"SAVE WATER "

Office of Chief Engineer (Technical) and TM, RWSSMB
Public Health Engineering Department,
Jal Bhawan, 2, Civil Lines, Jacob Road, Jaipur
Tel: 0141-2222342
Email: rj_tm@nic.in

No. CE(TM)/D&S/EE-II/F-22/2023-24-00441 Dt.:

OFFICE ORDER

Sub:- **Revised PHED BSR 2023 exclusive of GST.**

Ref :- Finance (Financial Rules) Department Circular No. P.4 (9) Finance/ GF&AR / 2026 dated 23.03.2026.

The revised PHED Basic Schedule of Rates (BSR) 2023, was issued by this office vide office order Rajkaj Ref. No. 4242951 dated 10.07.2023. All items of this BSR are inclusive of GST.

Finance (Financial Rules) Department vide their circular no P.4 (9) Finance/ GF&AR / 2026 dated 23.03.2026, issued direction regarding preparation and issuance of BSRs exclusive of GST and upload the same on IFMS 3.0.

Accordingly, in compliance of direction of Finance Department, the revised PHED BSR 2023 has been amended by exclusion **of GST**, keeping basic rates same as originally issued BSR on dated 10.07.2023.

1. This order shall come into force with effect from **01.04.2026.**

2. From 01.04.2026 onwards, all estimates for A&F and Technical sanction shall be prepared strictly on the basis of BSR exclusive of GST. The GST applicable at the time of preparing estimate shall be added accordingly.

Enclosed: FD circular dated 23.03.2026.
Revised PHED BSR 2023 exclusive of GST.

(Neeraj Mathur)
Chief Engineer (Technical) and
TM, RWSSMB, PHED, Raj. Jaipur

Signature Not Verified

Digitally signed by Neeraj Mathur
Designation : Chief Engineer
Date: 2026.04.06 19:05:19 IST
Reason: Approved

RajKaj Ref No.: 21403386

No. CE(TM)/D&S/EE-II/F-22/2023-24-00441 Dt.:

Copy to following:

1. SA to Hon'ble Minister, PHED, Govt. of Rajasthan, Jaipur.
2. PS to Principal Secretary, PHED, Govt. of Rajasthan, Jaipur.
3. Secretary (Budget), Finance Department, GOR, Jaipur.
4. Mission Director, JJM, PHED, Rajasthan, Jaipur.
5. Chief Engineer & Additional Secretory, PHED Rajasthan, Jaipur.
6. Chief Engineer (U&NRW), PHED, Jaipur (Nodal Officer) with request to upload the revised PHED BSR 2023 (exclusive of GST) on IFMS 3.0 as per directions of Finance Department.
7. Chief Engineer, PHED Jaipur (Rural)/ (JJM)/(U&NRW)/(SP)/(Adm.)/(QC) PHED Jaipur.
8. Chief Engineer, PHED, (P) Jodhpur/ Udaipur/JICA, Jaipur.
9. Additional Director & Ex-Officio Project Director (IFMS), GOR, Jaipur.
10. FA&CAO, RWSSMB/ FA (HQ), PHED, Jaipur.
11. Secretary, RWSSMB, PHED Jaipur.

Chief Engineer (Technical) and
TM, RWSSMB, PHED, Raj. Jaipur

Signature Not Verified

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Designation : Chief Engineer
Date: 2026.04.06 19:05:19 IST
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RajKaj Ref No.: 21403386

PUBLIC HEALTH ENGINEERING DEPARTMENT

Government of Rajasthan

REVISED SCHEDULE OF RATES

YEAR 2023 - 2024

(Exclusive of GST)

(Effective from 01/04/2026)

APPLICABLE FOR

PHED RAJASTHAN WORKS

Issued by:-

Chief Engineer (Tech) & TM.

RWSSMB, PHED, Jaipur

PUBLIC HEALTH ENGINEERING DEPARTMENT

Government of Rajasthan

REVISED PHED BSR 2023

CONTENTS

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(Neeraj Mathur)
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TM, RWSSMB, PHED, Raj. Jaipur

Signature Not Verified

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Designation : Chief Engineer
Date: 2026.04.06 19:05:19 IST
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Chief Engineer (Technical) and
TM, RWSSMB, PHED, Raj. Jaipur

Signature Not Verified

Digitally signed by Neeraj Mathur
Designation : Chief Engineer
Date: 2026.04.06 19:05:19 IST
Reason: Approved

RajKaj Ref No.: 21403386

Chapter 1

Pipe line work

Note : All rates are exclusive of GST.

S. No.	Description	Unit	Rate (Rs.)
	DI PIPES		
1.1	Providing, lowering, laying in trenches, aligning, fixing in position and jointing Ductile Iron (DI) ISI marked **K-7** grade S&S pipes as per IS:8329-2000 (amended up to date), with internal cement mortar lining suitable for potable water with rubber ring (EPDM) joints as per IS: 5382-1985 including transportation and freight charges, inspection charges, loading/ unloading charges, including cost of labour and material, specials (Tee, bend etc.) satisfactory hydraulic testing, disinfection, commissioning etc. complete as per technical specifications and direction of Engineer-in-charge. (excluding earth work) Note : Providing and fixing of all requisite specials as per drawing, design and layout are inclusive in RM measurement of the item and shall not be paid separately. **Rates are exclusive of GST.**		
1.1.1	80 mm	RMT	**1193.22**
1.1.2	100 mm	RMT	**1240.68**
1.1.3	150 mm	RMT	**1764.41**
1.1.4	200 mm	RMT	**2164.41**
1.1.5	250 mm	RMT	**2802.54**
1.1.6	300 mm	RMT	**3577.12**
1.1.7	350 mm	RMT	**4355.93**
1.1.8	400 mm	RMT	**5312.71**
1.1.9	450 mm	RMT	**6269.49**
1.1.10	500 mm	RMT	**7487.29**
1.1.11	600 mm	RMT	**9799.15**
1.1.12	700 mm	RMT	**13172.88**
1.1.13	800 mm	RMT	**16851.69**
1.1.14	900 mm	RMT	**20661.86**
1.1.15	1000 mm	RMT	**24853.39**

S. No.	Description	Unit	Rate (Rs.)
1.2	Providing, lowering, laying in trenches, aligning, fixing in position and jointing Ductile Iron (DI) ISI marked **K-9** grade S&S pipes as per IS:8329-2000 (amended up to date), with internal cement mortar lining suitable for potable water with rubber ring (EPDM) joints as per IS: 5382-1985 including transportation and freight charges, inspection charges, loading/ unloading charges, including cost of labour and material, specials (Tee, bend etc.) satisfactory hydraulic testing, disinfection, commissioning etc. complete as per technical specifications and direction of Engineer-in-charge. (excluding earth work) Note : Providing and fixing of all requisite specials as per drawing, design and layout are inclusive in RM measurement of the item and shall not be paid separately. **Rates are exclusive of GST.**		
1.2.1	100 mm	RMT	**1415.25**
1.2.2	150 mm	RMT	**2020.34**
1.2.3	200 mm	RMT	**2573.73**
1.2.4	250 mm	RMT	**3399.15**
1.2.5	300 mm	RMT	**4317.80**
1.2.6	350 mm	RMT	**5251.69**
1.2.7	400 mm	RMT	**6377.12**
1.2.8	450 mm	RMT	**7612.71**
1.2.9	500 mm	RMT	**8918.64**
1.2.10	600 mm	RMT	**11657.63**
1.2.11	700 mm	RMT	**14895.76**
1.2.12	800 mm	RMT	**18237.29**
1.2.13	900 mm	RMT	**22184.75**
1.2.14	1000 mm	RMT	**26815.25**
1.2.15	1100 mm	RMT	**32112.71**
1.2.16	1200 mm	RMT	**37314.41**
1.3	Providing, lowering, laying, aligning, fixing in position and jointing at all level/ depths DI standard specials with rubber ring (EPDM)/ nut bolt and insertion sheet and jointing as per IS: 9523-2000 or as amended up to date, such as tees, bends, tapers, caps etc. within trenches in DI pipe line complete including all material, labour, testing and commissioning along with pipe line as per technical specifications and direction of Engineer-in-charge (excluding earth work). **Rates are exclusive of GST.**		
1.3.1	**All End Socketed**		
1.3.1.1	Up to 300 mm Diameter	Kg	**122.88**
1.3.1.2	Above 300mm and up to 600 mm diameter	Kg	**136.44**
1.3.1.3	Above 600 mm diameter	Kg	**175.42**
1.3.2	**All End Flanged**		
1.3.2.1	Up to 300 mm Diameter	Kg	**133.90**
1.3.2.2	Above 300mm and up to 600 mm diameter	Kg	**151.69**
1.3.2.3	Above 600 mm diameter	Kg	**199.15**
1.3.3	**Single Flange/ MJ Collar**		

S. No.	Description	Unit	Rate (Rs.)
1.3.3.1	Up to 300 mm Diameter	Kg	**127.97**
1.3.3.2	Above 300mm and up to 600 mm diameter	Kg	**142.37**
1.3.3.3	Above 600 mm diameter	Kg	**185.59**
1.3.4	**Double Flange Pipe (up to 1 mtr. length)**		
1.3.4.1	Up to 300 mm Diameter	Kg	**141.53**
1.3.4.2	Above 300mm and up to 600 mm diameter	Kg	**165.25**
1.3.4.3	Above 600 mm diameter	Kg	**208.47**
	HDPE PIPES		
1.4	Providing, lowering, laying and jointing in trenches, standard lengths **HDPE** ISI marked Pipes as per IS-4984: 1995 (amended up to date) with necessary jointing material like mechanical connectors, i.e. thread/ insert joint/ quick release coupler joint/ compression fitting joint or flanged joint and specials jointing pipe by **electro fusion welding** method , including transportation and freight charges, inspection charges, loading/ unloading charges, stacking of pipes, including cost of labour and material, specials (Tee, bend etc.), satisfactory hydraulic testing, disinfection, commissioning etc. complete as per technical specifications and direction of Engineer-in-charge of following class and diameter. (excluding earth work) . Note : Providing and fixing of all requisite specials as per drawing, design and layout are inclusive in RM measurement of the item and shall not be paid separately. Supply may be in coil or straight length in 6 M/12 M. **Rates are exclusive of GST.**		
1.4.1	**HDPE PE-80 PN-6**		
1.4.1.1	*63 mm dia*	*RMT*	**144.92**
1.4.1.2	75 mm dia	RMT	**183.90**
1.4.1.3	90 mm dia	RMT	**259.32**
1.4.1.4	110 mm dia	RMT	**392.37**
1.4.2	**HDPE PE-100 PN-6**		
1.4.2.1	*63 mm dia*	*RMT*	**122.88**
1.4.2.2	75 mm dia	RMT	**157.63**
1.4.2.3	90 mm dia	RMT	**223.73**
1.4.2.4	110 mm dia	RMT	**374.58**
1.4.3	**HDPE PE-80 PN-10**		
1.4.3.1	90 mm dia	RMT	**380.51**
1.4.3.2	110 mm dia	RMT	**572.03**
1.4.4	**HDPE PE-100 PN-10**		
1.4.4.1	90 mm dia	RMT	**331.36**
1.4.4.2	110 mm dia	RMT	**493.22**

S. No.	Description	Unit	Rate (Rs.)
1.5	Providing, lowering, laying and jointing in trenches, standard lengths **HDPE** ISI marked Pipes as per IS-4984: 1995 (amended up to date) with necessary jointing material like mechanical connectors, i.e. thread/ insert joint/ quick release coupler joint/ compression fitting joint or flanged joint and specials jointing pipe by **butt fusion/ electro fusion** welding method, including transportation and freight charges, inspection charges, loading/ unloading charges, stacking of pipes, including cost of labour and material, specials (Tee, bend etc.), satisfactory hydraulic testing, disinfection, commissioning etc. complete as per technical specifications and direction of Engineer-in-charge of following class and diameter. (excluding earth work). Note : Providing and fixing of all requisite specials as per drawing, design and layout are inclusive in RM measurement of the item and shall not be paid separately. Supply of pipe shall be in straight length in 6/12 M. **Rates are exclusive of GST.**		
1.5.1	**HDPE PE-80 PN-6**		
1.5.1.1	125 mm dia	RMT	**562.71**
1.5.1.2	140 mm dia	RMT	**700.85**
1.5.1.3	160 mm dia	RMT	**882.20**
1.5.1.4	180 mm dia	RMT	**1108.47**
1.5.1.5	200 mm dia	RMT	**1327.97**
1.5.1.6	225 mm dia	RMT	**1678.81**
1.5.2	**HDPE PE-100 PN-6**		
1.5.2.1	125 mm dia	RMT	**485.59**
1.5.2.2	140 mm dia	RMT	**604.24**
1.5.2.3	160 mm dia	RMT	**760.17**
1.5.2.4	180 mm dia	RMT	**953.39**
1.5.2.5	200 mm dia	RMT	**1142.37**
1.5.2.6	225 mm dia	RMT	**1438.14**
1.5.3	**HDPE PE-80 PN-10**		
1.5.3.1	125 mm dia	RMT	**793.22**
1.5.3.2	140 mm dia	RMT	**993.22**
1.5.3.3	160 mm dia	RMT	**1283.05**
1.5.3.4	180 mm dia	RMT	**1598.31**
1.5.3.5	200 mm dia	RMT	**1960.17**
1.5.3.6	225 mm dia	RMT	**2447.46**
1.5.4	**HDPE PE-100 PN-10**		
1.5.4.1	125 mm dia	RMT	**674.58**
1.5.4.2	140 mm dia	RMT	**844.07**
1.5.4.3	160 mm dia	RMT	**1097.46**
1.5.4.4	180 mm dia	RMT	**1377.97**
1.5.4.5	200 mm dia	RMT	**1668.64**
1.5.4.6	225 mm dia	RMT	**2089.83**

S. No.	Description	Unit	Rate (Rs.)
	MS PIPES		
1.6	Manufacturing, supplying ,lowering, laying and jointing in position to correct line spirally welded SAW/Fabricated MS Pipe having bevelled end plates / coils, confirming to IS 3589-2001 or its latest revision/ amendments, for following thickness and inside diameter,including transportation and freight charges, inspection charges, loading/ unloading charges, including cost of labour and material, specials (Tee, bend etc.), field joints, satisfactory hydraulic testing, disinfection, commissioning etc. complete as per technical specifications and direction of Engineer-in-charge; (excluding earthwork, internal lining and outer coating). Note : Providing and fixing of all requisite specials as per drawing, design and layout are inclusive in RM measurement of the item and shall not be paid separately. **Rates are exclusive of GST.**		
1.6.1	**Outer dia of pipe 219.1 mm and thickness**		
1.6.1.1	2.6 mm	RMT	**1377.97**
1.6.1.2	3.2 mm	RMT	**1690.68**
1.6.1.3	4 mm	RMT	**2105.93**
1.6.1.4	4.5 mm	RMT	**2363.56**
1.6.2	**Outer dia of pipe 273 mm and thickness**		
1.6.2.1	3.6 mm	RMT	**2373.73**
1.6.2.2	4 mm	RMT	**2633.05**
1.6.2.3	5 mm	RMT	**3279.66**
1.6.2.4	6.3 mm	RMT	**4111.86**
1.6.3	**Outer dia of pipe 323.9 mm and thickness**		
1.6.3.1	4 mm	RMT	**3131.36**
1.6.3.2	4.5 mm	RMT	**3517.80**
1.6.3.3	5.6 mm	RMT	**4362.71**
1.6.3.4	7.1 mm	RMT	**5505.08**
1.6.4	**Outer dia of pipe 355.6 mm and thickness**		
1.6.4.1	4 mm	RMT	**3442.37**
1.6.4.2	5 mm	RMT	**4290.68**
1.6.4.3	5.6 mm	RMT	**4796.61**
1.6.4.4	7.1 mm	RMT	**6055.93**
1.6.4.5	8 mm	RMT	**6805.93**
1.6.5	**Outer dia of pipe 406.4 mm and thickness**		
1.6.5.1	4 mm	RMT	**3938.98**
1.6.5.2	5 mm	RMT	**4911.86**
1.6.5.3	6.3 mm	RMT	**6169.49**
1.6.5.4	7.1 mm	RMT	**6938.98**
1.6.5.5	8.8 mm	RMT	**8563.56**
1.6.6	**Outer dia of pipe 457 mm and thickness**		
1.6.6.1	4 mm	RMT	**4434.75**
1.6.6.2	5 mm	RMT	**5531.36**
1.6.6.3	6.3 mm	RMT	**6949.15**
1.6.6.4	7.1 mm	RMT	**7817.80**

S. No.	Description	Unit	Rate (Rs.)
1.6.6.5	8.8 mm	RMT	9653.39
1.6.7	**Outer dia of pipe 508 mm and thickness**		
1.6.7.1	5 mm	RMT	6155.08
1.6.7.2	5.6 mm	RMT	6885.59
1.6.7.3	6.3 mm	RMT	7735.59
1.6.7.4	7.1 mm	RMT	8704.24
1.6.7.5	8.8 mm	RMT	10751.69
1.6.7.6	10 mm	RMT	12188.14
1.6.7.7	11 mm	RMT	13380.51
1.6.8	**Outer dia of pipe 610 mm and thickness**		
1.6.8.1	5.8 mm	RMT	8577.12
1.6.8.2	6.3 mm	RMT	9308.47
1.6.8.3	7.1 mm	RMT	10476.27
1.6.8.4	8.8 mm	RMT	12948.31
1.6.8.5	10 mm	RMT	14684.75
1.6.8.6	11 mm	RMT	16126.27
1.6.8.7	12.5 mm	RMT	18279.66
1.6.9	**Outer dia of pipe 711 mm and thickness**		
1.6.9.1	6.3 mm	RMT	10866.10
1.6.9.2	7.1 mm	RMT	12231.36
1.6.9.3	8 mm	RMT	13764.41
1.6.9.4	8.8 mm	RMT	15123.73
1.6.9.5	10 mm	RMT	17156.78
1.6.9.6	11 mm	RMT	18844.92
1.6.9.7	12.5 mm	RMT	21369.49
1.6.10	**Outer dia of pipe 813 mm and thickness**		
1.6.10.1	7.1 mm	RMT	14004.24
1.6.10.2	8 mm	RMT	15761.86
1.6.10.3	8.8 mm	RMT	17320.34
1.6.10.4	10 mm	RMT	19652.54
1.6.10.5	11 mm	RMT	21591.53
1.6.10.6	12.5 mm	RMT	24489.83
1.6.10.7	14.2 mm	RMT	27761.02
1.6.11	**Outer dia of pipe 914 mm and thickness**		
1.6.11.1	8 mm	RMT	17738.98
1.6.11.2	8.8 mm	RMT	19495.76
1.6.11.3	10 mm	RMT	22124.58
1.6.11.4	11 mm	RMT	24310.17
1.6.11.5	12.5 mm	RMT	27579.66
1.6.11.6	12 mm	RMT	26491.53
1.6.11.7	14.2 mm	RMT	31271.19
1.6.12	**Outer dia of pipe 1016 mm and thickness**		
1.6.12.1	8.8 mm	RMT	21692.37
1.6.12.2	10 mm	RMT	24621.19
1.6.12.3	11 mm	RMT	27056.78
1.6.12.4	12.5 mm	RMT	30700.00
1.6.12.5	12 mm	RMT	29486.44
1.6.12.6	14.2 mm	RMT	34816.10
1.6.12.7	16 mm	RMT	39159.32

