steel J or L hooks 8 mm diameter, bolts and nuts with bitumen and G.I limpet washers or with G.I. limpet Washers filled with white lead and including a coat of appoved steel primer and two coats of approved paint on overlapping of sheets complete (up to any pitch in horizontal/Verticle or curved surfaces) excluding the cost of G.S. sheet purlins rafters and trusses and including cutting to size and shape wherever required as per direction of Engineer -in-Charge.	sqm	₹ 773.09

SCHEDULE OF RATES, 2023

CHAPTER – 3 INSTALLATION

**PUBLIC WORKS DEPARTMENT
(WATER RESOURCES)**

Chapter 3 Installation

Item No.	Brief Description of Item	Unit	Rate
3.1	Dismantling of pump for over hauling including greasing, gland packing, necessary repairs & reinstallation of the same including trial run for 10 hrs. in two spell complete as per direction of the Engineer-in-Charge.		
3.1.1	For LI	No.	₹ 2,106.92
3.1.2	For HPLI	No.	₹ 2,742.84
3.2	Dismantling of horizontal pump and motor of 20/25 HP from the base and carrying the pump set to the nearest workshop for repairing the body thread of stag nut and carrying the same to the scheme and fitting fixing the pump set as before as per direction of the Engineer-in-charge.	No.	₹ 4,247.99
3.3	Supplying and fitting fixing of asbestos rope of best quality as per direction of Engineer-in-charge.		
3.3.1	6 to 8 mm thick	Kg	₹ 277.20
3.3.2	10 to 12 mm thick	Kg	₹ 262.97
3.4	Supplying and greasing/applying of grease of approved quality as per direction of Engineer-in-charge.	Kg	₹ 426.36
3.5	Supplying and fitting fixing of pump cooling pipe of best quality as per direction of Engineer-in-charge.	No.	₹ 436.61
3.6	Providing & fitting fixing C.I coupling complete with nuts & bolts of approved quality.		
3.6.1	150 mm Ø	pair	₹ 4,014.68
3.6.2	190 mm Ø	pair	₹ 5,010.53
3.6.3	225 mm Ø	pair	₹ 5,721.84
3.7	Providing & fitting fixing coupling nuts & bolts (all Size)of approved quality.		
3.7.1	For LI	No.	₹ 88.12
3.7.2	For HPLI	No.	₹ 116.57
3.8	Providing & fitting fixing coupling rubber bush (All Size)of approved quality.		
3.8.1	For LI	No.	₹ 114.81
3.8.2	For HPLI	No.	₹ 129.03
3.9	Providing & fitting fixing coupling star bush (All Size) of approved quality.		
3.9.1	150 mm dia	No.	₹ 370.74
3.9.2	190 mm dia	No.	₹ 413.42
3.9.3	225 mm dia	No.	₹ 484.55
3.9.4	300 mm dia	No.	₹ 639.12

Item No.	Brief Description of Item	Unit	Rate
3.10	Providing & fitting fixing Pump Shaft of approved quality.	No.	₹ 8,668.12
3.11	Providing & fitting fixing Shaft sleeve bush of approved quality.		
3.11.1	For HPLI		
3.11.1.1	Cast Iron(CI)	No.	₹ 1,939.41
3.11.1.2	Stainless Steel (SS)	No.	₹ 4,500.16
3.11.2	For LI		
3.11.2.1	Cast Iron(CI)	No.	₹ 872.43
3.11.2.2	Stainless Steel (SS)	No.	₹ 2,295.07
3.12	Providing & fitting fixing Shaft sleeve nut of approved quality.		
3.12.1	Cast Iron(CI)	No.	₹ 535.80
3.12.2	Stainless Steel (SS)	No.	₹ 962.59
3.13	Providing & fitting fixing coupling/ impeller Key of approved quality.		
	Stainless Steel	No.	₹ 187.29
3.14	Providing & fitting fixing Casing ring of approved quality.		
3.14.1	150 mm dia		
3.14.1.1	8 mm thick	No.	₹ 1,447.25
3.14.1.2	10 mm thick	No.	₹ 2,229.70
3.14.2	200 mm dia		
3.14.2.1	8 mm thick	No.	₹ 3,510.07
3.14.2.2	10 mm thick	No.	₹ 4,079.13
3.15	Providing & fitting fixing C.I. gland of approved quality.		
3.15.1	For LI	No.	₹ 799.95
3.15.2	For HPLI	No.	₹ 2,256.87
3.16	Providing & fitting fixing Gland nut / Stag nut 100 mm long for gland of approved quality.		
3.16.1	For LI	No.	₹ 112.85
3.16.2	For HPLI	No.	₹ 197.89
3.17	Providing & fitting fixing Lantern Ring for pump of approved quality.	No.	₹ 426.22
3.18	Supply & fitting fixing ball bearing of approved quality for pump required during overhauling.		
3.18.1	6206 Ball bearing (TATA /SKF)	No.	₹ 888.58
3.18.2	6305 Ball bearing (TATA /SKF)	No.	₹ 760.54
3.18.3	6306 Ball bearing (TATA /SKF)	No.	₹ 860.13
3.18.4	6308 Ball bearing (TATA /SKF)	No.	₹ 1,542.99
3.18.5	6309 Ball bearing (TATA /SKF)	No.	₹ 1,813.29
3.18.6	6310 Ball bearing (TATA /SKF)	No.	₹ 2,026.69
3.18.7	6311 Ball bearing (TATA /SKF)	No.	₹ 3,697.43
3.18.8	6312 Ball bearing (TATA /SKF)	No.	₹ 4,689.72