S. No.	Description	Unit	Rate (Rs.)
1.6.13	**Outer dia of pipe 1067 mm and thickness**		
1.6.13.1	8.8 mm	RMT	**22790.68**
1.6.13.2	10 mm	RMT	**25869.49**
1.6.13.3	11 mm	RMT	**28429.66**
1.6.13.4	12.5 mm	RMT	**32260.17**
1.6.13.5	12 mm	RMT	**30984.75**
1.6.13.6	14.2 mm	RMT	**36588.98**
1.6.13.7	16 mm	RMT	**41155.93**
1.6.14	**Outer dia of pipe 1118 mm and thickness**		
1.6.14.1	8.8 mm	RMT	**23888.98**
1.6.14.2	10 mm	RMT	**27117.80**
1.6.14.3	11 mm	RMT	**29802.54**
1.6.14.4	12.5 mm	RMT	**33820.34**
1.6.14.5	12 mm	RMT	**32482.20**
1.6.14.6	14.2 mm	RMT	**38361.02**
1.6.14.7	16 mm	RMT	**43153.39**
1.6.15	**Outer dia of pipe 1219 mm and thickness**		
1.6.15.1	10 mm	RMT	**29589.83**
1.6.15.2	11 mm	RMT	**32521.19**
1.6.15.3	12.5 mm	RMT	**36910.17**
1.6.15.4	14.2 mm	RMT	**41871.19**
1.6.15.5	16 mm	RMT	**47108.47**
1.6.15.6	17.5 mm	RMT	**51460.17**
1.6.16	**Outer dia of pipe 1321 mm and thickness**	RMT	
1.6.16.1	12.5 mm		**40031.36**
1.6.16.2	14.2 mm	RMT	**45416.10**
1.6.16.3	16 mm	RMT	**51102.54**
1.6.16.4	17.5 mm	RMT	**55828.81**
1.6.16.5	20 mm	RMT	**63682.20**
1.6.17	**Outer dia of pipe 1422 mm and thickness**		
1.6.17.1	12.5 mm	RMT	**43121.19**
1.6.17.2	14.2 mm	RMT	**48926.27**
1.6.17.3	16 mm	RMT	**55057.63**
1.6.17.4	17.5 mm	RMT	**60155.08**
1.6.17.5	20 mm	RMT	**68626.27**
1.6.18	**Outer dia of pipe 1524 mm and thickness**		
1.6.18.1	14.2 mm	RMT	**52471.19**
1.6.18.2	16 mm	RMT	**59051.69**
1.6.18.3	17.5 mm	RMT	**64523.73**
1.6.18.4	20 mm	RMT	**73618.64**
1.6.18.5	22.2 mm	RMT	**81597.46**
1.6.19	**Outer dia of pipe 1626 mm and thickness**		
1.6.19.1	14.2 mm	RMT	**56016.10**
1.6.19.2	16 mm	RMT	**63045.76**
1.6.19.3	17.5 mm	RMT	**68892.37**
1.6.19.4	20 mm	RMT	**78611.86**
1.6.19.5	22.2 mm	RMT	**87139.83**
1.6.20	**Outer dia of pipe 1727 mm and thickness**		
1.6.20.1	14.2 mm	RMT	**59526.27**

S. No.	Description	Unit	Rate (Rs.)
1.6.20.2	16 mm	RMT	**67000.85**
1.6.20.3	17.5 mm	RMT	**73218.64**
1.6.20.4	20 mm	RMT	**83555.93**
1.6.20.5	22.2 mm	RMT	**92627.12**
1.6.21	**Outer dia of pipe 1829 mm and thickness**		
1.6.21.1	14.2 mm	RMT	**63071.19**
1.6.21.2	16 mm	RMT	**70995.76**
1.6.21.3	17.5 mm	RMT	**77587.29**
1.6.21.4	20 mm	RMT	**88548.31**
1.6.21.5	22.2 mm	RMT	**98169.49**
1.6.22	**Outer dia of pipe 2032 mm and thickness**		
1.6.22.1	16 mm	RMT	**78944.92**
1.6.22.2	17.5 mm	RMT	**86281.36**
1.6.22.3	20 mm	RMT	**98484.75**
1.6.22.4	22.2 mm	RMT	**109199.15**
1.6.22.5	25 mm	RMT	**122800.00**
1.6.23	**Outer dia of pipe 2235 mm and thickness**		
1.6.23.1	17.5 mm	RMT	**94976.27**
1.6.23.2	20 mm	RMT	**108422.03**
1.6.23.3	22.2 mm	RMT	**120228.81**
1.6.23.4	25 mm	RMT	**135221.19**
1.6.24	**Outer dia of pipe 2540 mm and thickness**		
1.6.24.1	20 mm	RMT	**123350.85**
1.6.24.2	22.2 mm	RMT	**136800.00**
1.6.24.3	25 mm	RMT	**153883.05**
	Lining and coating on MS pipe		
1.7	Providing and applying **3LPE** (3 Layer Polyethylene) tape coating conforming to ISO 21809-1, DIN 30670-91 or CAN/CSA Z245.20-10 to external surface of M.S. Pipe comprising of a layer of fusion bonded epoxy (FBE), overlaid with PE adhesive with an outer layer of high density polyethylene including preparation of surface by solvent cleaning, abrasive blasting to a finish of Grade 2.5 to DIN EN ISO 8501-1 and surface profile of 50 to 75 microns as per DIN EN ISO 8503-2. Minimum thickness of FBE shall be 250 microns including field joints coating at site complete as per technical specification and direction of Engineer-in-Charge. Minimum thickness of coating shall be 3.0 mm on weld seam as well as remaining surface. **Rates is exclusive of GST.**	SQM	**1039.83**

S. No.	Description	Unit	Rate (Rs.)
1.8	Providing and applying **DFBE** (Dual Layer Fusion Bonded Epoxy) Coating to the external surface of M.S. Pipes conforming to Canadian Standard CSA Z 245.20-10, consisting of 1st layer of (FBE) Fusion Bonded Epoxy powder and 2nd layer also of FBE powder as Abrasion Resistant Overcoat (ARO) including preparation of surface by solvent cleaning, abrasive blasting to a finish of Grade 2.5 to DIN EN ISO 8501 1 and surface profile of 50 to 75 microns as per DIN EN ISO 8503-2 including field joints coating at site complete as per technical specification and direction of Engineer in In charge. Minimum thickness of coating shall be 600 micron **Rates is exclusive of GST.**	SQM	**808.47**
1.9	Providing and applying Spray applied, 100% Solids (Solvent free) Two Component **PU** (Polyurethane) coating as per AWWA C222 Standard on external surface of M.S. Pipe including preparation of pipe outer surface by solvent cleaning, abrasive blasting to a finish of Grade 2.5 to DIN EN ISO 8501-1 and surface profile of 50 to 75 microns as per DIN EN ISO 8503-2 including field joints coating at site complete as per technical specification and direction of Engineer in In charge. Minimum dry film thickness of coating shall be 1000 micron **Rate is exclusive of GST.**	SQM	**722.03**
1.10	Providing and applying with mechanical arrangement 1:3 proportion **cement sand gunite**, of following thickness to M.S. Pipe outer surface under 2.1 Kg per Sqcm to 2.80 Kg per Sqcm. pressure including removing the loose materials as directed by EIC and including scrapping the surface with wire brushes, degreasing, cleaning by compressed air and providing fixing BRC fabric no.14 as reinforcement, curing for 21 days, disposing off the rebound materials with in a lead of 50 mtr including field joints coating at site complete as per technical specification and direction of Engineer in In charge. **Rates are exclusive of GST.**		
1.10.1	25 mm thick	SQM	**461.86**
1.10.2	40 mm thick	SQM	**519.49**
1.11	Providing and applying **polyolifine tape coating** (Cold applied) to external surface of M.S. Pipe as per AWWA C214-14 Standard comprising of liquid adhesive, inner layer tape and outer layer tape including preparation of outer surface of pipe by solvent cleaning, abrasive blasting to a finish of Grade 2.5 to DIN EN ISO 8501-1 and surface profile of 50 to 75 microns as per DIN EN ISO 8503-2 including field joints coating at site complete as per technical specification and direction of Engineer in In charge. **Rate is exclusive of GST.**	SQM	**1155.08**

S. No.	Description	Unit	Rate (Rs.)
1.12	Providing and applying Solvent free, two pack liquid **epoxy lining** to internal surface of M.S. Pipe as per BS 6920:2000 and AWWA C210 standard including preparation of internal surface of pipe by cleaning and abrasive blasting including field joints coating at site complete as per technical specification and direction of Engineer in In charge. Liquid Epoxy shall be NSF/WARS approved for drinking water and minimum thickness of lining shall be 406 microns. **Rates is exclusive of GST.**	SQM	**346.61**
1.13	Providing and applying 100% Solids, Rigid, DTM **Polyurethane lining** to internal surface of M.S. Pipe as per AWWA C222 standard including preparation of internal surface of pipe by cleaning and abrasive blasting including field joints coating at site complete as per technical specification and direction of Engineer in In charge. Polyurethane Coating shall be NSF/WARS/SS-375 approved for drinking water and minimum thickness of lining shall be 500 microns. **Rates is exclusive of GST.**	SQM	**544.92**
1.14	Providing and making inner **cement mortar lining** to M.S. Pipes with mechanical devices in cement mortar 1:1 proportion , including cost of all materials, labour, special sand required, machinery, power generation, all equipments, including carrying out "C" value performance test of pipeline, including field joints at site complete as per technical specification and direction of Engineer in In charge. **Rates are exclusive of GST.**		
1.14.1	9 mm thick for pipes up to 700 mm dia	SQM	**260.17**
1.14.2	12 mm thick for pipes above 700 mm dia	SQM	**288.98**
	MS Specials		
1.15	Providing and fixing of flanged/ plain ended MS Specials made from MS sheet strips of relevant IS specification of approved thickness by welding, lowering, laying, aligning, fixing in position at all level/ depths in trenches complete material, labour, inside lining, outside coating, testing and commissioning along with pipe line as per technical specifications and direction of Engineer-in-charge. **Rates are exclusive of GST.**		
1.15.1	MS pipe specials up to 600mm dia (with minimum 5mm thickness sheet)	Kg	**106.78**
1.15.2	MS pipe specials above 600mm dia(with minimum 6.3mm thickness sheet)	Kg	**113.56**

S. No.	Description	Unit	Rate (Rs.)
	BWSC PIPES		
1.16	Providing , lowering, laying and jointing of **Bar Wrapped Steel Cylinder Pipes (BWSC)** for overlapping steel welded joint as per IS:15155-2001(amended up to date) of following class and diameter, including transportation and freight charges, inspection charges, loading/ unloading charges, including cost of labour and material, specials (Tee, bend etc.), field joints, satisfactory hydraulic testing, disinfection, commissioning etc. complete as per technical specifications & direction of Engineer-in-charge (excluding earth work). Note : Providing and fixing of all requisite specials as per drawing, design and layout are inclusive in RM measurement of the item and shall not be paid separately. **Rates are exclusive of GST.**		
	Notes		
1)	Class mentioned below represents the Factory Test pressure of pipe.		
2)	For external coating at site to the joints, necessary polythene wrapping for pouring cement slurry shall also be provided with each pipe.		
1.16.1	Factory Test Pressure 12 Kg/ Cm2		
1.16.1.1	250mm	RMT	**2709.32**
1.16.1.2	300 mm	RMT	**3290.68**
1.16.1.3	350 mm	RMT	**3919.49**
1.16.1.4	400 mm	RMT	**4488.14**
1.16.1.5	450 mm	RMT	**5179.66**
1.16.1.6	500 mm	RMT	**5605.08**
1.16.1.7	600 mm	RMT	**7198.31**
1.16.1.8	700 mm	RMT	**9257.63**
1.16.1.9	800 mm	RMT	**11352.54**
1.16.1.10	900 mm	RMT	**13725.42**
1.16.1.11	1000 mm	RMT	**16514.41**
1.16.1.12	1100 mm	RMT	**22731.36**
1.16.1.13	1200 mm	RMT	**25111.86**
1.16.1.14	1300 mm	RMT	**27564.41**
1.16.1.15	1400 mm	RMT	**30733.90**
1.16.1.16	1500 mm	RMT	**36503.39**
1.16.1.17	1600 mm	RMT	**38866.95**
1.16.2	Factory Test Pressure 14 Kg/ Cm2		
1.16.2.1	250mm	RMT	**2721.19**
1.16.2.2	300 mm	RMT	**3300.00**
1.16.2.3	350 mm	RMT	**3844.92**
1.16.2.4	400 mm	RMT	**4500.00**
1.16.2.5	450 mm	RMT	**5190.68**
1.16.2.6	500 mm	RMT	**5755.08**
1.16.2.7	600 mm	RMT	**7509.32**

S. No.	Description	Unit	Rate (Rs.)
1.16.2.8	700 mm	RMT	**10311.02**
1.16.2.9	800 mm	RMT	**12622.03**
1.16.2.10	900 mm	RMT	**15303.39**
1.16.2.11	1000 mm	RMT	**19412.71**
1.16.2.12	1100 mm	RMT	**22790.68**
1.16.2.13	1200 mm	RMT	**25365.25**
1.16.2.14	1300 mm	RMT	**29782.20**
1.16.2.15	1400 mm	RMT	**34379.66**
1.16.2.16	1500 mm	RMT	**41853.39**
1.16.2.17	1600 mm	RMT	**45277.97**
1.16.3	Factory Test Pressure 16 Kg/Cm2		
1.16.3.1	250mm	RMT	**2721.19**
1.16.3.2	300 mm	RMT	**3323.73**
1.16.3.3	350 mm	RMT	**3927.12**
1.16.3.4	400 mm	RMT	**4513.56**
1.16.3.5	450 mm	RMT	**5261.02**
1.16.3.6	500 mm	RMT	**6123.73**
1.16.3.7	600 mm	RMT	**8004.24**
1.16.3.8	700 mm	RMT	**11055.08**
1.16.3.9	800 mm	RMT	**12738.98**
1.16.3.10	900 mm	RMT	**16502.54**
1.16.3.11	1000 mm	RMT	**19950.85**
1.16.3.12	1100 mm	RMT	**24248.31**
1.16.3.13	1200 mm	RMT	**28183.90**
1.16.3.14	1300 mm	RMT	**32444.07**
1.16.3.15	1400 mm	RMT	**37394.07**
1.16.3.16	1500 mm	RMT	**43756.78**
1.16.3.17	1600 mm	RMT	**48828.81**
1.16.4	Factory Test Pressure 18 Kg/Cm2		
1.16.4.1	250mm	RMT	**2722.88**
1.16.4.2	300 mm	RMT	**3348.31**
1.16.4.3	350 mm	RMT	**3931.36**
1.16.4.4	400 mm	RMT	**4568.64**
1.16.4.5	450 mm	RMT	**5560.17**
1.16.4.6	500 mm	RMT	**6478.81**
1.16.4.7	600 mm	RMT	**8532.20**
1.16.4.8	700 mm	RMT	**11804.24**
1.16.4.9	800 mm	RMT	**13714.41**
1.16.4.10	900 mm	RMT	**17696.61**
1.16.4.11	1000 mm	RMT	**21560.17**
1.16.4.12	1100 mm	RMT	**26011.02**
1.16.4.13	1200 mm	RMT	**29424.58**
1.16.4.14	1300 mm	RMT	**34844.07**
1.16.4.15	1400 mm	RMT	**39950.85**
1.16.4.16	1500 mm	RMT	**46927.12**
1.16.4.17	1600 mm	RMT	**52634.75**
1.16.5	Factory Test Pressure 20 Kg/Cm2		
1.16.5.1	250mm	RMT	**2729.66**
1.16.5.2	300 mm	RMT	**3360.17**

S. No.	Description	Unit	Rate (Rs.)
1.16.5.3	350 mm	RMT	**3984.75**
1.16.5.4	400 mm	RMT	**4880.51**
1.16.5.5	450 mm	RMT	**5939.83**
1.16.5.6	500 mm	RMT	**6980.51**
1.16.5.7	600 mm	RMT	**9191.53**
1.16.5.8	700 mm	RMT	**12802.54**
1.16.5.9	800 mm	RMT	**15854.24**
1.16.5.10	900 mm	RMT	**19024.58**
1.16.5.11	1000 mm	RMT	**23463.56**
1.16.5.12	1100 mm	RMT	**27268.64**
1.16.5.13	1200 mm	RMT	**32341.53**
1.16.5.14	1300 mm	RMT	**36779.66**
1.16.5.15	1400 mm	RMT	**43122.88**
1.16.5.16	1500 mm	RMT	**51999.15**
1.16.5.17	1600 mm	RMT	**57072.88**
	Laying Jointing and Removing of pipe line		
1.17	De-jointing and removing of already laid CI/DI pipes of following diameters in excavated trenches with care, without damaging pipes, CID joints, valves, specials etc. and other materials and then refilling of soil after de-laying and de-jointing of pipelines with proper compaction and disposing of all surplus soil as directed with in a lead of 30 mtr. This also include stacking the pipes with care and transporting the same to div./sub div. store or as directed by EIC with in the division. (Rates are Exclusive of Earth Work) **Rates are exclusive of GST.**		
1.17.1	80 mm	RMT	**38.14**
1.17.2	100 mm	RMT	**42.37**
1.17.3	125 mm	RMT	**42.37**
1.17.4	150 mm	RMT	**50.00**
1.17.5	200 mm	RMT	**66.95**
1.17.6	250 mm	RMT	**83.05**
1.17.7	300 mm	RMT	**100.85**
1.17.8	350 mm	RMT	**113.56**
1.17.9	400 mm	RMT	**138.98**
1.17.10	450 mm	RMT	**169.49**
1.17.11	500 mm	RMT	**217.80**
1.17.12	600 mm	RMT	**261.86**
1.18	De-jointing and removing of already laid MS pipes of following diameters in excavated trenches with care, without damaging pipes, CID joints, valves, specials etc. and other materials and then refilling of soil after de-laying and de-jointing of pipelines with proper compaction and disposing of all surplus soil as directed with in a lead of 30 mtr. This also include stacking the pipes with care and transporting the same to div./sub div. store or as directed by EIC with in the division. (Rates are Exclusive of Earth Work) **Rates are exclusive of GST.**		
1.18.1	100 mm	RMT	**27.12**

S. No.	Description	Unit	Rate (Rs.)
1.18.2	125 mm	RMT	**27.12**
1.18.3	150 mm	RMT	**32.20**
1.18.4	200 mm	RMT	**63.56**
1.18.5	250 mm	RMT	**81.36**
1.18.6	300 mm	RMT	**99.15**
1.18.7	350 mm	RMT	**116.95**
1.18.8	400 mm	RMT	**134.75**
1.18.9	450 mm	RMT	**172.03**
1.18.10	500 mm	RMT	**207.63**
1.18.11	600 mm	RMT	**250.00**
1.19	Laying, Jointing, Testing and Commissioning of uPVC/ PVC Pipes (Class- 3/ 4) in assorted length with specials, valves etc. including local handling and transportation from PHED store and then refilling of soil with proper compaction and disposing of all surplus soil as directed with in a lead of 30 mtr as per satisfaction of EIC. (Rates are Exclusive of Earth Work and jointing materials) **Rates are exclusive of GST.**		
1.19.1	90 mm	RMT	**14.41**
1.19.2	110 mm	RMT	**16.10**
1.19.3	125 mm	RMT	**19.49**
1.19.4	140 mm	RMT	**21.19**
1.19.5	160 mm	RMT	**22.88**
1.19.6	180 mm	RMT	**25.42**
1.19.7	200 mm	RMT	**26.27**
1.19.8	225 mm	RMT	**28.81**
1.19.9	250 mm	RMT	**30.51**
1.19.10	280mm	RMT	**32.20**
1.19.11	315 mm	RMT	**34.75**
1.20	Laying, Jointing, Testing and Commissioning of Ductile Iron (DI) Pipes of any class in assorted length with specials, valves etc. including local handling and transportation from PHED store and then refilling of soil with proper compaction and disposing of all surplus soil as directed with in a lead of 30 mtr as per satisfaction of EIC. (Rates are Exclusive of Earth Work and jointing materials) **Rates are exclusive of GST.**		
1.20.1	80 mm	RMT	**40.68**
1.20.2	100 mm	RMT	**42.37**
1.20.3	125 mm	RMT	**44.07**
1.20.4	150 mm	RMT	**54.24**
1.20.5	200 mm	RMT	**67.80**
1.20.6	250 mm	RMT	**84.75**
1.20.7	300 mm	RMT	**100.00**
1.20.8	350 mm	RMT	**116.95**
1.20.9	400 mm	RMT	**142.37**
1.20.10	450 mm	RMT	**177.97**
1.20.11	500 mm	RMT	**228.81**
1.20.12	600 mm	RMT	**268.64**

S. No.	Description	Unit	Rate (Rs.)
1.21	Laying, Jointing, Testing and Commissioning of AC Pressure Pipes (Class- 10/15/20) of any class in assorted length with specials, valves etc. including local handling and transportation from PHED store and then refilling of soil with proper compaction and disposing of all surplus soil as directed with in a lead of 30 mtr as per satisfaction of EIC. (Rates are Exclusive of Earth Work and jointing materials) **Rates are exclusive of GST.**		
1.21.1	80 mm	RMT	**26.27**
1.21.2	100 mm	RMT	**28.81**
1.21.3	125 mm	RMT	**31.36**
1.21.4	150 mm	RMT	**33.05**
1.21.5	200 mm	RMT	**39.83**
1.21.6	250 mm	RMT	**44.07**
1.21.7	300 mm	RMT	**83.05**
1.21.8	350 mm	RMT	**89.83**
1.21.9	400 mm	RMT	**102.54**
1.21.10	450 mm	RMT	**117.80**
1.21.11	500 mm	RMT	**133.90**
1.21.12	600 mm	RMT	**137.29**
1.22	Laying, Jointing, Testing and Commissioning of HDPE pipes of any grade in assorted length with specials, valves etc. with jointing material/ fixing of necessary jointing material like mechanical connector i.e. thread/ insert joint/quick release coupler joint compression fitting joint or flanged joint and jointing pipe in proper position and jointing of all specials by butt fusion / electro fusion welding method, including local handling and transportation from PHED store and then refilling of soil with proper compaction and disposing of all surplus soil as directed with in a lead of 30 mtr as per satisfaction of EIC. (Rates are Exclusive of Earth Work and jointing materials) **Rates are exclusive of GST.**		
1.22.1	90 mm	RMT	**11.86**
1.22.2	110 mm	RMT	**13.56**
1.22.3	125 mm	RMT	**59.32**
1.22.4	140 mm	RMT	**65.25**
1.22.5	160 mm	RMT	**73.73**
1.22.6	180 mm	RMT	**81.36**
1.22.7	200 mm	RMT	**89.83**
1.22.8	225 mm	RMT	**99.15**

S. No.	Description	Unit	Rate (Rs.)
	AC pipes		
1.23	Providing, lowering, laying and jointing in trenches, standard lengths ISI marked **AC** pressure pipe class 15 manufactured by MAZZA process as per IS-1592-2003 or amended up to date with AC coupling and EPDM Rubber sealing rings of Type -3 as per IS: 5382/1985 (Reaffirmed 1998) or amended up to date, including transportation and freight charges, inspection charges, loading/ unloading charges, stacking of pipes, labour and material, satisfactory hydraulic testing etc. complete as per technical specifications and direction of Engineer-in-charge. (excluding earth work and specials) Note: These pipes shall only be used for raw water conveyance main from Canal outlet to raw water reservoirs and interconnection works. **Rates are exclusive of GST.**		
1.23.1	150 mm dia Cl-15	RMT	**616.10**
1.23.2	200 mm dia Cl-15	RMT	**1002.54**
1.23.3	250 mm dia Cl-15	RMT	**1373.73**
1.23.4	300 mm dia Cl-15	RMT	**1988.98**
1.23.5	350 mm dia Cl-15	RMT	**2520.34**
1.23.6	400 mm dia Cl-15	RMT	**3336.44**
1.23.7	450 mm dia Cl-15	RMT	**3919.49**
1.23.8	500 mm dia Cl-15	RMT	**4961.86**
1.23.9	600 mm dia Cl-15	RMT	**7072.03**
	CI Specials		
1.24	Providing, lowering, laying, aligning, fixing in position at all level/ depths CI Class - B specials as per IS : 1538, amended up to date in trenches complete including all material, labour, testing and commissioning along with pipe line/ appurtenance as per Technical Specifications and as per direction of Engineer. Note : E/w to be measured and paid separately. **Rates are exclusive of GST.**		
1.24.1	Plain ended CI specials including tail piece, spigot end and socket end.		
1.24.1.1	Up to 300 mm dia	Kg	**94.07**
1.24.1.2	Above 300 mm and up to 600 mm dia	Kg	**109.32**
1.24.2	Double flanged CI pipe fittings.		
1.24.2.1	Up to 300 mm dia	Kg	**108.47**
1.24.2.2	Above 300 mm and up to 600 mm dia	Kg	**121.19**

S. No.	Description	Unit	Rate (Rs.)
	House hold tap connections		
1.25	Providing Household Tap Connection as per technical specification and approved drawing as per relevant IS code (amended up to date) from **uPVC/DI/AC/MS/GI** pipe line up to consumer meter/premises by using **PP/MS saddle piece** (Complete job).This job includes digging out suitable size of pits and trench for laying service line in all kinds of soil (excluding road); depositing and refilling of pit & jhiri with watering & ramming /compacting in layers and disposal of surplus excavated soil as directed with in a lead of 100 meter ; providing & fixing of all fitting duly approved in accordance with specification for potable water including MS/PP saddle piece, gunmetal ferrule 4.0 mm , GM Full-way Valve (IS:778 Mark) or ball valve (min. weight 165 gm) and specials, below ground level 20 mm nominal dia MDPE pipe PE 80 PN 16 as per ISO 4427 / 20 mm nominal dia PPR-C (Three layered) pipe PN16 SDR 7.4 (IS:15801:2008) (ISI mark) and above ground level using 20 mm dia PPR-C pipe with standard PPR fittings/ 15 mm dia GI pipe with fittings in the premises for fixing a tap / meter box (excluding) ,including accessories with flushing, cleaning, disinfecting and testing of pipe line complete required for making of service connection complete in all respect including labour charges . The service line should be laid at least 45 cm below ground level. **Note:** Road cut and restoration is not part of this item and paid separately. **Rate is exclusive of GST.**		
1.25.1	For connection with 20 mm dia MDPE/PPR-C pipe length up to 05 mtr.	Each	**1405.08**

S. No.	Description	Unit	Rate (Rs.)
1.26	Providing Household Tap Connection as per technical specification and approved drawing and as per relevant IS code (amended up to date) from **HDPE** pipe line up to consumer meter/premises by using **electro fusion saddle piece** (Complete job).This job includes digging out suitable size of pits and trench for laying service line in all kinds of soil; depositing and refilling of pit & jhiri with watering & ramming /compacting in layers and disposal of surplus excavated soil as directed with in a lead of 100 meter ; providing & fixing of all fitting duly approved in accordance with specification for potable water including electrofusion saddle piece, gunmetal ferrule 4.0 mm , GM Full-way Valve (IS:778 Mark) or wheel valve and specials, below ground level 20 mm nominal dia MDPE pipe PE 80 PN 16 as per ISO 4427 / 20 mm nominal dia PPR-C (Three layered) pipe PN16 SDR 7.4 (IS:15801:2008) (ISI mark) for and above ground level using 20 mm dia PPR-C pipe with standard PPR fittings/ 15 mm dia GI pipes with fittings in the premises for fixing a tap / meter box (excluding) ,including accessories with flushing, cleaning, disinfecting and testing of pipe line complete required for making of service connection complete in all respect including labour charges . The service line should be laid at least 45 cm below ground level. **Note:** Road cut and restoration is not part of this item and paid separately. **Rate is exclusive of GST.**		
1.26.1	For connection with 20 mm dia MDPE/PPR-C pipe length up to 05 mtr.	Each	**1683.05**
1.27	Providing Household Tap Connection as per technical specification and approved drawing as per relevant IS code (amended up to date) from **HDPE/uPVC/DI/AC/MS/GI** pipe line up to consumer meter/premises by using **PP mechanical Integrated saddle with inbuilt flow control valve made out of SS316 designed for 5 LPM discharge at 0.5 bar pressure , not exceeding the flow of 7 LPM at 2 bar and a compression elbow, moulded in single piece/ fusion welded** (Complete job) including digging out suitable size of pits and trench for laying service line in all kinds of soil; depositing and refilling of pit & jhiri with watering & ramming /compacting in layers and disposal of surplus excavated soil as directed with in a lead of 100 meter ; providing & fixing of all fitting duly approved in accordance with specification for potable water including GM Full-way Valve (IS:778 Mark) or wheel valve and specials with 20 mm nominal dia MDPE pipe PE 80 PN 16 as per ISO 4427 / 20 mm nominal dia PPR-C (Three layered) pipe PN16 SDR 7.4 (IS:15801:2008) (ISI mark) and above ground level using PPR-C pipe with standard PPR fittings/ GI pipes in the premises for fixing a tap / meter box (excluding) ,including accessories with flushing, cleaning, disinfecting and testing of pipe line complete required for making of service connection complete in all respect including labour charges . The service line should be laid at least 45 cm below ground level.		

S. No.	Description	Unit	Rate (Rs.)
	Note: Road cut and restoration is not part of this item and paid separately. **Rate is exclusive of GST.**		
1.27.1	For connection with 20 mm dia MDPE/PPR-C pipe length up to 05 mtr.	Each	**1508.47**
1.28	P & F Bib cock (IS : 781 mark), superior quality of approved make , brass 400 gm, 15 mm nominal bore. **Rate is exclusive of GST.**	Each	**263.56**
1.29	P & F Bib cock (IS : 8931 mark), superior quality of approved make, chrome plated with complete brass body including brass handle with wt. 300 to 325 gm.15 mm nominal bore. **Rate is exclusive of GST.**	Each	**263.56**
1.30	Road cutting for house hold service connection in minimum trench width wherever road crossing is required. Road cutting of cement concrete,WBM, Black top etc. of all thickness shall be done by using a concrete cutter machine keeping minimum trench width and restoration of the road with Cement concrete with PCC M-10 and CC M-30 grade as per specification and direction of Engineer in charge. **Rate is exclusive of GST.**	Mtr	**169.49**
1.31	Add extra over item no 1.21, 1.22 & 1.23 for providing 20 mm PE 80 PN 16 as per ISO 4427 MDPE pipe including excavation, providing, laying & jointing of service line above 5.00 mtr. **Rate is exclusive of GST.**	Mtr	**37.29**
1.32	Add extra over item no 1.21, 1.22 & 1.23 for providing 20 mm ISI marked PN16 SDR 7.4 (IS:15801:2008) PPR-C (Three layered) pipe including excavation, providing, laying & jointing of service line above 5.00 mtr. **Rate is exclusive of GST.**	Mtr	**48.31**
	PVC-O Pipe		
1.33	Providing, lowering, laying and jointing in trenches, standard lengths ISI marked Rigid **PVC-O** S/S Pipes (push on joints) as per IS-16647: 2017 (amended up to date) with EPDM Gasket seals on joints including transportation and freight charges, inspection charges, loading/ unloading charges, stacking of pipes, laying of pipes, including cost of labour and material, specials (Tee, bend etc.), satisfactory hydraulic testing, disinfection etc. complete as per technical specifications and direction of Engineer-in-charge of following class and diameter. Note : Providing and fixing of all requisite specials as per drawing, design and layout are inclusive in RM measurement of the item and shall not be paid separately. **Rates are exclusive of GST.**		
1.33.1	**PVC-O pipe Class 500 PN-16**		
1.33.1.1	110 mm dia	RMT	**740.68**
1.33.1.2	160 mm dia	RMT	**1254.24**
1.33.1.3	200 mm dia	RMT	**1441.53**
1.33.1.4	250 mm dia	RMT	**1932.20**

S. No.	Description	Unit	Rate (Rs.)
1.33.1.5	315 mm dia	RMT	**2355.93**
1.33.2	**PVC-O pipe Class 500 PN-12.5**		
1.33.2.1	110 mm dia	RMT	**641.53**
1.33.2.2	160 mm dia	RMT	**1085.59**
1.33.2.3	200 mm dia	RMT	**1238.98**
	PTMT Bib Cock		
1.34	Providing and fixing ISI mark (IS 9763: 2000 or amended up to date) **PTMT bib cock** 15 mm nominal bore, minimum weight 92 gms and length 100 mm as per technical specification, approved make and direction of Engineer in charge. **Rate is exclusive of GST.**	Each	**166.10**
	Double chambered restrained joint DI Pipes		
1.35	Providing, lowering, laying and jointing of ISI marked **Double chambered restrained joint DI K9** Pipes confirming to IS:8329-2000 (amended upto date); restrained joints are designed and tested as per ISO 10804: 2018 (to be used for minimum required length as per design along with double chambered restrained DI fittings to avoid concrete thrust block at bends) including rubber gaskets confirming to IS 5382 -1985/8329-2000 with latest amendments and locking bars & rubber spacers , conveying to work site, rolling and lowering into trenches, laying true to line, level and perfect linking at joints, testing and commissioning, including loading and unloading, cutting of pipes wherever necessary, jointing with DI special (excluding the cost of restrained joint specials) and rubber gaskets, cleaning the socket and spigot end with soap solution, applying soft soap to the socket and spigot ends before insertion of rubber gaskets, jacking and fixing in perfect conditions etc. The cost includes all accessories and hydraulic test to the required pressure and cost of all jointing materials etc complete including satisfactory hydraulic testing, disinfection etc. complete as per technical specifications and direction of Engineer-in-charge. (excluding earth work) **Rates are exclusive of GST.**		
1.35.1	100 mm	RMT	**2072.03**
1.35.2	150 mm	RMT	**2904.24**
1.35.3	200 mm	RMT	**3951.69**
1.35.4	250 mm	RMT	**5220.34**
1.35.5	300 mm	RMT	**6526.27**
1.35.6	350 mm	RMT	**8094.07**
1.35.7	400 mm	RMT	**9526.27**
1.35.8	450 mm	RMT	**11229.66**
1.35.9	500 mm	RMT	**13073.73**
1.35.10	600 mm	RMT	**17437.29**
1.35.11	700 mm	RMT	**22688.98**
1.35.12	800 mm	RMT	**24579.66**
1.35.13	900 mm	RMT	**34635.59**
1.35.14	1000 mm	RMT	**40401.69**

Chapter-2

Construction and Commissioning of Tube wells, Open Wells & Hand Pumps.

Note : All rates are exclusive of GST.

S. No.	Description	Unit	Rate (Rs.)
	TUBE WELLS		
2.1	Construction of tube well from ground level & up to 100 mtr depth to accommodate housing and assembly pipe of following sizes in all type of alluvium strata unconsolidated formation such as pebbles, boulders etc. by **percussion/rotary** drilling method as per IS:2800 Part 1: 1991 and IS:2800 Part II: 1979 (both amended up to date) and technical specifications, with gravel as per IS:4097-1967 and it's packing as per IS: 2800 (Part I & II) 1979 as amended up to date (the work includes the cost of gravel & it's primary packing and packing during development, lowering of housing & strainer assembly pipes with supply and wrapping of coir-rope, wherever necessary for arresting fine sand particles and development work, but excluding the cost of housing and strainer pipe assembly). The work would be completed after obtaining sand free water. **Rates are exclusive of GST.**		
2.1.1	Nominal bore 150 mm dia.	Mtr	842.37
2.1.2	Nominal bore 200 mm dia.	Mtr	1290.68
2.1.3	Nominal bore 250 mm dia.	Mtr	1510.17
2.1.4	Add 15% extra on above item (Item no 2.1.1 to 2.1.3) for drilling depth beyond 100 mtr and up to 200 mtr, rate shall be applicable for only extra depth beyond 100 mtr and up to 200 mtr.		
2.1.5	Add 40% extra on above item (Item no 2.1.1 to 2.1.3) for drilling depth beyond 200 mtr, rate shall be applicable for only extra depth beyond 200 mtr .		
2.2	Construction of Tube Well from ground level and up to 100 mtr. depth to accommodate housing and assembly pipe in all type of alluvium strata, unconsolidated formation such as pebbles, boulders etc. by **percussion/ rotary** drilling method as per IS:2800 Part 1: 1991 and IS:2800 Part II: 1979 (both amended up to date) and technical specifications for removal of overburden. The work includes the cost of lowering of casing pipe, but excludes the cost of casing pipe. **Rates are exclusive of GST.**		
2.2.1	Nominal bore 200 mm dia.	Mtr	1039.83
2.2.2	Nominal bore 250 mm dia.	Mtr	1172.88
2.2.3	Add 15% extra on above item (Item No 2.2.1 to 2.2.2) for drilling depth beyond 100 mtr, rate shall be applicable for only extra depth beyond 100 mtr .		

S. No.	Description	Unit	Rate (Rs.)
2.3	Construction of tube well after completion of drilling by rotary /percussion method & up to 100 mtr. depth in all type of rocks by **DTH** system as per IS:2800 Part 1: 1991 and IS:2800 Part II: 1979 (both amended up to date) and technical specifications. The work shall be deemed completed only after obtaining sand free water. The bore well should have a throughout nominal size bore beyond casing pipe. **Rates are exclusive of GST.**		
2.3.1	Nominal bore 150 mm dia.	Mtr	740.68
2.3.2	Nominal bore 200 mm dia.	Mtr	1070.34
2.3.3	Nominal bore 250 mm dia.	Mtr	1298.31
2.3.4	Add 15% extra on above item (Item No 2.3.1 to 2.3.3) for drilling depth beyond 100 mtr and up to 200 mtr from ground level, rate shall be applicable for only extra depth beyond 100 mtr and up to 200 mtr.		
2.3.5	Add 30% extra on above item (Item No 2.3.1 to 2.3.3) for drilling depth beyond 200 mtr and from ground level, rate shall be applicable for only extra depth beyond 200 mtr .		
2.3.6	Add 15% extra on above item (Item No 2.3.1 to 2.3.3) for drilling, where strata is collapsible and lowering of casing pipe is required . The work includes lowering of casing pipe, but excluding the cost of casing pipe. The rate shall be applicable for stretch of collapsible strata only.		
2.4	Construction of Tube Well up to 100 mtr. depth in all type of rocks by **DTH** system & over burden to accommodate casing pipe of following sizes in all types of soils & over burden including lowering of casing pipes, (if required) excluding cost of casing pipes, as per IS:2800 Part 1: 1991 and IS:2800 Part II: 1979 (both amended up to date) and technical specifications. The work would be completed after obtaining sand free water. The tube well should have a through out bore as per nominal dia of casing pipe. **Rates are exclusive of GST.**		
2.4.1	Nominal bore 150 mm dia.	Mtr	615.25
2.4.2	Nominal bore 200 mm dia.	Mtr	922.88
2.4.3	Add 15% extra on above item (Item No 2.4.1 to 2.4.2) for drilling depth beyond 100 mtr and up to 200 mtr from ground level, rate shall be applicable for only extra depth beyond 100 mtr and up to 200 mtr.		
2.4.4	Add 30% extra on above item (Item No 2.4.1 to 2.4.2) for drilling depth beyond 200 mtr and from ground level, rate shall be applicable for only extra depth beyond 200 mtr .		
2.4.5	Add 15% extra on above item (Item No 2.4.1 to 2.4.4) for drilling, where strata is collapsible and lowering of casing pipe is required . The work includes lowering of casing pipe, but excluding the cost of casing pipe. The rate shall be applicable for stretch of collapsible strata only.		