Item No.	Brief Description of Item	Unit	Rate
3.19	Supplying & fitting fixing of GI Pipe bend (medium class) of approved quality.		
3.19.1	200 mm dia	No.	₹ 3,547.91
3.19.2	250 mm dia	No.	₹ 4,513.24
3.19.3	300 mm dia	No.	₹ 5,478.57
3.20	Providing & fitting fixing M.S flange at site of work of approved quality.		
3.20.1	200 mm dia (12 mm thick)	No.	₹ 1,244.84
3.20.2	250 mm dia (12 mm thick)	No.	₹ 1,926.68
3.20.3	300 mm dia (14 mm thick)	No.	₹ 2,480.47
3.21	Providing & fitting fixing Rubber flange washer 6 mm thick at site of work of approved quality.		
3.21.1	300 mm dia	No.	₹ 440.98
3.21.2	250 mm dia	No.	₹ 369.85
3.21.3	200 mm dia	No.	₹ 241.81
3.21.4	150 mm dia	No.	₹ 142.23
3.21.5	125 mm dia	No.	₹ 113.78
3.21.6	100 mm dia	No.	₹ 106.66
3.21.7	80 mm dia	No.	₹ 99.55
3.21.8	65 mm dia	No.	₹ 85.61
3.22	Providing & fitting fixing C.I tail piece of approved quality at site of work.		
3.22.1	150 mm dia	No.	₹ 1,587.52
3.22.2	125 mm dia	No.	₹ 1,267.43
3.23	Providing & fitting fixing foot valve leather washer (6 mm thick) of heavy duty at site of work of approved quality.		
3.23.1	125 mm dia	No.	₹ 418.16
3.23.2	150 mm dia	No.	₹ 617.33
3.23.3	200 mm dia	No.	₹ 981.50
3.23.4	250 mm dia	No.	₹ 1,431.03
3.24	Providing & fitting fixing C.I foot valve spare parts of 125/150 mm dia at site of work of approved quality.		
3.24.1	C.I foot valve weight	No.	₹ 594.59
3.24.2	C.I foot valve ring	No.	₹ 736.85
3.24.3	C.I foot valve net	No.	₹ 1,775.38
3.25	Dismantling of old pump/motor from base & stacking of materials & return the same to Sub-Divisional store as per direction of the Engineer-in-Charge.	No.	₹ 2,280.49
3.26	Dismantling of G.I pipe including necessary earth cutting etc. & return the same to Sub-Divisional store as per direction of the Engineer-in-Charge.		
	125/150 mm dia	mtr.	₹ 200.54

Item No.	Brief Description of Item	Unit	Rate
3.27	Dismantling of G.I bend including necessary earth cutting etc. & return the same to Sub-Divisional store as per direction of the Engineer-in-Charge. 125/150 mm dia	No.	₹ 391.77
3.28	Installation of pump motor set including carriage of materials from Departmental store yard to site of work and making necessary electrical connection with main switch / starter with motor in/c commissioning & trial run for 10hrs. in two spell as per direction of the Engineer-in-charge.	No.	₹ 3,835.43
3.29	Providing and Installation of Horizontal pump motor set (Centrifugal) with allied equipments by maintaining proper level/slope, alignment etc. in/c all necessary nuts & bolts, washers etc. at site of work and making necessary electrical connection with main switch / starter with motor in/c commissioning & trial run for 10hrs. in two spell as per direction of the Engineer-in-charge.		
3.29.1	20 HP mortar with 60 LPS 18 m head pump	No.	₹ 2,27,530.80
3.29.2	25 HP mortar with 60 LPS 22 m head pump	No.	₹ 2,43,208.26
3.29.3	50 HP mortar with 125 LPS 22 m head pump	No.	₹ 5,78,132.47
3.29.4	60 HP mortar with 125 LPS 25 m head pump	No.	₹ 6,26,612.37
3.29.5	75HP mortar with 150 LPS 25 m head pump	No.	₹ 8,02,347.10
3.30	Providing and Installation of Submersible Pump Motor for DTW in/c all necessary nuts & bolts, washers, Safety Clamp etc. as per required size with heavy duty chain pulley and block and making necessary electrical connection with main switch / starter with motor in/c commissioning & trial run for 10hrs. in two spell at site of work as per direction of the Engineer-In-Charge.		
3.30.1	12.50 LPS 50m head	No.	₹ 83,618.31
3.30.2	15.00 LPS 50m head	No.	₹ 87,715.50
3.30.3	18.50 LPS 50m head	No.	₹ 91,513.94
3.30.4	10.00 LPS 40m head	No.	₹ 70,599.76
3.30.5	12.50 LPS 40m head	No.	₹ 76,505.13
3.30.6	15 LPS 40m head	No.	₹ 82,892.76
3.30.7	18.50 LPS 40m head	No.	₹ 89,223.50
3.30.8	25.00 LPS 40m head	No.	₹ 99,561.80
3.30.9	6.50 LPS 30m head	No.	₹ 63,145.15
3.31	Dismantling of motor for vernishing, heating etc. complete in/c reinstallation and making necessary electrical connection with main switch / starter with motor in/c trial run for 10 hrs in two spell complete as per direction of Engineer-in-charge.	No.	₹ 1,439.96
3.32	Providing & fixing G.I. plug of approved quality. 125/150 mm dia	No.	₹ 523.46

Item No.	Brief Description of Item	Unit	Rate
3.33	Labour charge for laying of G.I pipe conforming IS 1161,3589 & 1239 including fitting fixing complete as per direction of Engineer-in-Charge.		
3.33.1	150 mm dia nominal bore (medium)	mtr.	₹ 111.09
3.33.2	125 mm dia nominal bore (medium)	mtr.	₹ 103.86
3.34	Labour charge for fitting fixing of CI sluice valve class-I with cap complete by providing nuts and bolts, 3mm thick rubber insertion etc.(Tail piece if required will be paid separately) (only C.I sluice valve class-I with will be supplied by deptt. at free of cost)		
3.34.1	300 mm dia.	No.	₹ 2,416.35
3.34.2	250 mm dia.	No.	₹ 2,274.08
3.34.3	200 mm dia.	No.	₹ 1,776.40
3.34.4	150 mm dia.	No.	₹ 1,363.95
3.34.5	125 mm dia.	No.	₹ 1,278.59
3.34.6	100 mm dia.	No.	₹ 1,079.54
3.34.7	80 mm dia.	No.	₹ 969.35
3.35	Supplying & fitting fixing of spare parts for 20/25 HP Horizontal motor.		
3.35.1	Motor fan	No.	₹ 1,162.72
3.35.2	Terminal plate	No.	₹ 1,091.59
3.36	Labour charge of lifting of 5,000 to 20,000 GPH water lubricated vertical submersible pump with motor including column assembly upto 100 feet with heavy duty chain pulley and block as per direction of the Engineer-in-charge.	No.	₹ 4,163.35
3.37	Labour charge for lowering & fitting fixing of 5,000 to 20,000 GPH water lubricated vertical submersible pump with motor including column assembly upto 100 feet with heavy duty chain pulley and block and making necessary electrical connection with main switch / starter with motor in/c trial run for 10 hrs in two spell complete as per direction of the Engineer-in-charge.	No.	₹ 4,163.35
3.38	Labour charge for dismantling and overhauling of 5,000 to 20,000 GPH water lubricated vertical submersible pump after taking out shaft etc. including necessary fittings of new & existing submersible materials as per direction of the Engineer-in-charge.	No.	₹ 1,853.70
3.39	Supplying & fitting fixing of spare parts for submersible pump 5 HP to 25 HP of approved quality as per direction of Engineer-in-Charge.		
3.39.1	Impeller of brass make	No.	₹ 5,333.75
3.39.2	Motor bush (Brass make)	No.	₹ 1,471.86
3.39.3	Sand guard	No.	₹ 1,713.71

Item No.	Brief Description of Item	Unit	Rate
3.39.4	Thrust bearing with plate	No.	₹ 4,650.88
3.39.5	Pump bush (Brass make)	No.	₹ 750.16
3.39.6	Safety clamp	No.	₹ 3,362.05
3.39.7	Pump Shaft	No.	₹ 5,837.08
3.39.8	Pump Stainless steel sleeve	No.	₹ 1,045.07
3.39.9	Pump Coupling	pair	₹ 2,417.34
3.39.10	pump neck ring	No.	₹ 963.55
3.39.11	Pump column nut	No.	₹ 260.23
3.39.12	Impeller key	No.	₹ 181.10
3.40	Providing & fitting fixing of pannel board of local teak wood for fitting & fixing of electrical items including 2 nos. MS angle post (Size 50X50X6mm 2.80 Mtr. long) nuts& bolts etc. for errection of the same by 1 : 1.5 : 3 cement concreate casting (1feetX1feetX2feet) below the ground level and painting two or more coats of synthetic enamel paint on primer as per direction of Engineer-in-Charge.		
3.40.1	Size 1.80 X 1.20 X 0.025 mtr.	No.	₹ 7,837.48
3.40.2	Size 1.20 X 1.20 X 0.025 mtr.	No.	₹ 6,372.61
3.41	Dismantling of pannel board by disconnection of all electrical equipments & stacking of materials & return the same to Sub-Divisional store as per direction of the Engineer-in-charge.	No.	₹ 684.29
3.42	Labour charge for reinstallation of all electrical equipments (dismantalled serviceable materials, if any additional/ replacement of electrical equipments required will be paid sepately) on the pannel board including trial run for 10 hrs in two spell complete as per direction of the Engineer-in Charge.	No.	₹ 1,354.35
3.43	Supplying & fitting fixing manually operated oil immerged starter of approved quality.		
	30HP Osco/BCH Make	No.	₹ 15,456.09
3.44	Supplying & filling of Transformer Oil in the oil tank of manually operated oil immerged starter of approved quality.	ltr.	₹ 199.00
3.45	Repairing of OSCO starter including supplying & fixing of necessary spare parts as per direction of Engg.- In - Charge.		
3.45.1	Stand finger	No.	₹ 379.67
3.45.2	Gola finger	No.	₹ 379.67
3.45.3	CT Coil	No.	₹ 1,463.54
3.45.4	Magnet Coil	No.	₹ 894.48
3.45.5	Circuit board for Osco starter of Backelite make	No.	₹ 2,066.38
3.46	Supplying & fitting fixing power capacitor (ISI Marked) of approved quality.		
3.46.1	12.5 KVAr power capacitor	No.	₹ 6,102.22