S. No.	Description	Unit	Rate (Rs.)
2.5	Construction of tube well from ground level and up to 100 mtr. depth and above of following sizes in all types of soils in alluvium strata, unconsolidated formation such as pebbles, boulders etc. by **"bailing"** method and without gravel packing as per IS:2800 Part 1: 1991 and IS:2800 Part II: 1979 (both amended up to date) and technical specifications. The work includes formation of cavity at bottom by development with appropriate air compressor or bailer pumping and also lowering of casing pipe but excluding cost of the casing pipe. The tube well should have a throughout bore as per nominal dia of casing pipe. The work would be completed after obtaining sand free water. **Rates are exclusive of GST.**		
2.5.1	Nominal bore 125 mm dia.	Mtr	412.71
2.5.2	Nominal bore 150 mm dia.	Mtr	460.17
2.5.3	Nominal bore 200 mm dia.	Mtr	760.17
2.6	Construction of tube well from ground level and up to 100 mtr depth and above to accommodate housing assembly pipe in all type of unconsolidated formation such as pebbles, boulders, collapsible formation etc. by **Odex drilling** method as per IS: IS:2800 Part 1: 1991 and IS:2800 Part II: 1979 (both amended up to date) and technical specifications. The work will include lowering of housing and strainer pipe assembly and casing shoe including cost of casing shoe, but excluding cost of the casing pipe. The work would be completed after obtaining sand free water. **Rates are exclusive of GST.**		
2.6.1	Nominal bore 125 mm dia.	Mtr	706.78
2.6.2	Nominal Bore 150 mm dia.	Mtr	965.25
2.6.3	Nominal bore 200 mm dia.	Mtr	1415.25
2.6.4	Add 15% extra on above item (Item No 2.6.1 to 2.6.3) for drilling depth beyond 100 mtr, rate shall be applicable for only extra depth beyond 100 mtr.		
2.7	Deepening of existing tube well by **DTH** system beyond existing depth up to 100 mtr. and above in all type of rocks including flushing of tube well and obtaining sand free water. **Rates are exclusive of GST.**		
2.7.1	Nominal bore 150 mm dia.	Mtr	785.59
2.7.2	Nominal bore 200 mm dia.	Mtr	1138.98
2.8	Testing verticality of tube well by plumbing system and yield test and draw down test by pumping system as per IS : 2800 (Part – II) – 1979 or as per amended up to date. **Rate is exclusive of GST.**	Each	6930.51
2.9	Supplying & Packing P-gravel suitable for slot size/mesh size as suggested in IS 2800 (Part-1) 1991 or as per amended up to date. **Rate is exclusive of GST.**	Cum.	3482.20

S. No.	Description	Unit	Rate (Rs.)
2.10	Development of tube well having depth up to 250 mtr as per IS: 11189- 1985 and IS: 2800 (Part- I)- 1991 (both amended up to date) using suitable methods to give sand free water for required yield of the gravel packed tube well. **Rate is exclusive of GST.**	Hr.	1233.90
2.11	Supply of ERW M.S. black casing pipe ISI marked (IS: 4270/2001) or amended up to date of following sizes **Rates are exclusive of GST.**		
2.11.1	150 mm dia NB(Thickness of pipe 5.0 mm & mass of tube 20.13 Kg/m)	Mtr	1638.14
2.11.2	200 mm dia NB (Thickness of pipe 5.4mm & mass of tube 28.46 Kg/m)	Mtr	2316.95
2.11.3	250 mm dia NB (Thickness of pipe 7.1 mm & mass of tube 46.57 Kg/m)	Mtr	3790.68
2.12	Labour charges for making slots on blank pipes made of ERW MS black pipe ISI marked of following sizes, the slotting should be as per IS:8110-1985. **Rates are exclusive of GST.**		
2.12.1	125 mm dia nominal bore of 4.8 mm thickness	Mtr	149.15
2.12.2	150 mm dia nominal bore of 4.8 mm thickness	Mtr	177.12
2.12.3	200 mm dia nominal bore of 5.4mm thickness	Mtr	268.64
2.12.4	250 mm dia nominal bore of 7.1mm thickness	Mtr	336.44
2.13	Providing & laying ISI marked GI Pipe Light duty ("A" class) as per IS: 1239 for casing pipe for submersible cable external work 40 mm dia complete in all respect. **Rate is exclusive of GST.**	Mtr	321.19
2.14	**Supply & Installation** of **single phase** ISI marked submersible motor pump set of three star or better rating of BEE and as per IS: 8034-2018 (pump) and IS 9283-2013 (motor) or as amended up to date of approved make of following duty condition with required accessories including making connection suitable for tube well/DCB. The job includes lowering of motor pump, installation of complete fitting & accessories, jointing of electrical cables up to switch board, testing of submersible pump set and interconnection up to water mains, complete in all respect. **Rates are exclusive of GST.**		
2.14.1	Up to 2.0 KW	KW	14205.08
2.14.2	Above 2.0 KW	KW	11059.32
2.15	**Supply & Installation** of **3 phase** ISI marked submersible motor pump set of three star or better rating of BEE and as per IS: 8034-2018 (pump) and IS 9283-2013 (motor) or as amended up to date of approved make of following duty condition with required accessories including making connection suitable for tube well/DCB. The job includes lowering of motor pump, installation of complete fitting & accessories, jointing of electrical cables up to switch board, testing of submersible pump set and interconnection up to water mains, complete in all respect. **Rates are exclusive of GST.**		
2.15.1	Up to 5.5 KW (7.5 HP) & head up to 120 mtr.	KW	7697.46
2.15.2	Up to 5.5 KW (7.5 HP) & head above 120 mtr.	KW	8159.32
2.15.3	7.5 KW (10 HP) & head up to 120 mtr.	KW	5800.00
2.15.4	7.5 KW (10 HP) & head above 120 mtr.	KW	7050.85
2.15.5	9.3 KW (12.5 HP) & head up to 120 mtr.	KW	4915.25

S. No.	Description	Unit	Rate (Rs.)
2.15.6	9.3 KW (12.5 HP) & head above 120 mtr.	KW	6400.00
2.15.7	11 KW (15 HP) & head up to 120 mtr.	KW	4757.63
2.15.8	11 KW (15 HP) & head above 120 mtr.	KW	5573.73
2.15.9	13 KW (17.5 HP) & head up to 120 mtr.	KW	4748.31
2.15.10	13 KW (17.5 HP) & head above 120 mtr.	KW	5423.73
2.15.11	15 KW (20 HP) and above, head up to 120 mtr.	KW	4728.81
2.15.12	15 KW (20 HP) and above, head above 120 mtr.	KW	5355.93
2.16	**Supply and Fixing** of Electric feeder panel (having projected canopy)for submersible pump set Single phase up to 5 HP, comprising of DOL Starter, MCB, Indicating Light, Ammeter, Volt meter, connection plate, condensers of approved make and the panel enclosure should be made out from 18 gauge M.S. Sheet with powder coating. Panel size Height 600 mm Width 500 mm depth 250 mm with Stand (made of angle iron of size 35x35x5mm) duly bolted/screwed with enclosure box having 4 legs, each leg's length 18" and double door including in built locking system. The legs should be embedded in M-15 cement concrete platform. The size of CC platform should be equal or bigger than the base size of panel having height of at least 200 mm from ground level. The operation of panel should be suitable for on 240 Volt AC Supply. **Rate is exclusive of GST.**	Each	8482.20
2.17	**Supply and Fixing** of electric control feeder panel comprising of suitable rating MCCB, DOL starter, overload relay, ampere meter, volt meter, phase preventer, phase indicators, lighting arrangement etc. complete suitable for three phase pump set. The panel should have space for energy meter (supplied by DISCOM). All these equipments shall be housed by panel box made out from 18 gauge M.S. Sheet with powder coating. Panel should be of minimum size 900 x 600 x 300mm with Stand (made of angle iron of size 35x35x5mm) duly bolted/screwed with enclosure box having 4 legs, each leg's length 18" and double door including in built locking system. The legs should be embedded in M-15 cement concrete platform. The size of CC platform should be equal or bigger than the base size of panel having height of at least 200 mm from ground level. The panel should have opening of suitable size in front of space for energy meter with glass for meter reading. The operation of panel should be suitable for on 440 Volt AC Supply. **Rate is exclusive of GST.**		
2.17.1	Up to 5.00 HP	Each	11085.59

S. No.	Description	Unit	Rate (Rs.)
2.18	**Supply and Fixing** of electric control feeder panel comprising of suitable rating MCCB , fully automatic star-delta starter, over load relay, ampere meter with CTs, volt meter, phase preventer, suitable starting capacitors, phase indicators, lighting arrangement etc. complete suitable for three phase pump set. The panel should have space for energy meter (supplied by DISCOM). All these equipments shall be housed by panel box made out from 18 gauge M.S. Sheet with powder coating. Panel should be of minimum size 900 x 600 x 450 mm with Stand (made of angle iron of size 35x35x5mm) duly bolted/screwed with enclosure box having 4 legs, each leg's length 18" and double door including in built locking system. The legs should be embedded in M-15 cement concrete plat form. The size of CC platform should be equal or bigger than the base size of panel having height of at least 200 mm from ground level. The panel should have opening of suitable size in front of space for energy meter with glass for meter reading. The operation of panel should be suitable for on 440 Volt AC Supply. **Rates are exclusive of GST.**		
2.18.1	Above 5 HP and up to 10 HP	Each	20570.34
2.18.2	Above 10 HP and up to 15 HP	Each	23583.90
2.18.3	Above 15 HP and up to 20 HP	Each	27217.80
2.18.4	Above 20 HP and up to 30 HP	Each	33368.64
2.19	**Supply & Fixing** of ISI marked three core PVC flat submersible cable as per IS 694:1990 or amended up to date and conductor as per class 5 of IS 8130:1980 including making connection etc. **Rates are exclusive of GST.**		
2.19.1	3 core 4.0 Sq.mm	Mtr	160.17
2.19.2	3 core 6.0 Sq.mm	Mtr	239.83
2.19.3	3 core 10.0 Sq.mm	Mtr	410.17
2.19.4	3 core 16.0 Sq.mm	Mtr	611.86
2.20	**Supply & Fixing** XLPE insulated / P.V.C. sheathed cable of 1.1 KV grade with aluminium conductor Armoured of IS:7098-I/1554-1 approved make in ground as per IS:1255 including excavation of 30cmx75cm size trench, 25 cm thick under layer of sand, second Class bricks covering, refilling earth, compaction of earth, making necessary connection, testing etc. as required of size. **Rates are exclusive of GST.**		
2.20.1	10.0 Sq.mm, 4 core	Mtr	166.10
2.20.2	16.0 Sq.mm, 4 core	Mtr	198.31
2.20.3	25.0 Sq.mm, 3.5 core	Mtr	274.58
2.20.4	35.0 Sq.mm, 3.5 core	Mtr	321.19
2.21	**Plate Earthing** as per IS:3043 with G.I. Earth plate of size 600mm x 600mm x 6.0mm by embodying 3 to 4 mtr. below the ground level with 20 mm dia. G.I. 'B' class watering Pipe including all accessories like nut, bolts, reducer ,nipple, wire meshed funnel, and C.C. finished chamber covered with hinged type with locking arrangement C.I. Cover, C.I. Frame of size 300mm x 300mm complete with alternate layers of salt and coke/charcoal, testing of earth resistance as required. **Rate is exclusive of GST.**	Each	3094.07

S. No.	Description	Unit	Rate (Rs.)
2.22	**Supply & Fixing** M S clamp set of 50x6 mm flat from iron with nuts and bolts etc. for holding the riser pipe assembly of submersible pump set. **Rate is exclusive of GST.**	Each	589.83
2.23	**Supply & Fixing** tube well cover of MS sheet 8mm thick at top & 5mm thick 100mm wide shroud around the edge so as to form a cap on the top end of casing pipe with GI Nipple 45cm long & two GI flanges at both ends in 80mm sizes passing through a hole in the centre of MS sheet. A 25 mm socket with end plug shall also be welded over top plate. A GI nipple having outside thread of size 1/2" (for installation pressure gauge) shall be provided & welded with 80mm GI nipple near top plate nipple shall be provided with end plug. **Rates are exclusive of GST.**		
2.23.1	125 mm dia	Each	638.98
2.23.2	150 mm dia	Each	688.14
2.23.3	200 mm dia	Each	835.59
2.23.4	250 mm dia	Each	983.05
2.24	**Providing & Lowering** in tube well ISI marked GI Pipe medium duty ("B" class), Steel tube as per IS:1239 or amended up to date and zinc coating as per IS 4736, threaded and double flanged (welded) on both ends and two number 25x3mm MS flat welded on both ends between pipe & flange, rubber washer & nut bolts etc. complete in all respect. **Rates are exclusive of GST.**		
2.24.1	32 mm dia	Mtr	364.41
2.24.2	50 mm dia	Mtr	574.58
2.24.3	65 mm dia	Mtr	648.31
2.24.4	80mm dia	Mtr	800.00
2.25	**Providing & Lowering** in tube well ISI marked HDPE pipe as per IS 4984:1995 or amended up to date in PE 80 grade and class PN 10 of following dia. including HDPE/GI fittings and PVC rope confirming to IS 5175:1992 or amended up to date, along with clamping of submersible cable etc. complete in all respect. **Rates are exclusive of GST.**		
2.25.1	40 mm dia	Mtr	73.73
2.25.2	50 mm dia	Mtr	115.25
2.25.3	63 mm dia	Mtr	180.51
2.25.4	75 mm dia	Mtr	256.78
2.25.5	90 mm dia	Mtr	364.41
2.26	**Providing, installing, testing and commissioning** of double flanged bulk flow meter with removable mechanism, of class B conforming to ISO 4064/1 or amended up to date of approved make including cost of all material and labour as per specifications with GI Box (sheet 16 SWG) suitable with locking arrangement of following dia. **Rates are exclusive of GST.**		
2.26.1	50 mm dia	Each	10000.85
2.26.2	65 mm dia	Each	11313.56
2.26.3	80 mm dia	Each	13349.15
2.27	**Providing & Fixing** pump safety cage as per specifications or as directed by Engineer in charge. **Rate is exclusive of GST.**	Each	937.29

S. No.	Description	Unit	Rate (Rs.)
2.28	**Providing and Fixing** of ISI marked PVC storage tank of following capacity as per IS: 12701-1989 (of approved make) with cover, 25 mm dia. 1 mtr long GI overflow pipe, 25 cm long 25 mm dia washout GI pipe with plug & socket, including P&F 32 mm dia Ball Cock (Float valve) IS 1703 marked with rod and PVC ball complete with brass weight 1000 gm, including P&F 15mm dia CI quarter turn heavy duty Bib Cocks four no's of superior quality and approved make, including interconnections complete job. **Rates are exclusive of GST.**		
2.28.1	1000 litres capacity	Each	7232.20
2.28.2	2000 litres capacity	Each	13928.81
2.29	**Fabrication & Fixing** M.S. Stand of specified class of angle iron L-shaped of 50 mm size with four legs grouted by 300*300*300 mm CC Block M-15 in the ground and all legs tied up with each other through same size of angle iron along with cross bars to support the bottom of 1000 Ltr./ 2000 Ltr. PVC tank complete in all respect. **Rate is exclusive of GST.**	kg	99.15
2.30	**Providing & Fixing** of double flanged, CI body, ISI marked NRV of approved make of following sizes **Rates are exclusive of GST.**		
2.30.1	65 mm dia	Each	2123.73
2.30.2	80 mm dia	Each	2398.31
2.31	**Proving and Fixing** 32 mm dia Full way valve or wheel valve as per IS:778 or amended up to date of approved make, on pump delivery pipe. **Rate is exclusive of GST.**	Each	695.76
2.32	**Supplying & Installing** 100 mm diameter sealed diaphragm bourdon type pressure gauge of range 0 to 10 kg. including all jointing material as per specification with safety cover. **Rate is exclusive of GST.**	Each	1053.39
2.33	Construction of bore hole for shallow depth tube well from ground level to required depth for following size for all type of relevant strata by percussion/ rotary drilling/ hand boring method excluding cost of casing pipe. The bore hole should be as per nominal bore of PVC casing pipe. The work will be complete after obtaining sand free water. **Rates are exclusive of GST.**		
2.33.1	125 mm dia nominal bore	Mtr.	294.07
2.33.2	150 mm dia nominal bore	Mtr.	327.97
2.33.3	200 mm dia nominal bore	Mtr.	466.95
2.33.4	250 mm dia nominal bore	Mtr.	656.78
2.34	**Providing and Lowering** of ISI mark PVC-U casing and screen pipe as per IS : 12818 : 2010 or amended up to date having pipe thickness as per IS code suitable for TW and DCB with threading , winding with superior quality of plastic mesh & rope in three layers with end cap complete as per technical specification and direction of Engineer In charge. **Rates are exclusive of GST.**		
2.34.1	**Shallow well casing pipe (CS) suitable for depth up to 80 mtr.**		
2.34.1.1	150 mm nominal dia (internal dia).	Mtr	402.54
2.34.1.2	200 mm nominal dia (internal dia).	Mtr	738.98

S. No.	Description	Unit	Rate (Rs.)
2.34.1.3	250 mm nominal dia (internal dia).	Mtr.	1154.24
2.34.2	**Medium well casing pipe (CM) suitable for depth above 80 mtr and up to 250 mtr.**		
2.34.2.1	100 mm nominal dia (internal dia)	Mtr.	238.98
2.34.2.2	125 mm nominal dia (internal dia)	Mtr.	381.36
2.34.2.3	150 mm nominal dia (internal dia)	Mtr	522.03
2.34.2.4	200 mm nominal dia (internal dia)	Mtr	944.07
2.34.2.5	250 mm nominal dia (internal dia)	Mtr.	1468.64
2.35	Supply of ISI mark AC pressure pipe class 15 manufactured by MAZZA process as per IS:1592-2003 or amended up to date, for casing of tube well for following dia nominal bore, with jointing material PVC coupler as per technical specification and direction of Engineer In charge. **Rates are exclusive of GST.**		
2.35.1	125 mm nominal dia	Mtr	277.97
2.35.2	150 mm nominal dia	Mtr	492.37
2.35.3	200 mm nominal dia	Mtr	809.32
2.35.4	250 mm nominal dia	Mtr	1083.90
2.35.5	300 mm nominal dia	Mtr	1572.03
2.36	Making slots of hole size and Nos. as directed by EIC in AC pressure pipe Class 15 as per technical specification for using slotted pipe in TW casing. **Rate is exclusive of GST.**	Per 100 no.	83.05
	RCC OPEN WELLS		
2.37	Dry sinking of well true & vertical in all types of soil including sand, silt, clay, mixed up to 25% with gravel and river bed stones up to size 300 mm in any direction complete as per drawing and technical specification (depth from level of placing of cutting edge & internal dia, to be taken for measurement) rate includes all percentage of pebbles, boulders and river bed stones. (depth to be measured from ground level) **Rates are exclusive of GST.**		
2.37.1	for depth up to 5.00 m	P.M. dia P.M. depth	1248.31
2.37.2	for depth from 5.00 m to 10.0 mtr	P.M. dia P.M. depth	1743.22
2.37.3	for depth from 10.0 m to 15.0 mtr	P.M. dia P.M. depth	2091.53
2.37.4	for depth from 15.0 m to 20.0 mtr and above.	P.M. dia P.M. depth	2439.83
2.38	Wet sinking of well in all type of strata (soil & boulders in any quantity) including required operations like chiselling, air and water jetting, hoist drives, skilled divers etc. for removal of isolated obstructions and minor blasting if required and lifting of excavated material up to ground level, and spreading the same with ramming and watering within a radius of 50 m from the site of open well. Rate includes all percentage of pebbles, boulders and river bed stones. (depth to be measured from ground level) **Rates are exclusive of GST.**		

S. No.	Description	Unit	Rate (Rs.)
2.38.1	for depth up to 5.00m	P.M. dia P.M. depth	1805.93
2.38.2	for depth from 5.00m to 10.0 mtr	P.M. dia P.M. depth	2972.03
2.38.3	for depth from 10.00m to 15.0 mtr	P.M. dia P.M. depth	3769.49
2.38.4	for depth from 15.0 m to 20.0 mtr	P.M. dia P.M. depth	4494.07
2.38.5	for depth from 20.0 m to 25.0 mtr	P.M. dia P.M. depth	5460.17
2.38.6	for depth from 25.0 m to 30.0 mtr and above.	P.M. dia P.M. depth	6426.27
2.39	Earth work in excavation over areas (exceeding 30cm depth, 1.5 mtr in width and 10 SQM in plan) for construction of open well, lift up to 1.5 Mtr. including taking out the excavated soil and disposal of surplus excavated soil as directed within a lead of 50 meter. **Rates are exclusive of GST.**		
2.39.1	All kind of soil	CUM	266.10
2.39.2	Ordinary Rock	CUM	571.19
2.39.3	Hard Rock (Requiring blasting)	CUM	827.12
2.39.4	Hard Rock (Blasting Prohibited)	CUM	1148.31
2.40	Add extra over item No. 2.39.1 for every additional lift of 1.5 Mtr. or part thereof : In all kind of soils. **Rate is exclusive of GST.**	CUM	39.83
2.41	Add extra over item No. 2.39.2-4 for every additional lift of 1.5 Mtr. or part thereof : In Ordinary rock and hard rock. **Rate is exclusive of GST.**	CUM	56.78
2.42	Add 20% extra over item No. 2.39 for excavation in saturated soil where pumping or baling out of water is required, including shoring strutting where required and dewatering.		
2.43	Labour charges for horizontal boring 100 mm dia in open well in rocky strata with all types of rock cutting & drilling tools etc. including all T&P required for job including dewatering arrangement. **Rate is exclusive of GST.**	Mtr	530.51
	HAND PUMPS		
2.44	Construction of tube well from ground level & up to 100 mtr depth to accommodate housing and assembly pipe of following sizes in all type of alluvium strata unconsolidated formation such as pebbles, boulders etc. by **percussion/rotary** drilling method as per IS:2800 Part 1: 1991 and IS:2800 Part II: 1979 (both amended up to date) and technical specifications, with gravel as per IS:4097-1967 and it's packing as per IS: 2800 (Part I & II) 1979 as amended up to date (the work includes the cost of gravel & it's primary packing and packing during development, lowering of housing & strainer assembly pipes with supply and wrapping of coir-rope, wherever necessary for arresting fine sand particles and development work, but excluding the cost of housing and strainer pipe assembly). The work would be completed after obtaining sand free water. **Rates are exclusive of GST.**		
2.44.1	Nominal bore 125 mm dia.	Mtr	564.41