Item No.	Brief Description of Item	Unit	Rate
3.46.2	15 KVAR power capacitor	No.	₹ 7,524.86
3.46.3	20 KVAR power capacitor	No.	₹ 12,959.03
3.46.4	25 KVAR power capacitor	No.	₹ 16,182.49
3.46.5	30 KVAR power capacitor	No.	₹ 19,417.21
3.47	Providing & fixing 200 Amps busbar of size 600X 450X100 mm with 4 nos. copper strip of size 450X40X4 mm of approved quality.	No.	₹ 5,944.84
3.48	Providing and installation of Copper Strips of 200 Amps busbar by replacing the damaged one with necessary nuts and bolts etc. as per direction of Engg.- In - Charge.	No.	₹ 1,037.81
3.49	Supplying & fitting fixing of PVC insulated Copper Wire with all electrical equipments including trial run etc. complete (ISI Marked) on the pannel board of approved quality.		
3.49.1	7/16 Copper Wire	mtr.	₹ 285.32
3.49.2	1 sqmm Multistrand Wire	mtr.	₹ 30.98
3.50	Supplying and fitting fixing of selector switch on the panel board of approved quality.	No.	₹ 564.31
3.51	Supplying & fitting fixing kit cut for main & sub-main swich (Male & female) as per direction of the Engineer in Charge.		
3.51.1	63 Amps main switch	No.	₹ 529.04
3.51.2	100 Amps main switch	No.	₹ 1,098.10
3.51.3	200 Amps main switch	No.	₹ 2,165.08
3.52	Supplying and fitting fixing of 3 pole power conductors of different type, range from 25-300 AC-3 suitable for Fully Automatic Star Delta type Motor startar L&T , BCH, Havells make as per direction of Engineer-in-Charge.		
3.52.1	Type ML1.5	No.	₹ 5,617.64
3.52.2	Type ML2.0	No.	₹ 7,794.27
3.52.3	Type ML3.0	No.	₹ 12,183.10
3.52.4	Type ML4.0	No.	₹ 19,843.41
3.52.5	Type ML6.0	No.	₹ 31,210.28
3.53	Supplying and fitting fixing of spare contact kit , type ML 1.5/2.0/3.0/ 4.0/6.0 suitable for Fully Automatic Star Delta type Motor startar L&T ,BCH, Havells make as per direction of Engineer-in- Charge.		
3.53.1	Type ML1.5	No.	₹ 2,317.12
3.53.2	Type ML2.0	No.	₹ 3,028.44
3.53.3	Type ML3.0	No.	₹ 8,363.32
3.53.4	Type ML4.0	No.	₹ 12,986.89
3.53.5	Type ML6.0	No.	₹ 22,717.13

Item No.	Brief Description of Item	Unit	Rate
3.54	Supplying and fitting fixing of spare coil, type ML 1.5/2.0/3.0/4.0/6.0 range suitable for Fully Automatic Star Delta type Motor startar L&T ,BCH, Havells make as per direction of Engineer-in- Charge.		
3.54.1	Type ML1.5	No.	₹ 1,036.75
3.54.2	Type ML2.0	No.	₹ 1,563.12
3.54.3	Type ML3.0	No.	₹ 2,103.72
3.54.4	Type ML4.0 & ML6.0	No.	₹ 3,938.33
3.55	Supplying and fitting fixing of Thermal overload Relay, relay range 20-32, & 28-42, directly operated suitable for Fully Automatic Star Delta type Motor startar L&T ,BCH, Havells make as per direction of Engineer-in-Charge.	No.	₹ 2,743.91
3.56	Supplying and fitting fixing of thermal timer type GT 200 (230/250 V, 360 V, 400/440 V, 500 V, 50 Hz for 5-18 secs range) suitable for Fully Automatic Star Delta type Motor startar L&T ,BCH, Havells make as per direction of Engineer-in-Charge.	No.	₹ 4,166.55
3.57	Providing and fitting fixing control relay type MXO-13E cat No.94043 of approved quality as per direction of the Engineer-in-charge.	No.	₹ 2,581.23
3.58	Providing and fitting fixing electronic timer type ET 100 of approved quality as per direction of the Engineer-in-charge.	No.	₹ 2,559.89
3.59	Providing and fitting fixing DIN type fuse links HM 200 volts cat No.94332 Suitable for Type FN 400/ FNX 400 S-D-F & for HB 800 Fuse base (Cat. No. SF94332) of approved quality as per direction of the Engineer-in-charge.	per unit	₹ 1,599.61

SCHEDULE OF RATES, 2023

CHAPTER – 4 DIVERSION, BARRAGE & MI STORAGE

**PUBLIC WORKS DEPARTMENT
(WATER RESOURCES)**

CHAPTER-4

DIVERSION, BARRAGE & MI STORAGE

Item No.	Brief Description of item	Unit	Rate
4.1	Construction of earthen embankment/ dam of MI Storage with semi-pervious material as directed by the authority obtained from borrow pit transporting to site, spreading, grading, breaking clods, spraying of water to obtain maximum dry density (corresponding to OMC) to required slope and compacting to meet required OMC (Optimum Moisture Content) by rolling every layer of 20 cm with sheep foot roller having vibrator of minimum 8 tonne with a lift upto 1.5 m and lead upto 1000 m as per direction of Engineer-in-Charge.		
4.1.1	By mechanical means	cum	₹ 279.73
4.1.2	Mechanical transport upto a distance of 5.00 Km	cum	₹ 66.29
4.2	Construction of earthen core wall for embankment/dam of MI Storage with impervious material of permeability 1×10^{-6} or as directed by the authority obtained from borrow pit transporting to site, spreading, grading, breaking clods, spraying of water to obtain maximum dry density (corresponding to OMC) to required slope and compacting to meet required OMC (Optimum Moisture Content) by rolling every layer of 20 cm with sheep foot roller having vibrator of minimum 8 tonne with a lift upto 1.5 m and lead upto 1000 m as per direction of Engineer-in-Charge.		
		cum	₹ 289.59
4.3	Providing & laying 200 mm thick coarse filter (well graded stone aggregate) including supply of materials complete as per direction of the Engineer - in- Charge.		
4.3.1	Stone aggregate of size 12.50 mm	cum	₹ 7,065.69
4.3.2	Stone aggregate of size 20 mm	cum	₹ 7,043.92
4.4	Providing & laying filter media with jhama brick aggregate of 40 mm down (well graded) as per direction of the Engineer - in- Charge.		
		cum	₹ 5,611.55
4.5	Providing & laying of stone boulder of 200mm & above in different places including compaction as per direction of the Engineer - in- Charge.		
		cum	₹ 4,937.73
4.6	Providing & laying of 1st class brick bats in different places including compaction as per direction of the Engineer - in- Charge.		
		cum	₹ 5,221.11
4.7	Labour charge for fitting & placing thermo-mechanically treated bar /cold twisted deformed steel bar reinforcement in substructure complete as per drawing & MoRT&H technical specification clauses 1600 & 2200.		
		ton	₹ 10,693.53

Item No.	Brief Description of item	Unit	Rate
4.8	Supplying carrying and driving ISPS1021 BZ type sheet piles below foundation in all kinds of soil including sand , silt, stiff clay dry or moist by method of direct driving in original strata including landing , cutting to proper size as per direction including fabricating of junction piles , later piles, corner piles etc as required also including scrapping , painting with one coat of primer and two coats of anti corrosive paints etc. complete as per design drawing specification and direction of the Engineer - in- Charge.	sqm	₹ 23,305.63
4.9	Providing gate made of steel for under sluice / conduits spillway including hoisting arrangement with hoist bridge , platform & supporting system stop log as per direction of Engineer-in - charge.	sqm	₹ 1,97,342.46
4.10	Design, fabrication (including shop & field painting) & supply of fixed wheel gate , guides , wheels, seals , tracks & other embedded parts including hand operated rope drum hoist of suitable capacity and hoist bridge and its supporting structure (including R.S.Joist, Chequered plate for hoist platform etc) and all other materials complete in accordance with the specification as well as relevant I.S. specification and delivery at scheme site as per direction of Engineer-in-charge.	Sqm	₹ 64,022.23
4.11	Erection of steel gate for diversion scheme including all mechanical and other arrangement etc. complete as per direction of the Engineer-in-Charge.	Sqm	₹ 4,436.97
4.12	Providing and fixing 10 mm thick MS sheet flap shutter gate with frame of 50x50x5mm MS angles & vertical brace 25x6mm MS flat and all necessary coat of approved steel primer complete as directed by Engineer-in-charge (Cost of MS angles, MS flat will be paid separately)	kg	₹ 170.62
4.13	Providing cork mastic filter of approved quality of size 400 mm x 100 mm on the top of sheet pile as per approved drawing and direction of the Engineer-in-charge.	mtr	₹ 2,463.08
4.14	Drilling grout hole by rotary type drilling machine of 76mm. to 98mm. bit diameter in foundation of earthen dam for a length below ground level up to 12 meters and starting from the level of 2 meter below ground level and washing/flushing hole with water to remove cutting sludge, clay, mud etc, as per standard specification and as per direction and satisfaction of the Engineer-in-charge.	mtr	₹ 431.56