S. No.	Description	Unit	Rate (Rs.)
2.44.2	Add 15% extra on above item for drilling depth beyond 100 mtr, If depth of bore is more than 100 mtr.		
2.45	Construction of Tube Well up to 100 mtr. depth in all type of rocks by **DTH** system & over burden to accommodate casing pipe of following sizes in all types of soils & over burden including lowering of casing pipes, (if required) excluding cost of casing pipes, as per IS:2800 Part 1: 1991 and IS:2800 Part II: 1979 (both amended up to date) and technical specifications. The work would be completed after obtaining sand free water. The tube well should have a through out bore as per nominal dia of casing pipe. **Rates are exclusive of GST.**		
2.45.1	Nominal bore 100 mm dia.	Mtr	398.31
2.45.2	Nominal bore 125 mm dia.	Mtr	455.93
2.45.3	Add 15% extra on above item for drilling depth beyond 100 mtr, If depth of bore is more than 100 mtr.		
2.46	Construction of tube well from ground level and up to 100 mtr. depth and above of following sizes in all types of soils in alluvium strata, unconsolidated formation such as pebbles, boulders etc. by **bailing** method and without gravel packing as per IS:2800 Part 1: 1991 and IS:2800 Part II: 1979 (both amended up to date) and technical specifications. The work includes formation of cavity at bottom by development with appropriate air compressor or bailer pumping and also lowering of casing pipe but excluding cost of the casing pipe. The tube well should have a throughout bore as per nominal dia of casing pipe. The work would be completed after obtaining sand free water. **Rates are exclusive of GST.**		
2.46.1	Nominal bore 100 mm dia.	Mtr	288.98
2.46.2	Nominal bore 125 mm dia.	Mtr	316.10
2.47	Supply of ERW M.S. black casing pipe ISI marked {IS:1239(Part-1:2004)} medium of following sizes at site of work. **Rates are exclusive of GST.**		
2.47.1	100 mm dia NB (Thickness of pipe 4.5 mm & mass of tube 12.50 Kg/m)	Mtr	1089.83
2.47.2	125 mm dia NB(Thickness of pipe 4.8 mm & mass of tube 16.40 Kg/m)	Mtr	1358.47
2.48	**Providing and Lowering** of ISI mark **Medium well PVC-U** casing and screen pipe **(CM)** as per IS : 12818 : 2010 or amended up to date having pipe thickness as per IS code suitable for bore well with threading , winding with superior quality of plastic mesh & rope in three layers with end cap complete as per technical specification and direction of Engineer In charge. **Rates are exclusive of GST.**		
2.48.1	100 mm nominal dia (internal dia).	Mtr	238.98
2.48.2	125 mm nominal dia (internal dia).	Mtr	381.36
2.49	Labour charges for making slots on blank pipes made of ERW MS black pipe ISI marked of following sizes, the slotting should be as per IS:8110-1985. **Rates are exclusive of GST.**		
2.49.1	100 mm dia nominal bore	Mtr	116.95

S. No.	Description	Unit	Rate (Rs.)
1.36	Providing, lowering, laying, aligning, fixing in position and jointing at level/ depths **Ductile Iron Double Chambered Restrained Joint specials** confirming to IS 9523 : 2000 of Class K-12 with internal Cement mortar lining and external Zinc rich paint coating followed by a finishing layer of bitumen coating duly ISI marked. Joints will be of Double Chamber Restrained Type as per ISO 10804:2018 including rubber gasket confirming to IS 5382 : 1985 and locking bars & rubber gaskets etc complete as per technical specifications and direction of Engineer-in-charge, (excluding earth work). **Rates are exclusive of GST.**		
1.36.1	Upto 300 mm Diameter	Kg	**194.07**
1.36.2	Above 300 mm and up to 600 mm diameter	Kg	**203.39**
1.36.3	Above 600 mm diameter	Kg	**259.32**

S. No.	Description	Unit	Rate (Rs.)
2.49.2	125 mm dia nominal bore	Mtr	149.15
2.50	Supply & installation of GI pipe 32 mm medium class "B" with pipe sockets (heavy duty). **Rate is exclusive of GST.**	Mtr	284.75
2.51	Supply and installation of ISI marked India Mark II Hand pump set complete with cylinder & 15 connecting rods. **Rate is exclusive of GST.**	Set	11355.93
2.52	Supply and installation of ISI Marked India Mark II Hand pump set Extra-Deep (EDW) complete with cylinder and connecting rods. **Rates are exclusive of GST.**		
2.52.1	EDWHP + 20 Connecting rod.	Set	11769.49
2.52.2	EDWHP + 23 Connecting rod + 1 Weight.	Set	13160.17
2.52.3	EDWHP + 26 Connecting rod + 2 Weight.	Set	14094.07
2.52.4	EDWHP + 30 Connecting rod + 3 Weight.	Set	14428.81
2.53	Supply and installation of ISI mark connecting rod as per departmental specifications. of 3 meter length. **Rate is exclusive of GST.**	Each	152.54
2.54	Installation of India Mark II/III E.D. I & II hand pump set complete on existing platform. **Rate is exclusive of GST.**	Each	728.81
2.55	Construction of 185 cm. dia platform as per approved design & drawing of UNICEF. **Rate is exclusive of GST.**	Each	3083.05

Chapter 3

RCC Reservoirs

Note : All rates are exclusive of GST.

Sr. No.	Description	Unit	Rate (Rs.)
3.1	**Construction and commissioning of RCC flat slab Over Head Service Reservoir of following capacity and staging including all material and labour charges as per the Scope of work and Technical Specification, consisting of the following main activities: -** a) Topographic survey, preparation of site contour plan, conducting SBC test and its approval from department before construction. Submission and approval of concrete mix design and water quality test report for water to be used in construction. b) Excavation in all types of soil, PCC below foundation, all RCC Work, Plinth protection all around the structure including all material, labour, shuttering, scaffolding etc. c) OHSR shall be provided with adequate plinth protection all around the structure in a width starting from edge of structure at GL and extending at least up to 1.0m beyond the edge of outer most projection of OHSR. The plinth protection shall consist of 150mm thick PCC in M-15 grade concrete laid over 150mm thick layer of compacted soil. d) Providing and applying two coats of food grade epoxy paint on the inside surface roof slab, and 600 mm height of the vertical wall. e) Successfully hydro test and water tightness test as per I.S. code. f) Providing and applying three coats of anti-carbonation paint on the top surface of the roof slab. g) Providing and applying three coats of cement-based paint on the external surface of the container, balcony, cone wall, columns & beams etc. h) Providing and fixing SS-304 ventilator, SS 304 manhole frame and cover and SS-304 ladder from top Slab to bottom Slab inside container. i) Providing and fixing of MS section ladder from the last landing to balcony and MS ladder with safety cage from balcony to top slab. j) Providing and fixing water level indicator (float type). k) Providing and fixing of hand railing all around the balcony, roof and staircase, consisting of 25mm diameter Class-B GI pipe in two rows and 1000 mm high, 50X50X6mm angle iron vertical post at a maximum spacing of 1500mm centres. l) All MS parts to be painted with two coats of the enamel paint over the primer coat of red oxide. m) Providing and fixing of 150mm wide PVC water bar for the construction joints in the container (vertical wall & cone wall). n) Providing one Aluminium portable ladder of appropriate length to access first landing (3.5 to 4.5m above GL) from ground. o) Lighting arrestor consisting of providing and fixing of 2 Nos. of chemical earthing and connecting it to the conical cover of SS ventilator with two separate GI strips of 50mmX3mm p) CI/DI puddle collar shall be fixed in the bottom/slab for connecting inlet, outlet, overflow and washout pipe of the reservoir. q) Painting the name of the scheme and other details on the reservoir, and any other work related to structure as per the directions of Engineer-in- Charge, Technical Specification and Scope of Work. r) **Inlet, outlet, overflow, washout pipes and valves are not included in this work, provision for the same shall be taken separately.** **Rates are exclusive of GST.**		

Sr. No.	Description	Unit	Rate (Rs.)
3.1.1	**Rates for RCC OHSR,SBC 7 T/sqm, SEISMIC ZONE-II & STAGING 15 M**		
3.1.1.1	50 KL capacity	Litre	**35.33**
3.1.1.2	75 KL capacity	Litre	**29.14**
3.1.2	**Rates for RCC OHSR,SBC 7 T/sqm, SEISMIC ZONE-III & STAGING 15 M**		
3.1.2.1	50 KL capacity	Litre	**36.68**
3.1.2.2	75 KL capacity	Litre	**29.90**
3.1.3	**Rates for RCC OHSR,SBC 7 T/sqm, SEISMIC ZONE-IV & STAGING 15 M**		
3.1.3.1	50 KL capacity	Litre	**38.95**
3.1.3.2	75 KL capacity	Litre	**32.05**
3.1.4	**Rates for RCC OHSR,SBC 10 T/sqm, SEISMIC ZONE-II & STAGING 15 M**		
3.1.4.1	50 KL capacity	Litre	**32.34**
3.1.4.2	75 KL capacity	Litre	**25.30**
3.1.5	**Rates for RCC OHSR,SBC 10 T/sqm, SEISMIC ZONE-III & STAGING 15 M**		
3.1.5.1	50 KL capacity	Litre	**33.01**
3.1.5.2	75 KL capacity	Litre	**25.93**
3.1.6	**Rates for RCC OHSR,SBC 10 T/sqm, SEISMIC ZONE-IV & STAGING 15 M**		
3.1.6.1	50 KL capacity	Litre	**33.66**
3.1.6.2	75 KL capacity	Litre	**26.36**
3.1.7	**Rates for RCC OHSR,SBC 18 T/sqm, SEISMIC ZONE-II & STAGING 15 M**		
3.1.7.1	50 KL capacity	Litre	**31.09**
3.1.7.2	75 KL capacity	Litre	**24.32**
3.1.8	**Rates for RCC OHSR,SBC 18 T/sqm, SEISMIC ZONE-III & STAGING 15 M**		
3.1.8.1	50 KL capacity	Litre	**32.04**
3.1.8.2	75 KL capacity	Litre	**25.04**
3.1.9	**Rates for RCC OHSR,SBC 18 T/sqm, SEISMIC ZONE-IV & STAGING 15 M**		
3.1.9.1	50 KL capacity	Litre	**32.64**
3.1.9.2	75 KL capacity	Litre	**25.57**
3.2	***Construction and commissioning of RCC INTZE type Over Head Service Reservoir of following capacity and staging as per the Scope of work and Technical specifications, consisting of the following main activities: -***		

Sr. No.	Description	Unit	Rate (Rs.)
	a) Topographic survey, preparation of site contour plan, conducting SBC test and its approval from department before construction. Submission and approval of concrete mix design and water quality test report for water to be used in construction. b) Excavation in all types of soil, PCC below foundation, all RCC Work, Plinth protection all around the structure including all material, labour, shuttering, scaffolding etc. c) OHSR shall be provided with adequate plinth protection all around the structure in a width starting from edge of structure at GL and extending at least up to 1.0m beyond the edge of outer most projection of OHSR. The plinth protection shall consist of 150mm thick PCC in M-15 grade concrete laid over 150mm thick layer of compacted soil. d) Providing and applying two coats of food grade epoxy paint on the inside surface on the top dome, edge beam and 600 mm height of the vertical wall. e) Conducting successfully hydro test and water tightness test as per I.S. code. f) Providing and applying three coats of anti-carbonation paint on the top surface of the Top Dome. g) Providing and applying three coats of cement-based paint on the external surface of the container, balcony, cone wall, columns & beams etc.. h) Providing and fixing SS-304 ventilator, SS 304 manhole frame and cover and SS-304 ladder from top dome/Slab to bottom dome/Slab inside container. i) Providing and fixing of MS section ladder from the last landing to balcony having railing all around it and MS ladder with safety cage from balcony to top dome/slab. j) Providing and fixing water level indicator (float type). k) Providing and fixing of hand railing all around the balcony, top dome and staircase consisting of 25mm diameter Class-B GI pipe in two rows and 1000 mm high, 50X50X6mm angle iron vertical post at a maximum spacing of 1500mm centres. l) All MS parts to be painted with two coats of the enamel paint over the primer coat of red oxide. m) Providing and fixing of 150mm wide PVC water bar for the construction joints in the container (vertical wall & cone wall). n) Providing one Aluminium portable ladder of appropriate length to access first landing (3.5 to 4.5m above GL) from ground. o) Lighting arrestor consisting of providing and fixing of 2 Nos. of chemical earthing and connecting it to the conical cover of SS ventilator with two separate GI strips of 50mmX3mm. p) CI/DI puddle collar shall be fixed in the bottom dome/ slab for connecting inlet, outlet, overflow and washout pipe of the reservoir. q) Painting the name of the scheme and other details on the reservoir, and any other work related to structure as per the directions of Engineer-in- Charge, Technical Specification and Scope of Work. r) ***Inlet, outlet, overflow, washout pipes and valves are not included in this work, provision for the same shall be taken separately.*** **Rates are exclusive of GST.**		
3.2.1	**Rates for RCC OHSR,SBC 7 T/sqm, SEISMIC ZONE-II & STAGING 18 M**		
3.2.1.1	100 KL capacity	Litre	**26.09**
3.2.1.2	150KL capacity	Litre	**20.38**
3.2.1.3	200KL capacity	Litre	**17.81**
3.2.1.4	250KL capacity	Litre	**17.33**
3.2.1.5	300KL capacity	Litre	**17.86**
3.2.1.6	400KL capacity	Litre	**16.23**
3.2.1.7	500KL capacity	Litre	**15.49**

Sr. No.	Description	Unit	Rate (Rs.)
3.2.1.8	600 KL capacity	Litre	13.73
3.2.1.9	700 KL capacity	Litre	13.14
3.2.1.10	800 KL capacity	Litre	12.66
3.2.1.11	900 KL capacity	Litre	12.25
3.2.1.12	1000 KL capacity	Litre	11.89
3.2.1.13	1250 KL capacity	Litre	11.16
3.2.1.14	1500 KL capacity	Litre	10.56
3.2.1.15	1750 KL capacity	Litre	10.05
3.2.1.16	2000 KL capacity	Litre	9.63
3.2.2	**Rates for RCC OHSR,SBC 7 T/sqm, SEISMIC ZONE-III & STAGING 18 M**		
3.2.2.1	100 KL capacity	Litre	26.59
3.2.2.2	150KL capacity	Litre	21.02
3.2.2.3	200KL capacity	Litre	18.32
3.2.2.4	250KL capacity	Litre	18.03
3.2.2.5	300KL capacity	Litre	18.31
3.2.2.6	400KL capacity	Litre	16.69
3.2.2.7	500KL capacity	Litre	15.93
3.2.2.8	600 KL capacity	Litre	14.03
3.2.2.9	700 KL capacity	Litre	13.43
3.2.2.10	800 KL capacity	Litre	12.94
3.2.2.11	900 KL capacity	Litre	12.51
3.2.2.12	1000 KL capacity	Litre	12.14
3.2.2.13	1250 KL capacity	Litre	11.41
3.2.2.14	1500 KL capacity	Litre	10.82
3.2.2.15	1750 KL capacity	Litre	10.36
3.2.2.16	2000 KL capacity	Litre	9.98
3.2.3	**Rates for RCC OHSR,SBC 7 T/sqm, SEISMIC ZONE-IV & STAGING 18 M**		
3.2.3.1	100 KL capacity	Litre	28.27
3.2.3.2	150KL capacity	Litre	22.41
3.2.3.3	200KL capacity	Litre	19.39
3.2.3.4	250KL capacity	Litre	19.27
3.2.3.5	300KL capacity	Litre	19.46
3.2.3.6	400KL capacity	Litre	17.46
3.2.3.7	500KL capacity	Litre	16.46
3.2.3.8	600 KL capacity	Litre	15.03
3.2.3.9	700 KL capacity	Litre	14.28
3.2.3.10	800 KL capacity	Litre	13.66
3.2.3.11	900 KL capacity	Litre	13.13
3.2.3.12	1000 KL capacity	Litre	12.68
3.2.3.13	1250 KL capacity	Litre	11.76
3.2.3.14	1500 KL capacity	Litre	11.14
3.2.3.15	1750 KL capacity	Litre	10.59
3.2.3.16	2000 KL capacity	Litre	10.14
3.2.4	**Rates for RCC OHSR,SBC 10 T/sqm, SEISMIC ZONE-II & STAGING 18 M**		
3.2.4.1	100 KL capacity	Litre	23.33
3.2.4.2	150KL capacity	Litre	17.98
3.2.4.3	200KL capacity	Litre	16.04
3.2.4.4	250KL capacity	Litre	15.31
3.2.4.5	300KL capacity	Litre	15.23
3.2.4.6	400KL capacity	Litre	12.64

Sr. No.	Description	Unit	Rate (Rs.)
3.2.4.7	500KL capacity	Litre	12.49
3.2.4.8	600 KL capacity	Litre	11.18
3.2.4.9	700 KL capacity	Litre	10.57
3.2.4.10	800 KL capacity	Litre	10.08
3.2.4.11	900 KL capacity	Litre	9.65
3.2.4.12	1000 KL capacity	Litre	9.30
3.2.4.13	1250 KL capacity	Litre	8.57
3.2.4.14	1500 KL capacity	Litre	8.03
3.2.4.15	1750 KL capacity	Litre	7.58
3.2.4.16	2000 KL capacity	Litre	7.23
3.2.5	**Rates for RCC OHSR,SBC 10 T/sqm, SEISMIC ZONE-III & STAGING 18 M**		
3.2.5.1	100 KL capacity	Litre	24.63
3.2.5.2	150KL capacity	Litre	19.11
3.2.5.3	200KL capacity	Litre	17.03
3.2.5.4	250KL capacity	Litre	16.48
3.2.5.5	300KL capacity	Litre	16.47
3.2.5.6	400KL capacity	Litre	13.75
3.2.5.7	500KL capacity	Litre	13.42
3.2.5.8	600 KL capacity	Litre	12.12
3.2.5.9	700 KL capacity	Litre	11.48
3.2.5.10	800 KL capacity	Litre	10.96
3.2.5.11	900 KL capacity	Litre	10.52
3.2.5.12	1000 KL capacity	Litre	10.14
3.2.5.13	1250 KL capacity	Litre	9.39
3.2.5.14	1500 KL capacity	Litre	8.81
3.2.5.15	1750 KL capacity	Litre	8.35
3.2.5.16	2000 KL capacity	Litre	7.97
3.2.6	**Rates for RCC OHSR,SBC 10 T/sqm, SEISMIC ZONE-IV & STAGING 18 M**		
3.2.6.1	100 KL capacity	Litre	26.90
3.2.6.2	150KL capacity	Litre	21.17
3.2.6.3	200KL capacity	Litre	18.36
3.2.6.4	250KL capacity	Litre	18.41
3.2.6.5	300KL capacity	Litre	18.04
3.2.6.6	400KL capacity	Litre	14.90
3.2.6.7	500KL capacity	Litre	14.44
3.2.6.8	600 KL capacity	Litre	12.80
3.2.6.9	700 KL capacity	Litre	12.08
3.2.6.10	800 KL capacity	Litre	11.50
3.2.6.11	900 KL capacity	Litre	11.01
3.2.6.12	1000 KL capacity	Litre	10.59
3.2.6.13	1250 KL capacity	Litre	9.75
3.2.6.14	1500 KL capacity	Litre	9.11
3.2.6.15	1750 KL capacity	Litre	8.61
3.2.6.16	2000 KL capacity	Litre	8.19
3.2.7	**Rates for RCC OHSR,SBC 18 T/sqm, SEISMIC ZONE-II & STAGING 18 M**		
3.2.7.1	100 KL capacity	Litre	21.10
3.2.7.2	150KL capacity	Litre	16.47
3.2.7.3	200KL capacity	Litre	14.62
3.2.7.4	250KL capacity	Litre	13.55
3.2.7.5	300KL capacity	Litre	13.35