Item No.	Brief Description of item	Unit	Rate
4.15	Curtain grouting with cement slurry in grout hole of 76mm. dia to 98mm. dia under foundation of earthen dam for a depth below ground level up to 12 meters and starting from the level of 2 meter below ground level as per standard specification and as per direction and satisfaction of the Engineer-in-charge.	bags	₹ 1,511.27
4.16	Supplying and fitting fixing tar paper of approved quality on surrounding of sheet pile as per approved drawing and direction of the Engineer-in-charge.	Sqm	₹ 431.34
4.17	Labour charge for watch on ward for operation of barrage gate oe smooth supply of irrigation water at canal at day or night including removal of all kinds of floating garbage from pond and canals as per direction of the Engineer-in-charge.	Nos	₹ 707.05
4.18	Renovation and Over houlng of old roller of steel sluice gate which are rusted and make them working properly by greasing and oiling with tools and tackles as per direction of Engineer-in-Charge.		
4.18.1	For Barrage	Nos	₹ 14,754.16
4.18.2	For Diversion	Nos	₹ 9,957.02
4.19	Fabrication, supply and fitting fixing of gate roller with pin housing in proper position at suitable interval and also make the roller hole in position of gate by gas cutting and fitting additional plate as required including necessary scaffolding, consumables, labour etc for barrage gate as per the direction of Engineer-in-Charge.	Nos	₹ 25,518.76
4.20	Supplying fitting fixing of thrust bearing (SKF 222/9C) including bearing cover, oil seal of gate roller as per sample including necessary scaffolding, consumables, labour etc for barrage gate as per direction of the Engineer-in-charge.	Nos	₹ 16,362.91
4.21	To open out existing old rubber seals and covering plate from barrage gate by cutting bolts and nuts where necessary as per direction of the Engineer-in-Charge.	Mtr	₹ 476.11
4.22	Supplying, fitting fixing at site new rubber seals for barrage gate and fixing them with new bolts, nuts and washer and punching necessary tubes in rubber seals with new covering plate. The new rubber seals are to be proper shape and size, hardwires, staging and scaffolding where necessary as per direction of Engineer-in-charge.		
4.22.1	For Flat Shaped	Mtr	₹ 5,190.28
4.22.2	For 'L' Shaped	Mtr	₹ 5,787.79

Item No.	Brief Description of item	Unit	Rate
4.23	Maintainance of gear boxes and overhauling of them ie. Dismantling of gear, pinion etc. and again fitting fixing the same in position after necessary maintenance as required including change of oil seal if necessary and greasing and mobiling by the contractor's own labour, tools and plants as required as per direction of the Engineer-in-Charge.	Job	₹ 4,398.80
4.24	Repairing and replacement of damaged/ defective parts of guide shoes as required by cutting bolts nuts with special tools and tackles after proper realignment as per direction of the Engineer-in-charge.	Job	₹ 11,142.10
4.25	Realignment of sluice gates with wire rope by adjusting the rope with hoisting machinery and alignment of the gates in the proper line with side seal and gate roller path and fitted the lower position of the rope with the gate hinge and make them working properly neccessary tools and plants and scaffolding etc. complete.	Job	₹ 6,021.74
4.26	Supplying and fitting fixing wire rope of required dia steel coir including 'U' bolts as per direction of the Engineer-in-Charge.	Job	₹ 1,151.20
4.27	Supplying and fitting fixing rope drum and pinion assembly as per direction of the Engineer-in-Charge.	Job	₹ 2,62,021.21
4.28	Supplying and fitting fixing Coupling with G.M Bush, flange etc. as per direction of the Engineer-in-Charge.	Job	₹ 30,282.24
4.29	Intake gate service and stop log, should be checked in both left and right bank repeating over howling of hoist machine, its accessories, old rubber seal will be dismantaled and will be fitted with new rubber seal with new bolts and nuts, washer only manual operation system will be restored.	Job	₹ 19,925.45
4.30	Supplying and fitting fixing MS fabricated hoist supporting structure by fixing, welding, scaffolding etc as per direction of the Engineer-in-Charge.	Sqm	₹ 10,209.96

SCHEDULE OF RATES, 2023

CHAPTER – 5 FLOOD PROTECTION WORKS

**PUBLIC WORKS DEPARTMENT
(WATER RESOURCES)**

CHAPTER-5

FLOOD PROTECTION WORKS

Item No.	Brief Description of item	Unit	Rate
5.1	Supplying carrying and laying of inverted filter in slope of river banks below C.C . Blocks including preparation of subgrade etc.(Jhama aggregate of different sizes upto 40mm) as per drawing and direction of Engineer -in- charge.	Cum	₹ 6,274.11
5.2	Placing of porcupine in the river bed wherever required including carrying of post from site of manufacture (6 Nos. RCC posts 2mtr /3mtr each for one set) tying with 4 mm G.I wire minimum two knots through end hole of three posts as per drawing and direction of Engg-in-charge.		
5.2.1	For 2.00 mtr post in length	Set	₹ 987.95
5.2.2	For 3.00 mtr post in length	Set	₹ 1,220.48
5.3	Manufacturing of Cement concrete Block with mix 1:4: 8(1 Cement : 4 River sand : 8 Jhama brick aggregate of 40 mm nominal size) including centering & shuttering of size 0.45 m X 0.45 m X 0.30 m and engraving the serial number of each block as per direction of the Engineer - in- Charge.	Cum	₹ 9,365.66
5.4	Manufacturing of Sand Cement Block with mix 1:8(1 Cement : 8 River Sand) of Size 0.45 m X 0.45 m X 0.3 m including the cost of centering and shuttering and placing of polythene sheet at bottom of the block with engraving the serial number of each block as per direction of the Engineer - in- Charge.	Cum	₹ 4,971.76
5.5	Placing of sand cement/cement concrete blocks of size 0.45m X 0.45m X 0.30m in slope of river bank and in river bed including preparation of bed or launching apron as per direction of the Engineer - in- Charge.		
5.5.1	Cement concrete block	No.	₹ 35.48
5.5.2	Sand cement block	No.	₹ 30.69
5.6	Joining of CC Blocks of size 0.45mx 0.45mx 0.30m with 12 mm thick cement mortar 1:6 (1 cement : 6 river sand) to make panels as per drawing and direction of Engineer- in- Charge. in slopes of embankments and River banks etc.	cum	₹ 2,137.00
5.7	Providing & fitting fixing 80 mm dia G.I pipes as weep holes including cutting as per required length etc in the centre portion of each panel of blocks as per direction of Engineer-in-charge.	mtr	₹ 871.60

Item No.	Brief Description of item	Unit	Rate
5.8	Supplying testing and installation of Woven jute Geotextile (JGT) by special water repellant treatment having pore size (O90) 300 to 400 micron & untreated weight of 760 gsm thickness 2 mm width 1000 mm tensile strength 21 KN/mtr(in wrap direction)X21 KN/mtr(in weft direction) strain at break 10%(both in wrap and weft directions) over a prepared bed and providing side lapping of 150mm and horizontal lapping of 250mm duly secured to slope of embankment by U-shaped M.S staples(11gauge) at an interval of 750 mm as per direction of Engineer - in- Charge. The rate is including of preparation of bed and inclusive of all Govt taxes duties cess as leviable transportation from a reputed jute mill at/near Agartala to the work site upto 100km loading & unloading and storage of the material at site etc complete(Payment to be made on the basis of measurement on finished surface)	sqm	₹ 157.00
5.9	Manufacturing & supplying of machine made PVC wire crates chain link type made by S.W.G PVC wire bearing 12/10 SW. GI wire inside the PVC wire, size of cage 1500 mm. X 600 mm. X 450 mm. having square mesh of 80mm. X 80mm. including carrying to the work site as per direction of the Engineer-in charge (Weight of each cage shall not be less than 7.80 kg)	kg	₹ 202.00
5.10	Supplying and stacking mixed class brick bats (50% first class & 50% un-class) including carriage loading & unloading at the site of work complete as per direction of the Engineer-in-charge	cum	₹ 3,420.92
5.11	Labour charge for filling/packing of mixed class brick bats in S.W.G PVC wire crates of size of 1500 mm. X 600 mm. X 450 mm. fastening with SWG GI wire and placing in river bed/slope properly as per direction of the Engg-in-Charge.	No.	₹ 173.30
5.12	Manufacturing & supplying of machine made 4 mm G.I. wire crates chain link type size of cage 1500 mm. X 600 mm. X 450 mm. having square mesh of 80mm. X 80mm. including carrying to the work site as per direction of the Engineer-in charge (Weight of each cage shall not be less than 7.80 kg)	Kg	₹ 142.61