Sr. No.	Description	Unit	Rate (Rs.)
3.2.7.6	400KL capacity	Litre	11.81
3.2.7.7	500KL capacity	Litre	10.90
3.2.7.8	600 KL capacity	Litre	10.25
3.2.7.9	700 KL capacity	Litre	9.68
3.2.7.10	800 KL capacity	Litre	9.21
3.2.7.11	900 KL capacity	Litre	8.81
3.2.7.12	1000 KL capacity	Litre	8.48
3.2.7.13	1250 KL capacity	Litre	7.81
3.2.7.14	1500 KL capacity	Litre	7.30
3.2.7.15	1750 KL capacity	Litre	6.89
3.2.7.16	2000 KL capacity	Litre	6.56
3.2.8	**Rates for RCC OHSR,SBC 18 T/sqm, SEISMIC ZONE-III & STAGING 18 M**		
3.2.8.1	100 KL capacity	Litre	21.54
3.2.8.2	150KL capacity	Litre	16.97
3.2.8.3	200KL capacity	Litre	14.97
3.2.8.4	250KL capacity	Litre	14.14
3.2.8.5	300KL capacity	Litre	13.71
3.2.8.6	400KL capacity	Litre	12.24
3.2.8.7	500KL capacity	Litre	11.31
3.2.8.8	600 KL capacity	Litre	10.69
3.2.8.9	700 KL capacity	Litre	10.11
3.2.8.10	800 KL capacity	Litre	9.63
3.2.8.11	900 KL capacity	Litre	9.22
3.2.8.12	1000 KL capacity	Litre	8.87
3.2.8.13	1250 KL capacity	Litre	8.18
3.2.8.14	1500 KL capacity	Litre	7.65
3.2.8.15	1750 KL capacity	Litre	7.23
3.2.8.16	2000 KL capacity	Litre	6.89
3.2.9	**Rates for RCC OHSR,SBC 18 T/sqm, SEISMIC ZONE-IV & STAGING 18 M**		
3.2.9.1	100 KL capacity	Litre	22.75
3.2.9.2	150KL capacity	Litre	17.69
3.2.9.3	200KL capacity	Litre	15.60
3.2.9.4	250KL capacity	Litre	15.27
3.2.9.5	300KL capacity	Litre	14.67
3.2.9.6	400KL capacity	Litre	12.85
3.2.9.7	500KL capacity	Litre	11.83
3.2.9.8	600 KL capacity	Litre	11.14
3.2.9.9	700 KL capacity	Litre	10.54
3.2.9.10	800 KL capacity	Litre	10.04
3.2.9.11	900 KL capacity	Litre	9.64
3.2.9.12	1000 KL capacity	Litre	9.27
3.2.9.13	1250 KL capacity	Litre	8.56
3.2.9.14	1500 KL capacity	Litre	8.02
3.2.9.15	1750 KL capacity	Litre	7.58
3.2.9.16	2000 KL capacity	Litre	7.23
3.2.10	**Rates for RCC OHSR,SBC 7 T/sqm, SEISMIC ZONE-II & STAGING 20 M**		
3.2.10.1	100 KL capacity	Litre	28.03
3.2.10.2	150KL capacity	Litre	21.96
3.2.10.3	200KL capacity	Litre	18.94
3.2.10.4	250KL capacity	Litre	18.19

Sr. No.	Description	Unit	Rate (Rs.)
3.2.10.5	300KL capacity	Litre	18.71
3.2.10.6	400KL capacity	Litre	16.88
3.2.10.7	500KL capacity	Litre	15.86
3.2.10.8	600 KL capacity	Litre	14.58
3.2.10.9	700 KL capacity	Litre	13.89
3.2.10.10	800 KL capacity	Litre	13.32
3.2.10.11	900 KL capacity	Litre	12.85
3.2.10.12	1000 KL capacity	Litre	12.42
3.2.10.13	1250 KL capacity	Litre	11.53
3.2.10.14	1500 KL capacity	Litre	10.82
3.2.10.15	1750 KL capacity	Litre	10.27
3.2.10.16	2000 KL capacity	Litre	9.82
3.2.11	**Rates for RCC OHSR,SBC 7 T/sqm, SEISMIC ZONE-III & STAGING 20 M**		
3.2.11.1	100 KL capacity	Litre	28.07
3.2.11.2	150KL capacity	Litre	22.26
3.2.11.3	200KL capacity	Litre	19.19
3.2.11.4	250KL capacity	Litre	18.81
3.2.11.5	300KL capacity	Litre	19.22
3.2.11.6	400KL capacity	Litre	17.35
3.2.11.7	500KL capacity	Litre	16.29
3.2.11.8	600 KL capacity	Litre	14.61
3.2.11.9	700 KL capacity	Litre	13.97
3.2.11.10	800 KL capacity	Litre	13.44
3.2.11.11	900 KL capacity	Litre	12.99
3.2.11.12	1000 KL capacity	Litre	12.60
3.2.11.13	1250 KL capacity	Litre	11.81
3.2.11.14	1500 KL capacity	Litre	11.20
3.2.11.15	1750 KL capacity	Litre	10.71
3.2.11.16	2000 KL capacity	Litre	10.31
3.2.12	**Rates for RCC OHSR,SBC 7 T/sqm, SEISMIC ZONE-IV & STAGING 20 M**		
3.2.12.1	100 KL capacity	Litre	29.88
3.2.12.2	150KL capacity	Litre	24.00
3.2.12.3	200KL capacity	Litre	20.38
3.2.12.4	250KL capacity	Litre	20.42
3.2.12.5	300KL capacity	Litre	20.54
3.2.12.6	400KL capacity	Litre	18.41
3.2.12.7	500KL capacity	Litre	17.06
3.2.12.8	600 KL capacity	Litre	15.54
3.2.12.9	700 KL capacity	Litre	14.75
3.2.12.10	800 KL capacity	Litre	14.08
3.2.12.11	900 KL capacity	Litre	13.54
3.2.12.12	1000 KL capacity	Litre	13.06
3.2.12.13	1250 KL capacity	Litre	12.11
3.2.12.14	1500 KL capacity	Litre	11.38
3.2.12.15	1750 KL capacity	Litre	10.80
3.2.12.16	2000 KL capacity	Litre	10.32
3.2.13	**Rates for RCC OHSR,SBC 10 T/sqm, SEISMIC ZONE-II & STAGING 20 M**		
3.2.13.1	100 KL capacity	Litre	25.43
3.2.13.2	150KL capacity	Litre	19.53
3.2.13.3	200KL capacity	Litre	17.10

Sr. No.	Description	Unit	Rate (Rs.)
3.2.13.4	250KL capacity	Litre	16.18
3.2.13.5	300KL capacity	Litre	16.02
3.2.13.6	400KL capacity	Litre	14.22
3.2.13.7	500KL capacity	Litre	12.97
3.2.13.8	600 KL capacity	Litre	12.03
3.2.13.9	700 KL capacity	Litre	11.29
3.2.13.10	800 KL capacity	Litre	10.68
3.2.13.11	900 KL capacity	Litre	10.17
3.2.13.12	1000 KL capacity	Litre	9.75
3.2.13.13	1250 KL capacity	Litre	8.89
3.2.13.14	1500 KL capacity	Litre	8.24
3.2.13.15	1750 KL capacity	Litre	7.74
3.2.13.16	2000 KL capacity	Litre	7.32
3.2.14	**Rates for RCC OHSR,SBC 10 T/sqm, SEISMIC ZONE-III & STAGING 20 M**		
3.2.14.1	100 KL capacity	Litre	26.16
3.2.14.2	150KL capacity	Litre	20.13
3.2.14.3	200KL capacity	Litre	17.84
3.2.14.4	250KL capacity	Litre	17.39
3.2.14.5	300KL capacity	Litre	17.25
3.2.14.6	400KL capacity	Litre	15.37
3.2.14.7	500KL capacity	Litre	14.09
3.2.14.8	600 KL capacity	Litre	12.56
3.2.14.9	700 KL capacity	Litre	11.91
3.2.14.10	800 KL capacity	Litre	11.22
3.2.14.11	900 KL capacity	Litre	10.62
3.2.14.12	1000 KL capacity	Litre	10.24
3.2.14.13	1250 KL capacity	Litre	9.47
3.2.14.14	1500 KL capacity	Litre	8.88
3.2.14.15	1750 KL capacity	Litre	8.42
3.2.14.16	2000 KL capacity	Litre	8.03
3.2.15	**Rates for RCC OHSR,SBC 10 T/sqm, SEISMIC ZONE-IV & STAGING 20 M**		
3.2.15.1	100 KL capacity	Litre	28.29
3.2.15.2	150KL capacity	Litre	22.38
3.2.15.3	200KL capacity	Litre	19.25
3.2.15.4	250KL capacity	Litre	19.47
3.2.15.5	300KL capacity	Litre	19.06
3.2.15.6	400KL capacity	Litre	16.67
3.2.15.7	500KL capacity	Litre	15.24
3.2.15.8	600 KL capacity	Litre	13.08
3.2.15.9	700 KL capacity	Litre	12.40
3.2.15.10	800 KL capacity	Litre	11.84
3.2.15.11	900 KL capacity	Litre	11.37
3.2.15.12	1000 KL capacity	Litre	10.96
3.2.15.13	1250 KL capacity	Litre	10.15
3.2.15.14	1500 KL capacity	Litre	9.53
3.2.15.15	1750 KL capacity	Litre	9.03
3.2.15.16	2000 KL capacity	Litre	8.62
3.2.16	**Rates for RCC OHSR,SBC 18 T/sqm, SEISMIC ZONE-II & STAGING 20 M**		
3.2.16.1	100 KL capacity	Litre	23.06
3.2.16.2	150KL capacity	Litre	17.86

Sr. No.	Description	Unit	Rate (Rs.)
3.2.16.3	200KL capacity	Litre	15.53
3.2.16.4	250KL capacity	Litre	14.45
3.2.16.5	300KL capacity	Litre	14.11
3.2.16.6	400KL capacity	Litre	12.35
3.2.16.7	500KL capacity	Litre	11.41
3.2.16.8	600 KL capacity	Litre	10.85
3.2.16.9	700 KL capacity	Litre	10.20
3.2.16.10	800 KL capacity	Litre	9.67
3.2.16.11	900 KL capacity	Litre	9.22
3.2.16.12	1000 KL capacity	Litre	8.84
3.2.16.13	1250 KL capacity	Litre	8.08
3.2.16.14	1500 KL capacity	Litre	7.51
3.2.16.15	1750 KL capacity	Litre	7.06
3.2.16.16	2000 KL capacity	Litre	6.69
3.2.17	**Rates for RCC OHSR,SBC 18 T/sqm, SEISMIC ZONE-III & STAGING 20 M**		
3.2.17.1	100 KL capacity	Litre	23.03
3.2.17.2	150KL capacity	Litre	17.98
3.2.17.3	200KL capacity	Litre	15.85
3.2.17.4	250KL capacity	Litre	15.00
3.2.17.5	300KL capacity	Litre	14.53
3.2.17.6	400KL capacity	Litre	12.76
3.2.17.7	500KL capacity	Litre	11.81
3.2.17.8	600 KL capacity	Litre	11.47
3.2.17.9	700 KL capacity	Litre	10.83
3.2.17.10	800 KL capacity	Litre	10.30
3.2.17.11	900 KL capacity	Litre	9.85
3.2.17.12	1000 KL capacity	Litre	9.47
3.2.17.13	1250 KL capacity	Litre	8.70
3.2.17.14	1500 KL capacity	Litre	8.13
3.2.17.15	1750 KL capacity	Litre	7.67
3.2.17.16	2000 KL capacity	Litre	7.30
3.2.18	**Rates for RCC OHSR,SBC 18 T/sqm, SEISMIC ZONE-IV & STAGING 20 M**		
3.2.18.1	100 KL capacity	Litre	24.05
3.2.18.2	150KL capacity	Litre	18.54
3.2.18.3	200KL capacity	Litre	16.45
3.2.18.4	250KL capacity	Litre	16.03
3.2.18.5	300KL capacity	Litre	15.47
3.2.18.6	400KL capacity	Litre	13.47
3.2.18.7	500KL capacity	Litre	12.37
3.2.18.8	600 KL capacity	Litre	11.89
3.2.18.9	700 KL capacity	Litre	11.25
3.2.18.10	800 KL capacity	Litre	10.73
3.2.18.11	900 KL capacity	Litre	10.27
3.2.18.12	1000 KL capacity	Litre	9.90
3.2.18.13	1250 KL capacity	Litre	9.13
3.2.18.14	1500 KL capacity	Litre	8.54
3.2.18.15	1750 KL capacity	Litre	8.08
3.2.18.16	2000 KL capacity	Litre	7.70
3.2.19	**Rates for RCC OHSR,SBC 7 T/sqm, SEISMIC ZONE-II & STAGING 22 M**		
3.2.19.1	100 KL capacity	Litre	29.68

Sr. No.	Description	Unit	Rate (Rs.)
3.2.19.2	150KL capacity	Litre	22.72
3.2.19.3	200KL capacity	Litre	19.69
3.2.19.4	250KL capacity	Litre	19.19
3.2.19.5	300KL capacity	Litre	19.21
3.2.19.6	400KL capacity	Litre	17.26
3.2.19.7	500KL capacity	Litre	16.29
3.2.19.8	600 KL capacity	Litre	14.97
3.2.19.9	700 KL capacity	Litre	14.23
3.2.19.10	800 KL capacity	Litre	13.61
3.2.19.11	900 KL capacity	Litre	13.09
3.2.19.12	1000 KL capacity	Litre	12.64
3.2.19.13	1250 KL capacity	Litre	11.72
3.2.19.14	1500 KL capacity	Litre	10.98
3.2.19.15	1750 KL capacity	Litre	10.40
3.2.19.16	2000 KL capacity	Litre	9.92
3.2.20	**Rates for RCC OHSR,SBC 7 T/sqm, SEISMIC ZONE-III & STAGING 22 M**		
3.2.20.1	100 KL capacity	Litre	29.69
3.2.20.2	150KL capacity	Litre	23.00
3.2.20.3	200KL capacity	Litre	19.97
3.2.20.4	250KL capacity	Litre	19.49
3.2.20.5	300KL capacity	Litre	19.74
3.2.20.6	400KL capacity	Litre	17.74
3.2.20.7	500KL capacity	Litre	16.71
3.2.20.8	600 KL capacity	Litre	15.16
3.2.20.9	700 KL capacity	Litre	14.44
3.2.20.10	800 KL capacity	Litre	13.84
3.2.20.11	900 KL capacity	Litre	13.33
3.2.20.12	1000 KL capacity	Litre	12.90
3.2.20.13	1250 KL capacity	Litre	12.02
3.2.20.14	1500 KL capacity	Litre	11.34
3.2.20.15	1750 KL capacity	Litre	10.80
3.2.20.16	2000 KL capacity	Litre	10.35
3.2.21	**Rates for RCC OHSR,SBC 7 T/sqm, SEISMIC ZONE-IV & STAGING 22 M**		
3.2.21.1	100 KL capacity	Litre	31.07
3.2.21.2	150KL capacity	Litre	24.87
3.2.21.3	200KL capacity	Litre	20.86
3.2.21.4	250KL capacity	Litre	20.84
3.2.21.5	300KL capacity	Litre	21.21
3.2.21.6	400KL capacity	Litre	18.54
3.2.21.7	500KL capacity	Litre	17.32
3.2.21.8	600 KL capacity	Litre	15.80
3.2.21.9	700 KL capacity	Litre	14.97
3.2.21.10	800 KL capacity	Litre	14.30
3.2.21.11	900 KL capacity	Litre	13.72
3.2.21.12	1000 KL capacity	Litre	13.22
3.2.21.13	1250 KL capacity	Litre	12.23
3.2.21.14	1500 KL capacity	Litre	11.47
3.2.21.15	1750 KL capacity	Litre	10.87
3.2.21.16	2000 KL capacity	Litre	10.38
3.2.22	**Rates for RCC OHSR,SBC 10 T/sqm, SEISMIC ZONE-II & STAGING 22 M**		

Sr. No.	Description	Unit	Rate (Rs.)
3.2.22.1	100 KL capacity	Litre	27.38
3.2.22.2	150KL capacity	Litre	20.57
3.2.22.3	200KL capacity	Litre	18.14
3.2.22.4	250KL capacity	Litre	17.18
3.2.22.5	300KL capacity	Litre	16.61
3.2.22.6	400KL capacity	Litre	14.63
3.2.22.7	500KL capacity	Litre	13.34
3.2.22.8	600 KL capacity	Litre	12.08
3.2.22.9	700 KL capacity	Litre	11.33
3.2.22.10	800 KL capacity	Litre	10.73
3.2.22.11	900 KL capacity	Litre	10.22
3.2.22.12	1000 KL capacity	Litre	9.79
3.2.22.13	1250 KL capacity	Litre	8.93
3.2.22.14	1500 KL capacity	Litre	8.29
3.2.22.15	1750 KL capacity	Litre	7.78
3.2.22.16	2000 KL capacity	Litre	7.36
3.2.23	**Rates for RCC OHSR,SBC 10 T/sqm, SEISMIC ZONE-III & STAGING 22 M**		
3.2.23.1	100 KL capacity	Litre	27.65
3.2.23.2	150KL capacity	Litre	20.97
3.2.23.3	200KL capacity	Litre	18.49
3.2.23.4	250KL capacity	Litre	17.90
3.2.23.5	300KL capacity	Litre	17.84
3.2.23.6	400KL capacity	Litre	15.69
3.2.23.7	500KL capacity	Litre	14.39
3.2.23.8	600 KL capacity	Litre	13.32
3.2.23.9	700 KL capacity	Litre	12.52
3.2.23.10	800 KL capacity	Litre	11.85
3.2.23.11	900 KL capacity	Litre	11.35
3.2.23.12	1000 KL capacity	Litre	10.93
3.2.23.13	1250 KL capacity	Litre	10.08
3.2.23.14	1500 KL capacity	Litre	9.42
3.2.23.15	1750 KL capacity	Litre	8.92
3.2.23.16	2000 KL capacity	Litre	8.48
3.2.24	**Rates for RCC OHSR,SBC 10 T/sqm, SEISMIC ZONE-IV & STAGING 22 M**		
3.2.24.1	100 KL capacity	Litre	29.93
3.2.24.2	150KL capacity	Litre	22.90
3.2.24.3	200KL capacity	Litre	19.81
3.2.24.4	250KL capacity	Litre	20.02
3.2.24.5	300KL capacity	Litre	19.60
3.2.24.6	400KL capacity	Litre	16.98
3.2.24.7	500KL capacity	Litre	15.55
3.2.24.8	600 KL capacity	Litre	14.68
3.2.24.9	700 KL capacity	Litre	13.81
3.2.24.10	800 KL capacity	Litre	13.18
3.2.24.11	900 KL capacity	Litre	12.64
3.2.24.12	1000 KL capacity	Litre	12.18
3.2.24.13	1250 KL capacity	Litre	11.26
3.2.24.14	1500 KL capacity	Litre	10.56
3.2.24.15	1750 KL capacity	Litre	10.00
3.2.24.16	2000 KL capacity	Litre	9.55

Sr. No.	Description	Unit	Rate (Rs.)
3.2.25	**Rates for RCC OHSR,SBC 18 T/sqm, SEISMIC ZONE-II & STAGING 22 M**		
3.2.25.1	100 KL capacity	Litre	**24.57**
3.2.25.2	150KL capacity	Litre	**18.97**
3.2.25.3	200KL capacity	Litre	**16.39**
3.2.25.4	250KL capacity	Litre	**15.46**
3.2.25.5	300KL capacity	Litre	**14.73**
3.2.25.6	400KL capacity	Litre	**12.83**
3.2.25.7	500KL capacity	Litre	**11.80**
3.2.25.8	600 KL capacity	Litre	**10.83**
3.2.25.9	700 KL capacity	Litre	**10.14**
3.2.25.10	800 KL capacity	Litre	**9.58**
3.2.25.11	900 KL capacity	Litre	**9.11**
3.2.25.12	1000 KL capacity	Litre	**8.70**
3.2.25.13	1250 KL capacity	Litre	**7.92**
3.2.25.14	1500 KL capacity	Litre	**7.32**
3.2.25.15	1750 KL capacity	Litre	**6.85**
3.2.25.16	2000 KL capacity	Litre	**6.47**
3.2.26	**Rates for RCC OHSR,SBC 18 T/sqm, SEISMIC ZONE-III & STAGING 22 M**		
3.2.26.1	100 KL capacity	Litre	**24.84**
3.2.26.2	150KL capacity	Litre	**18.92**
3.2.26.3	200KL capacity	Litre	**16.51**
3.2.26.4	250KL capacity	Litre	**15.71**
3.2.26.5	300KL capacity	Litre	**15.21**
3.2.26.6	400KL capacity	Litre	**13.26**
3.2.26.7	500KL capacity	Litre	**12.21**
3.2.26.8	600 KL capacity	Litre	**11.27**
3.2.26.9	700 KL capacity	Litre	**10.58**
3.2.26.10	800 KL capacity	Litre	**10.02**
3.2.26.11	900 KL capacity	Litre	**9.55**
3.2.26.12	1000 KL capacity	Litre	**9.15**
3.2.26.13	1250 KL capacity	Litre	**8.36**
3.2.26.14	1500 KL capacity	Litre	**7.76**
3.2.26.15	1750 KL capacity	Litre	**7.29**
3.2.26.16	2000 KL capacity	Litre	**6.90**
3.2.27	**Rates for RCC OHSR,SBC 18 T/sqm, SEISMIC ZONE-IV & STAGING 22 M**		
3.2.27.1	100 KL capacity	Litre	**25.36**
3.2.27.2	150KL capacity	Litre	**19.50**
3.2.27.3	200KL capacity	Litre	**17.10**
3.2.27.4	250KL capacity	Litre	**16.52**
3.2.27.5	300KL capacity	Litre	**16.05**
3.2.27.6	400KL capacity	Litre	**13.85**
3.2.27.7	500KL capacity	Litre	**12.72**
3.2.27.8	600 KL capacity	Litre	**11.75**
3.2.27.9	700 KL capacity	Litre	**11.07**
3.2.27.10	800 KL capacity	Litre	**10.52**
3.2.27.11	900 KL capacity	Litre	**10.04**
3.2.27.12	1000 KL capacity	Litre	**9.65**
3.2.27.13	1250 KL capacity	Litre	**8.86**
3.2.27.14	1500 KL capacity	Litre	**8.26**
3.2.27.15	1750 KL capacity	Litre	**7.79**

Sr. No.	Description	Unit	Rate (Rs.)
3.2.27.16	2000 KL capacity	Litre	**7.40**
3.2.28	For staging above 22 Mtr (only in exceptional condition where hydraulics not permit) add 2% per Mtr above 22 Mtr.		
3.3	***Construction of RCC* (Flat slab type) Clear Water Reservoir** of following capacity as per the Scope of work and Technical specification, consisting of the following main activities: - a) Topographic survey, preparation of site contour plan, conducting SBC test and its approval from department before construction. Submission and approval of concrete mix design and water quality test report for water to be used in construction. b) Excavation in all types of soil, PCC below foundation & all RCC Work including all labour and material charges including providing and fixing of accessories such as SS ladder, SS manhole frame and covers, water level indicator (float type), SS ventilator with SS screen, float valve, puddle collars, G.I. pipe railing around walk way, Top Dome/Slab, Staircase. c) CWR shall be provided with adequate plinth protection all around the structure in a width starting from edge of structure at GL and extending at least up to 1.0m beyond the vertical wall of CWR. The plinth protection shall consist of 150mm thick PCC in M-15 concrete over 150mm thick compacted soil fill. d) Providing and applying two coats of food grade epoxy paint on the inside surface of the roof slab, and 600 mm height of the vertical wall. e) Successful hydro test and water tightness test as per I.S. code. f) Providing and applying three coats of anti-carbonation paint on the roof Slab. g) Providing and applying three coats of cement-based paint on the remaining external surface area of the structure. h) Providing and fixing SS-304 ventilator, SS 304 manhole frame and cover and SS 304 ladder from roof slab to bottom Slab, inside container. Providing and fixing water level indicator (Float type). i) Providing and fixing MS ladder from ground to top slab. j) All MS parts to be painted with two coats of the enamelled paint over the primer coat of red oxide. k) Providing and fixing of 150mm wide water bar for the construction joints in the container. l) Providing and fixing CI/DI puddle collars the vertical wall for connecting inlet, outlet, overflow and washout pipes of the reservoir. m) ***Inlet, outlet, overflow, washout pipes and valves are not included in this work, provision for the same shall be taken separately.*** **Rates are exclusive of GST.**		
3.3.1	***Rates for RCC Partially Underground type clear water reservoir SBC 7 T/sqm, SEISMIC ZONE-2,3 & 4***		
3.3.1.1	50 KL capacity	Litre	**7.30**
3.3.1.2	75 KL capacity	Litre	**6.77**
3.3.1.3	100 KL capacity	Litre	**6.74**
3.3.1.4	150KL capacity	Litre	**6.05**
3.3.1.5	200KL capacity	Litre	**5.58**
3.3.1.6	250KL capacity	Litre	**5.31**
3.3.1.7	300KL capacity	Litre	**5.15**
3.3.2	***Rates for RCC Underground type clear water reservoir SBC 7 T/sqm, SEISMIC ZONE-2,3 & 4***		
3.3.2.1	50 KL capacity	Litre	**7.35**

Sr. No.	Description	Unit	Rate (Rs.)
3.3.2.2	75 KL capacity	Litre	**6.82**
3.3.2.3	100 KL capacity	Litre	**6.77**
3.3.2.4	150KL capacity	Litre	**5.96**
3.3.2.5	200KL capacity	Litre	**5.62**
3.3.2.6	250KL capacity	Litre	**5.31**
3.3.2.7	300KL capacity	Litre	**5.24**
3.4	Construction of **RCC (Dome type) Clear Water Reservoir** of following capacity as per Scope of work and Technical specification, consisting of the following main activities: - a) Topographic survey, preparation of site contour plan, conducting SBC test and its approval from department before construction. Submission and approval of concrete mix design and water quality test report for water to be used in construction. . b) Excavation in all types of soil, PCC below foundation & all RCC Work including all labour and material charges including providing and fixing of accessories such as SS ladder, SS manhole frame and covers, water level indicator (float type), SS ventilator with SS screen, float valve, puddle collars, G.I. pipe railing around walk way, Top Dome/Slab, Staircase. c) CWR shall be provided with adequate plinth protection all around the structure in a width starting from edge of structure at GL and extending at least up to 1.0m beyond the vertical wall of CWR. The plinth protection shall consist of 150mm thick PCC in M-15 concrete over 150mm thick compacted soil fill. d) Providing and applying two coats of food grade epoxy paint on the inside surface of the roof slab, and 600 mm height of the vertical wall. e) Successful hydro test and water tightness test as per I.S. code. f) Providing and applying three coats of anti-carbonation paint on the roof Slab. g) Providing and applying three coats of cement-based paint on the remaining external surface area of the structure. h) Providing and fixing SS-304 ventilator, SS 304 manhole frame and cover and SS 304 ladder from roof slab to bottom Slab, inside container. Providing and fixing water level indicator (Float type). i) Providing and fixing MS ladder from ground to top slab. j) All MS parts to be painted with two coats of the enamelled paint over the primer coat of red oxide. k) Providing and fixing of 150mm wide water bar for the construction joints in the container. l) Providing and fixing CI/DI puddle collars the vertical wall for connecting inlet, outlet, overflow and washout pipes of the reservoir. m***) Inlet, outlet, overflow, washout pipes and valves are not included in this work, provision for the same shall be taken separately.*** **Rates are exclusive of GST.**		
3.4.1	**Rates for RCC Partially Underground type clear water reservoir SBC 7 T/sqm, SEISMIC ZONE2,3 & 4**		
3.4.1.1	400 KL capacity	Litre	**5.52**
3.4.2	**Rates for RCC Underground type clear water reservoir SBC 7 T/sqm, SEISMIC ZONE-2,3 & 4**		
3.4.2.1	400 KL capacity	Litre	**5.38**
3.4.3	**Rates for RCC Partially Underground type clear water reservoir SBC 7 T/sqm, SEISMIC ZONE-2 & 3.**		
3.4.3.1	500 KL capacity	Litre	**4.73**
3.4.3.2	600 KL capacity	Litre	**4.50**
3.4.3.3	700 KL capacity	Litre	**4.42**
3.4.3.4	800 KL capacity	Litre	**4.37**

Sr. No.	Description	Unit	Rate (Rs.)
3.4.3.5	900 KL capacity	Litre	4.29
3.4.3.6	1000 KL capacity	Litre	4.22
3.4.4	**Rates for RCC Partially Underground type clear water reservoir SBC 12.5 T/sqm, SEISMIC ZONE-2 & 3.**		
3.4.4.1	500 KL capacity	Litre	4.61
3.4.4.2	600 KL capacity	Litre	4.36
3.4.4.3	700 KL capacity	Litre	4.25
3.4.4.4	800 KL capacity	Litre	4.19
3.4.4.5	900 KL capacity	Litre	4.08
3.4.4.6	1000 KL capacity	Litre	4.00
3.4.5	**Rates for RCC Partially Underground type clear water reservoir SBC 7 T/sqm, SEISMIC ZONE-4**		
3.4.5.1	500 KL capacity	Litre	5.21
3.4.5.2	600 KL capacity	Litre	4.99
3.4.5.3	700 KL capacity	Litre	4.90
3.4.5.4	800 KL capacity	Litre	4.83
3.4.5.5	900 KL capacity	Litre	4.67
3.4.5.6	1000 KL capacity	Litre	4.54
3.4.6	**Rates for RCC Partially Underground type clear water reservoir SBC 12.5 T/sqm, SEISMIC ZONE-4**		
3.4.6.1	500 KL capacity	Litre	4.71
3.4.6.2	600 KL capacity	Litre	4.53
3.4.6.3	700 KL capacity	Litre	4.42
3.4.6.4	800 KL capacity	Litre	4.36
3.4.6.5	900 KL capacity	Litre	4.23
3.4.6.6	1000 KL capacity	Litre	4.12
3.4.7	**Rates for RCC Underground type clear water reservoir SBC 7 T/sqm, SEISMIC ZONE-2 & 3**		
3.4.7.1	500 KL capacity	Litre	4.81
3.4.7.2	600 KL capacity	Litre	4.71
3.4.7.3	700 KL capacity	Litre	4.61
3.4.7.4	800 KL capacity	Litre	4.53
3.4.7.5	900 KL capacity	Litre	4.43
3.4.7.6	1000 KL capacity	Litre	4.36
3.4.8	**Rates for RCC Underground type clear water reservoir SBC 12.5 T/sqm, SEISMIC ZONE- 2 & 3**		
3.4.8.1	500 KL capacity	Litre	4.71
3.4.8.2	600 KL capacity	Litre	4.59
3.4.8.3	700 KL capacity	Litre	4.50
3.4.8.4	800 KL capacity	Litre	4.44
3.4.8.5	900 KL capacity	Litre	4.35
3.4.8.6	1000 KL capacity	Litre	4.25
3.4.9	**Rates for RCC Underground type clear water reservoir SBC 7 T/sqm, SEISMIC ZONE-4**		
3.4.9.1	500 KL capacity	Litre	4.87
3.4.9.2	600 KL capacity	Litre	4.80
3.4.9.3	700 KL capacity	Litre	4.68
3.4.9.4	800 KL capacity	Litre	4.59
3.4.9.5	900 KL capacity	Litre	4.49
3.4.9.6	1000 KL capacity	Litre	4.42
3.4.10	**Rates for RCC Underground type clear water reservoir SBC 12.5 T/sqm, SEISMIC ZONE-4**		

Sr. No.	Description	Unit	Rate (Rs.)
3.4.10.1	500 KL capacity	Litre	**4.87**
3.4.10.2	600 KL capacity	Litre	**4.80**
3.4.10.3	700 KL capacity	Litre	**4.68**
3.4.10.4	800 KL capacity	Litre	**4.59**
3.4.10.5	900 KL capacity	Litre	**4.49**
3.4.10.6	1000 KL capacity	Litre	**4.42**
3.5	**Construction of RCC Dome type Ground Level Service Reservoir (GLSR) of following capacity as per the Scope of work and Technical specifications, consisting of the following main activities: -** a) Topographic survey, preparation of site contour plan, conducting SBC test and its approval from department before construction. Submission and approval of concrete mix design and water quality test report for water to be used in construction. b) Excavation in all types of soil, PCC below foundation & all RCC Work. c) All the GLSR shall be provided with adequate plinth protection all around the structure in a width starting from edge of structure at GL and extending at least up to 1.0m beyond the vertical wall. The plinth protection shall consist of 150mm thick PCC in M-15 concrete over 150mm thick compacted soil fill. d) Providing and applying two coats of food grade epoxy paint on the inside surface of the roof slab, and 600 mm height of the vertical wall giving. e) Successful hydro test and water tightness test as per I.S. code. f) Providing and applying three coats of anti-carbonation paint on the roof Slab. g) Providing and applying three coats of cement-based paint on the remaining external surface area of the structure. h) Providing and fixing SS-304 ventilator, SS 304 manhole frame and cover and SS 304 ladder from top bottom Slab inside container. Providing and fixing water level indicator (Float type). i) Providing and fixing MS ladder from ground to top slab with safety cage. j) All MS parts to be painted with two coats of the enamelled paint over the primer coat of red oxide. k) Providing and fixing of 150mm wide water bar for the construction joints in the container. l) Providing and fixing CI/DI puddle collars the vertical wall for connecting inlet, outlet, overflow and washout pipe of the reservoir. m) **Inlet, outlet, overflow, washout pipes and valves are not included in this work, provision for the same shall be taken separately.** **Rates are exclusive of GST.**		

Sr. No.	Description	Unit	Rate (Rs.)
3.5.1	**Rates for RCC GROUND LEVEL SERVICE RESERVOIR SEISMIC ZONE-II & III and SBC18T/sqm**		
3.5.1.1	50 KL capacity	Litre	**9.08**
3.5.1.2	100 KL capacity	Litre	**6.86**
3.5.1.3	150 KL capacity	Litre	**5.78**
3.5.1.4	200 KL capacity	Litre	**5.33**
3.5.1.5	250 KL capacity	Litre	**4.87**
3.5.1.6	300 KL capacity	Litre	**4.70**
3.5.1.7	400 KL capacity	Litre	**4.48**
3.5.1.8	500 KL capacity	Litre	**4.36**
3.5.2	**Rates for RCC GROUND LEVEL SERVICE RESERVOIR SEISMIC ZONE-4 & SBC 18T/sqm**		
3.5.2.1	50 KL capacity	Litre	**9.26**
3.5.2.2	100 KL capacity	Litre	**6.96**
3.5.2.3	150 KL capacity	Litre	**5.86**
3.5.2.4	200 KL capacity	Litre	**5.35**
3.5.2.5	250 KL capacity	Litre	**4.90**
3.5.2.6	300 KL capacity	Litre	**4.72**
3.5.2.7	400 KL capacity	Litre	**4.49**
3.5.2.8	500 KL capacity	Litre	**4.36**
3.6	Providing and fixing double flanged ISI marked GI pipes medium duty (class B) Steel tube as per IS:1239 or amended up to date and zinc coating as per IS 4736 with GI fittings excluding valves as vertical pipes for RCC Reservoirs including specials required such as bend, tee etc. providing and fixing with MS clamps at every 3 mtr, jointing materials such as nuts, bolt, rubber packing, hydraulic testing etc. complete in all respect up to and from valve chamber as per direction of EIC, Technical Specification and Scope of work. **Rates are exclusive of GST.**		
3.6.1	50 mm	Mtr	**576.27**
3.6.2	65 mm	Mtr	**738.98**
3.6.3	80 mm	Mtr	**763.56**
3.6.4	100 mm	Mtr	**999.15**
3.7	Providing and fixing double flanged ISI marked DI Class K-9 pipes as per IS:8329-2000 (amended up to date), as vertical pipes for RCC Reservoirs including specials required such as duck foot bend, bend, tee etc. providing and fixing clamps at every 3 mtr, jointing materials such as nuts, bolt, rubber packing, hydraulic testing etc. complete in all respect up to and from valve chamber as per direction of EIC, Technical Specification and Scope of work. **Rates are exclusive of GST.**		
3.7.1	100 mm	Mtr	**1914.41**
3.7.2	150 mm	Mtr	**2753.39**
3.7.3	200 mm	Mtr	**3601.69**
3.7.4	250 mm	Mtr	**4858.47**
3.7.5	300 mm	Mtr	**6198.31**
3.7.6	350 mm	Mtr	**7479.66**
3.7.7	400 mm	Mtr	**9092.37**
3.7.8	450 mm	Mtr	**10750.85**
3.7.9	500 mm	Mtr	**12633.90**
3.7.10	600 mm	Mtr	**16777.97**
3.7.11	700 mm	Mtr	**21644.92**
	Note: The rates for DI double flanged pipes shall be reduced 5%, if used other than OHSR pipes.		

Chapter 4

Earth work, Road cutting, restoration & trenchless laying

Note : All rates are exclusive of GST.

S. No.	Description	Unit	Rate (Rs.)
4.1	Earth work in excavation by mechanical means (Hydraulic Excavator)/ manual means in trenches of required width and gradient for laying and jointing of pipe line including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 Mtr. including taking out the excavated soil, and then returning the soil as required in layers not exceeding 20cm in depth including consolidating each deposited layer by ramming, watering etc. and disposal of surplus excavated soil as directed within a lead of 50 Mtr. including required all safety provisions etc.: All kinds of soil **Rate is exclusive of GST.**	Cum	**169.49**
4.2	Add extra for trenches for every additional lift over item no 4.1 **Rates are exclusive of GST.**		
4.2.1	Above 1.5 mtr and up to 3.0 mtr.	Cum	**16.95**
4.2.2	Above 3.0 mtr and up to 4.5 mtr.	Cum	**33.05**
4.3	Earth work in excavation by mechanical means (Hydraulic Excavator)/ manual means in trenches of required width and gradient for laying and jointing of pipe line including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 Mtr. including taking out the excavated soil, and then returning the soil as required in layers not exceeding 20cm in depth including consoljdating each deposited layer by ramming, watering etc. and stacking serviceable material for measurements and disposal of unserviceable material as directed, with in a lead of 50 Mtr. including all safety provisions required .: **Rates are exclusive of GST.**		
4.3.1	Ordinary rock	Cum	**309.32**
4.3.2	Hard rock (requiring blasting)	Cum	**462.71**
4.3.3	Hard rock(blasting prohibited)	Cum	**662.71**
4.4	Add extra for trenches for every additional lift over item no 4.3 **Rates are exclusive of GST.**		
4.4.1	Above 1.5 mtr and up to 3.0 mtr.	Cum	**31.36**
4.4.2	Above 3.0 mtr and up to 4.5 mtr.	Cum	**61.86**

S. No.	Description	Unit	Rate (Rs.)
4.5	Dismantling of **cement concrete pavement** for pipe line and chambers by mechanical means using pneumatic tools, cutting the peripheral edge by CC cutter, breaking to pieces not exceeding 0.02 cum in volume and stock piling at designated locations and disposal of dismantled materials up to a lead of 1000 meters. Measurement for dismantled trench to be made as per standard trench width specified in tender document and no extra payment shall be made be made for trench width more than specified, re-handling of material/earth to complete the tasks as per technical specification and scope of work. **Rate is exclusive of GST.**	Cum	**641.53**
4.6	Dismantling of **flexible pavement** for pipe line and chambers by mechanical means using pneumatic tools, breaking to pieces not exceeding 0.02 cum in volume and stock piling at designated locations and disposal of dismantled materials up to a lead of 1000 meters. Measurement for dismantled trench to be made as per standard trench width specified in tender document and no extra payment shall be made be made for trench width more than specified, re-handling of material/earth to complete the tasks per technical specification and scope of work. **Rates are exclusive of GST.**		
4.6.1	Bituminous courses	Cum	**352.54**
4.6.2	Granular courses	Cum	**250.85**
4.7	Providing and laying in position cement concrete M10 grade nominal mix 1:3:6 (1 Cement : 3coarse sand : 6 graded stone aggregate 40 mm nominal size) in base course complete including all material, labour, machinery, lighting, guarding for road restoration work in trenches of pipe line and chamber work. Measurement for CC work to be made as per standard trench width specified in tender document and no extra payment shall be made be made for trench width more than specified, complete work as per technical specification and scope of work. **Rate is exclusive of GST.**	Cum	**3964.41**
4.8	Providing and laying in position cement concrete in specified grade over prepared base course complete including finishing, curing, all material, labour, machinery, lighting, guarding for road restoration work in trenches of pipe line and chamber work. Measurement for CC work to be made as per standard trench width specified in tender document and no extra payment shall be made be made for trench width more than specified, complete work as per technical specification and scope of work. **Rates are exclusive of GST.**		
4.8.1	M20 grade Nominal Mix 1: 1.5: 3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20mm nominal size).	Cum	**5222.03**
4.8.2	Plain cement concrete pavement of M-30 Grade	Cum	**5505.93**