SCHEDULE OF RATES, 2023

CHAPTER – 6 MISCELLANEOUS

**PUBLIC WORKS DEPARTMENT
(WATER RESOURCES)**

CHAPTER-6 MISCELLANEOUS

Item No.	Brief Description of item	Unit	Rate
6.1	Desilting of Lake/river etc. by using contractor's Amphibian dredger machine, having capacity of the dredger of minimum 67.2 cum per hour in solid state excluding isolated bolder and hard rock for distance of 600.0 mtr. from lake/river bank and de-silted soil to be dumped at suitable place for making road, Islands etc. as per direction of the Engineer-in-charge.	Cum	₹ 294.43
6.2	Desilting of Lake/river etc. by departmental dredger machine, Amphibian dredger Water Master Classic-IV having capacity of the dredger 67.2 cum of solids per hour for distance of 600.0 mtr. (as per Water Master operational manual) in/c operation and running maintainance of the dredger and de-silted soil to be dumped at suitable place for making road, Islands etc. as per direction of the Engineer-in-charge. (volume of dumped soil to be determined by pre-measurement at dumping place.)	Cum	₹ 207.25
6.3	Supplying and spreading of coagulant including formulation of lime, gypsum, potash alum, bentonite clay, polyalumunium chloride during dredging operation at Lake/river etc. as per direction of the Engineer-in-charge.	kg	₹ 184.15
6.4	Pumping of water from river / cherra bed/ trench/pit by the pump set of capacity 4000 lts/hr including the cost of service of operating staff and supply of lubricant oil etc complete as per direction of Engg-in-charge	Hour	₹ 498.37
6.5	Hiring charge of welding set of single phase with operating staff and carrying upto the site of work including loading and unloading (both way) complete as per direction of Engineer-in-charge.	Per day	₹ 3,637.68
6.6	Preparation of sub-grade & side slope for canal lining section with compaction of bed & side slope by wooden or steel rammers of minimum 10kg weight in/c making profile as per approved drawing & lining the same with first class bricks of flat with cement mortar 1:3 (1 cement : 3 river sand) with joint finished smooth an under layer of 6 mm thick cement mortar 1:5 (1 cement: 5 river sand) as per approved drawing & curing the same in/c balling out water when ever required with all lead & lift complete.	sqm	₹ 1,208.44

Item No.	Brief Description of item	Unit	Rate
6.7	Desilting of earth, silt, garbage, slush and other solid deposits etc. from the existing canal manually to bring it to the required section for smooth flow in the canal including disposal of excavated material outside of the canal with a lead of 50 m. and all lifts including execution of work in or under water, liquid mud and under foul conditions including the cost of taking care of canal section. Dewatering of stagnant or flowing or seepage water/sludge/liquid masonry entering into the canal from any sources as required for satisfactory execution of work including taking out the excavated material outside the canal as per directions of Engineer-in-charge. Disposal of excavated materials, such as earth, silt, garbage, slush and other solid deposits etc. to be deposited & properly levelled over the canal embankment.	cum	₹ 325.90
6.8	Labour charge for lifting of Submersible pump motor set (2HP/3HP) of 70 ft to 100 ft column pipe complete as per direction of the Engineer-in-charge.	Each	₹ 1,468.16
6.9	Labour charge for lowering of Submersible pump motor set (2HP/3HP) at a depth of 70 ft to 100 ft column pipe including fitting fixing nuts & bolts etc complete as per direction of the Engineer-in-charge.	Each	₹ 1,702.90
6.10	Supplying and installation of water lubricated submersible pump having capacity upto 2000 GPH at total head of 45 mtr. Coupled with submersible motor suitable for 240 volts (+10% verification) single phase along with 35 mtr long 2.5sqm, PVC insulated 3 core flat cable conforming to IS code in/c fitting, fixing and lowering 40 mm dia GI pipe upto 100 ft.(30 mtr) etc. complete as per direction of the Engineer-in-charge.		
6.10.1	2HP 230V 50HZ Borewell (Lubi Make)	Each	₹ 51,389.19
6.10.2	2HP 230V 50HZ Borewell (Crompton Make)	Each	₹ 55,331.32
6.10.3	3HP 230V 50HZ Borewell (Lubi Make)	Each	₹ 57,947.54
6.10.4	3HP 230V 50HZ Borewell (Crompton Make)	Each	₹ 65,386.51
6.11	Repairing of single phase motor starter in/c necessary electric wiring as per direction of the Engineer-in-charge.		
6.11.1	30A Amps Meter	Each	₹ 390.51
6.11.2	300A Voltmeter	Each	₹ 390.51
6.11.3	2 Pole Contactor	Each	₹ 2,261.28
6.11.4	Capacitor	Each	₹ 696.38
6.11.5	Green Push Button	Each	₹ 333.61
6.11.6	Red Push Button	Each	₹ 276.70
6.11.7	5 Way Connector	Each	₹ 276.70
6.11.8	Voltmeter Switch	Each	₹ 212.68

Item No.	Brief Description of item	Unit	Rate
6.11.9	Panel Indicator	Each	₹ 212.68
6.11.10	Relay (Fixed)	Each	₹ 390.51
6.11.11	Overload Relay	Each	₹ 1,180.08
6.12	Supplying & fitting fixing of panel box of MS sheet with locking arrangement comprises with starter, main switch, busbar voltmeter, selector switch etc. inside the box with roof for rain water protection and 4(four) noos. stand by CC works in all respect as per direction of the Engineer-in-charge.	Each	₹ 7,471.62
6.13	Servise connection of SBTW Scheme within 35mtr length from LT line by providing all necessary materials as per direction of the Engineer-in-charge.	Each	₹ 8,774.11
6.14	Supplying & fitting fixing of single phase motor starter/panel unit (with 2 pole contactor, overload relay, volt meter & amps meter), 32 amps main switch (220 volt) of Havels/ BCH/L&T make in KIOSK including necessary electric wiring and GI pipe earthing etc. complete as per direction of the Engineer-in-charge. For 3 HP submersible motor.	Each	₹ 7,751.66



Conserve Water – Save Life