S. No.	Description	Unit	Rate (Rs.)
4.9	Removing & Re-fixing of Precast concrete interlocking blocks for laying of pipe line by manual method, stacking of serviceable & non serviceable material separately, disposal of dismantled material lead up to 50 mtr. The C.C. interlocking paving blocks be laid on average 25 mm thick bed of coarse sand and the joints to be filled with fine sand. Laying procedure on compacted sub base as defined. Complete job is to be executed as per the directions of Engineer in charge. The rates to be inclusive of fixing of 70 percent reusable precast concrete interlocking block and cost of required new precast concrete interlocking block against damaged, including all lead and lift as per Technical specifications. (Interlocking block manufactured by fully computerized automatic stationery hydraulic vibro pressed machine & full computerized automatic batching plant of class A-1 as per BS:6717-2001. Tensile splitting strength and breaking load as per BS: 6717-2001 Colour: Grey cement natural colour. Variation in Dimension : Less than 1.6 mm Variation in thickness: Less than 3.2 mm) **Note:** If existing precast block used more than 70%, than for every 1% use above 70%, deduction of 1% in cost shall be done for every 1% use above 70%. **Rates are exclusive of GST.**		
4.9.1	60 mm thick.	Sqm.	**233.05**
4.9.2	80 mm thick.	Sqm.	**252.54**
4.9.3	100 mm thick	Sqm.	**281.36**
4.10	Horizontal directional drilling (by trenchless technology) of suitable dia hole minimum 1.0 mtr below natural ground level in all type of soil under CC/BT roads and pulling **HDPE pipes of dia up to 110 mm**, which are available in the form of a coil including excavation, shoring/ strutting, preparation, maintain the thrust and including, road dismantling, excavation and refilling of drive pit and exit pit, restoration of road cut as per technical specification and scope of work, but excluding the cost of pipe line. **Rate is exclusive of GST**.	RMT	**244.92**

S. No.	Description	Unit	Rate (Rs.)
4.11	Supply laying and pushing of MS casing pipe of specified thickness approved by concerned department authority by trenchless method adopting any suitable technology below ground at required depth under running traffic condition as per Highway/ Railway standard including carrying out survey work at the job site for determining underground cable trenches like telephone, cable, water & sanitary lines and resistivity test for finding the soil strata using necessary equipments for completion of works, mobilizing of machineries and specialized crew at the job site complete in all respect, including excavation of driven pit and exit pit (up to 3 meter depth) with proper protection at these sites with shoring sheets and ISMB. Providing MS cutting edges for front shield and constructing thrust bed at designated level. Necessary dewatering and providing concrete foundation at the base of the driven pit, PVC/Rubber saddle as per the requirement of Highway/Railway authority, crane for handing of pipe and any other machinery, tools, and tackles required, construction of temporary works as per design, drawing and method as per approved by authority specification and the direction of the Engineer. Apply corrosion, resistant, protection on inside and outside of casing pipe as per technical specification. **Rates are exclusive of GST.**		
4.11.1	300 mm Dia 8 mm thick casing pipe.	RMT	**15553.39**
4.11.2	400 mm Dia 8 mm thick casing pipe .	RMT	**17772.88**
4.11.3	500 mm Dia 8 mm thick casing pipe .	RMT	**19973.73**
4.11.4	600 mm Dia 10 mm thick casing pipe .	RMT	**25602.54**
4.11.5	700 mm Dia 10 mm thick casing pipe .	RMT	**28353.39**
4.12	Removing & Re-fixing of Bricks Kharanja road by manual means for laying of pipe line, stacking of serviceable & unserviceable material separately, disposal of dismantled material lead up to 50 mtr. The Bricks interlocking be laid on average 12 mm thick bed of mud mortar and the joints to be filled with pointing in cement mortar 1:3. Laying procedure on compacted sub base as defined. Complete job is to be executed as per the direction of Engineer in charge. The rates are inclusive of fixing of 80 percent reusable Bricks and cost of required new First class FPS bricks (min. 10.5 Mpa) in place of damaged bricks, all lead and lift as per Technical Specifications and direction of Engineer in Charge. **Note:** If existing bricks used more than 80%, than for every 1% above 80% use, deduction of 1% in cost shall be done for every 1% use above 80%. **Rates are exclusive of GST.**		
4.12.1	Horizontal aligned Bricks	Sqm.	**179.66**
4.12.2	Vertical aligned Bricks	Sqm.	**194.92**

Chapter 5

Pump sets

Note : All rates are exclusive of GST.

Sr. No.	Description	Unit	Rate (Rs.)
5.1	Providing, installation, testing and commissioning of Centrifugal Monoblock pump set conforming to IS 9079 , 2 pole motor operating at synchronised speed of 3000 RPM with requisite MOC impeller, priming funnel, cock, suitable flanges at suction and delivery side. Pump shall have common shaft for pump and motor. Motor shall be suitable for working on 415 V ± 10%, 3 Ph, 50 Hz A.C. Supply. Motor shall be TEFC type and Pump set shall be suitable for working at various discharge and head requirements as per scope of work. Pump shall be erected on C.C. foundation / cross channels / RSJ frame block with suitable foundation bolts grouted in C.C. foundation block etc. complete in all respect as per specification, scope of work and direction of Engineer in Charge of following power rating, suitable for prescribed duty conditions mentioned in TD. **Rates are exclusive of GST.**		
5.1.1	**Centrifugal Monoblock Pump set (Single Stage)**		
5.1.1.1	2.2 KW (3.0 HP)	Each	**28872.88**
5.1.1.2	3.7 KW (5.0 HP)	Each	**37084.75**
5.1.1.3	5.5 KW (7.5 HP)	Each	**46800.85**
5.1.1.4	7.5 KW (10 HP)	Each	**57215.25**
5.1.1.5	9.3 KW (12.5 HP)	Each	**66830.51**
5.1.1.6	11.0 KW (15 HP)	Each	**70464.41**
5.1.1.7	15.0 KW (20.0 HP)	Each	**92224.58**
5.1.1.8	18.5 KW (25.0 HP)	Each	**121719.49**
5.1.2	**Centrifugal Monoblock Pump set (Double Stage)**		
5.1.2.1	3.7 KW (5.0 HP)	Each	**42664.41**
5.1.2.2	5.5 KW (7.5 HP)	Each	**51881.36**
5.1.2.3	7.5 KW (10.0 HP)	Each	**62295.76**
5.1.2.4	9.3 KW (12.5 HP)	Each	**68989.83**
5.1.2.5	11.0 KW (15.0 HP)	Each	**76227.12**
5.1.2.6	15.0 KW (20.0 HP)	Each	**99698.31**
	Vacuum Pump set (Monoblock)		
5.2	Providing, installation, testing and commissioning of Mono block Vacuum pump set with base plate including C.C. foundation / cross channels / RSJ frame and foundation bolts etc. complete in all respect as per specification, scope of work and direction of Engineer in Charge. **Rates are exclusive of GST.**		
5.2.1	0.75 KW (1 HP), single Ph	Each	**26394.07**
5.2.2	2.2 KW (3 HP), three Ph	Each	**48072.03**
	Vacuum Pump set (Coupled)		

Sr. No.	Description	Unit	Rate (Rs.)
5.3	Providing, installation, testing and commissioning of Vacuum pump set with horizontal foot mounted TEFC squirrel cage motor working on three phase 50 Hz, 415 Volts +/- 10% with base plate including cost of flexible couplings, coupling guard etc. complete in all respect as per specification, scope of work and direction of Engineer in Charge. **Rates are exclusive of GST.**		
5.3.1	3.7 KW (5.0 HP)	Each	**102393.22**
5.3.2	7.5 KW (10.0 HP)	Each	**126256.78**
5.4	Providing, installation, testing and commissioning of **Submerged Centrifugal Pump sets with motor** 4 pole synchronised speed of 1500 rpm (water immersed, dry air filled, class "F" insulated TEWC motor integrally mounted on volute casing pump sets for drinking water) 3 phase, +/- 3%, 415 volt +/- 10%, along with suitable foundation/ installation device and with 10 mtr cable, material of construction of impeller SS, casing (volute) CI, wearing ring SS, etc. complete in all respect as per specification, scope of work and direction of Engineer in Charge of following power rating, suitable for prescribed duty conditions mentioned in TD. **Rates are exclusive of GST.**		
5.4.1	15 KW	Each	**206577.12**
5.4.2	18.5 KW	Each	**254779.66**
5.4.3	22 KW	Each	**302980.51**
5.4.4	30 KW	Each	**413154.24**
5.4.5	37 KW	Each	**506837.29**
5.4.6	45 KW	Each	**536572.03**
5.4.7	55 KW	Each	**689065.25**
5.4.8	75 KW	Each	**764980.51**
5.4.9	90 KW	Each	**1035165.25**
5.4.10	110 KW	Each	**1273949.15**
5.4.11	125 KW	Each	**1397257.63**
5.4.12	132 KW	Each	**1473590.68**
5.4.13	160 KW	Each	**1696760.17**
5.4.14	180 KW	Each	**1802637.29**
5.4.15	200 KW	Each	**2163164.41**

Sr. No.	Description	Unit	Rate (Rs.)
5.5	Providing, installation, testing and commissioning of **submersible Monoblock pump** set conforming to IS 8034 and 2 pole motor operating at synchronised speed of speed 3000 RPM, with water proof winding. Pump shall be suitable for various delivery head and discharge with stainless steel shaft. Motor suitable for working on 415 V ± 10%, 3 Ph, 50 Hz AC and with water lubricated bearing to accept entire hydraulic thrust. Supply, with cable guard, thrust carbon/fibre bearing to withstand entire hydraulic thrust. The pump set shall be suitable for direct coupling, with suitable suction strainer. Pump should have suitable discharge out let as per manufacturer's design. Antithrust stream lined non return valve shall be provided with the pump and minimum 6 m submersible copper conductor cable in single / double run and 2 pairs of suitable size erection clamp 10 mm thick shall be provided with each pump etc. complete in all respect as per specification, scope of work and direction of Engineer in Charge of following power rating, suitable for prescribed duty conditions mentioned in TD. **Rates are exclusive of GST.**		
5.5.1	2.2 KW (3.0 HP)	Each	**30450.85**
5.5.2	3.7 KW (5.0 HP)	Each	**33848.31**
5.5.3	5.5 KW (7.5 HP)	Each	**45583.90**
5.5.4	7.5 KW (10 HP)	Each	**51389.83**
5.5.5	9.3 KW (12.5 HP)	Each	**64819.49**
5.5.6	11.0 KW (15 HP)	Each	**72514.41**
5.5.7	15.0 KW (20.0 HP)	Each	**86226.27**
5.6	Providing, installation, testing and commissioning of **submersible dewatering pump** set conforming to relevant IS codes and as per scope of work and Technical Specifications, with water proof winding. Pump shall be suitable for various delivery head and discharge with stainless steel shaft, impeller, pump and motor body. Motor suitable for working on 415 V ± 10%, 3 Ph, 50 Hz A.C. Supply, with cable guard. The pump set shall be suitable for direct coupling, with suitable suction strainer etc. complete in all respect as per specification, scope of work and direction of Engineer in Charge of following power rating, suitable for prescribed duty conditions mentioned in TD. **Rates are exclusive of GST.**		
5.6.1	0.75 KW (1.0 HP)	Each	**34368.64**
5.6.2	1.5 KW (2.0 HP)	Each	**39407.63**
5.6.3	2.2 KW (3.0 HP)	Each	**68056.78**
5.6.4	3.7 KW (5.0 HP)	Each	**91101.69**

Sr. No.	Description	Unit	Rate (Rs.)
5.7	Providing and fixing at site with necessary packing, Horizontal Centrifugal Split Casting pumps with 4 pole induction motor operating at synchronised speed of speed 1500 RPM as per IS 12615: 2011 or amended up to date , CI casing and casing ring, SS 316 impeller, SS 410 Shaft and shaft sleeve, coupling guard, common base plate, foundation bolts, Cement concrete foundation etc. complete with all respect as per the specification and scope of work and direction of Engineer in Charge of following range of duty conditions. Note: Duty condition of required pump shall also be mentioned in BoQ. **Rates are exclusive of GST.**		
5.7.1	Discharge 20 to 30 LPS and head 20 to 30 M	Each	**140980.51**
5.7.2	Discharge 20 to 30 LPS and head 31 to 40 M	Each	**205277.12**
5.7.3	Discharge 20 to 30 LPS and head 41 to 50 M	Each	**242062.71**
5.7.4	Discharge 20 to 30 LPS and head 51 to 60 M	Each	**277380.51**
5.7.5	Discharge 20 to 30 LPS and head 61 to 70 M	Each	**353955.08**
5.7.6	Discharge 20 to 30 LPS and head 71 to 80 M	Each	**353955.08**
5.7.7	Discharge 20 to 30 LPS and head 81 to 90 M	Each	**353955.08**
5.7.8	Discharge 31 t0 40 LPS and head 20 to 30 M	Each	**205277.12**
5.7.9	Discharge 31 t0 40 LPS and head 31 to 40 M	Each	**242062.71**
5.7.10	Discharge 31 t0 40 LPS and head 41 to 50 M	Each	**277380.51**
5.7.11	Discharge 31 t0 40 LPS and head 51 to 60 M	Each	**353955.08**
5.7.12	Discharge 31 t0 40 LPS and head 61 to 70 M	Each	**417385.59**
5.7.13	Discharge 31 to 40 LPS and head 71 to 80 M	Each	**417385.59**
5.7.14	Discharge 31 to 40 LPS and head 81 to 90 M	Each	**486806.78**
5.7.15	Discharge 41 t0 50 LPS and head 20 to 30 M	Each	**242062.71**
5.7.16	Discharge 41 t0 50 LPS and head 31 to 40 M	Each	**353955.08**
5.7.17	Discharge 41 t0 50 LPS and head 41 to 50 M	Each	**353955.08**
5.7.18	Discharge 41 t0 50 LPS and head 51 to 60 M	Each	**417385.59**
5.7.19	Discharge 41 t0 50 LPS and head 61 to 70 M	Each	**486806.78**
5.7.20	Discharge 41 to 50 LPS and head 71 to 80 M	Each	**569975.42**
5.7.21	Discharge 41 to 50 LPS and head 81 to 90 M	Each	**569975.42**
5.7.22	Discharge 51 to 60 LPS and head 20 to 30 M	Each	**277380.51**
5.7.23	Discharge 51 to 60 LPS and head 31 to 40 M	Each	**353955.08**
5.7.24	Discharge 51 to 60 LPS and head 41 to 50 M	Each	**417385.59**
5.7.25	Discharge 51 to 60 LPS and head 51 to 60 M	Each	**486806.78**
5.7.26	Discharge 51 to 60 LPS and head 61 to 70 M	Each	**569975.42**
5.7.27	Discharge 51 to 60 LPS and head 71 to 80 M	Each	**727326.27**
5.7.28	Discharge 51 to 60 LPS and head 81 to 90 M	Each	**727326.27**
5.7.29	Discharge 61 to 70 LPS and head 20 to 30 M	Each	**277380.51**
5.7.30	Discharge 61 to 70 LPS and head 31 to 40 M	Each	**353955.08**
5.7.31	Discharge 61 to 70 LPS and head 41 to 50 M	Each	**486806.78**
5.7.32	Discharge 61 to 70 LPS and head 51 to 60 M	Each	**569975.42**
5.7.33	Discharge 61 to 70 LPS and head 61 to 70 M	Each	**727326.27**
5.7.34	Discharge 61 to 70 LPS and head 71 to 80 M	Each	**727326.27**
5.7.35	Discharge 61 to 70 LPS and head 81 to 90 M	Each	**839394.07**

Sr. No.	Description	Unit	Rate (Rs.)
5.7.36	Discharge 71 to 80 LPS and head 20 to 30 M	Each	**353955.08**
5.7.37	Discharge 71 to 80 LPS and head 31 to 40 M	Each	**417385.59**
5.7.38	Discharge 71 to 80 LPS and head 41 to 50 M	Each	**569975.42**
5.7.39	Discharge 71 to 80 LPS and head 51 to 60 M	Each	**727326.27**
5.7.40	Discharge 71 to 80 LPS and head 61 to 70 M	Each	**727326.27**
5.7.41	Discharge 71 to 80 LPS and head 71 to 80 M	Each	**839394.07**
5.7.42	Discharge 71 to 80 LPS and head 81 to 90 M	Each	**982800.85**
5.7.43	Discharge 81 to 90 LPS and head 20 to 30 M	Each	**353955.08**
5.7.44	Discharge 81 to 90 LPS and head 31 to 40 M	Each	**486806.78**
5.7.45	Discharge 81 to 90 LPS and head 41 to 50 M	Each	**569975.42**
5.7.46	Discharge 81 to 90 LPS and head 51 to 60 M	Each	**727326.27**
5.7.47	Discharge 81 to 90 LPS and head 61 to 70 M	Each	**727326.27**
5.7.48	Discharge 81 to 90 LPS and head 71 to 80 M	Each	**982800.85**
5.7.49	Discharge 81 to 90 LPS and head 81 to 90 M	Each	**982800.85**
5.7.50	Discharge 91 to 100 LPS and head 20 to 30 M	Each	**417385.59**
5.7.51	Discharge 91 to 100 LPS and head 31 to 40 M	Each	**569975.42**
5.7.52	Discharge 91 to 100 LPS and head 41 to 50 M	Each	**727326.27**
5.7.53	Discharge 91 to 100 LPS and head 51 to 60 M	Each	**727326.27**
5.7.54	Discharge 91 to 100 LPS and head 61 to 70 M	Each	**839394.07**
5.7.55	Discharge 91 to 100 LPS and head 71 to 80 M	Each	**982800.85**
5.7.56	Discharge 91 to 100 LPS and head 81 to 90 M	Each	**1086682.20**
5.7.57	Discharge 101 to 120 LPS and head 20 to 30 M	Each	**417385.59**
5.7.58	Discharge 101 to 120 LPS and head 31 to 40 M	Each	**569975.42**
5.7.59	Discharge 101 to 120 LPS and head 41 to 50 M	Each	**727326.27**
5.7.60	Discharge 101 to 120 LPS and head 51 to 60 M	Each	**839394.07**
5.7.61	Discharge 101 to 120 LPS and head 61 to 70 M	Each	**982800.85**
5.7.62	Discharge 101to 120 LPS and head 71 to 80 M	Each	**982800.85**
5.7.63	Discharge 101to 120 LPS and head 81 to 90 M	Each	**1319377.97**
5.7.64	Discharge 121 to 140 LPS and head 20 to 30 M	Each	**486806.78**
5.7.65	Discharge 121 to 140 LPS and head 31 to 40 M	Each	**727326.27**
5.7.66	Discharge 121 to 140 LPS and head 41 to 50 M	Each	**839394.07**
5.7.67	Discharge 121 to 140 LPS and head 51 to 60 M	Each	**982800.85**
5.7.68	Discharge 121 to 140 LPS and head 61 to 70 M	Each	**982800.85**
5.7.69	Discharge 121 to 140 LPS and head 71 to 80 M	Each	**1134233.05**
5.7.70	Discharge 121 to 140 LPS and head 81 to 90 M	Each	**1319377.97**
5.7.71	Discharge 141 to 160 LPS and head 20 to 30 M	Each	**569975.42**
5.7.72	Discharge 141 to 160 LPS and head 31 to 40 M	Each	**727326.27**
5.7.73	Discharge 141 to 160 LPS and head 41 to 50 M	Each	**982800.85**
5.7.74	Discharge 141 to 160 LPS and head 51 to 60 M	Each	**1086682.20**
5.7.75	Discharge 141 to 160 LPS and head 61 to 70 M	Each	**1319377.97**
5.7.76	Discharge 141 to 160 LPS and head 71 to 80 M	Each	**1319377.97**
5.7.77	Discharge 141 to 160 LPS and head 81 to 90 M	Each	**1572318.64**
5.7.78	Discharge 161 to 180 LPS and head 20 to 30 M	Each	**727326.27**
5.7.79	Discharge 161 to 180 LPS and head 31 to 40 M	Each	**839394.07**
5.7.80	Discharge 161 to 180 LPS and head 41 to 50 M	Each	**982800.85**
5.7.81	Discharge 161 to 180 LPS and head 51 to 60 M	Each	**1134233.05**

Sr. No.	Description	Unit	Rate (Rs.)
5.7.82	Discharge 161 to 180 LPS and head 61 to 70 M	Each	**1319377.97**
5.7.83	Discharge 161 to 180 LPS and head 71 to 80 M	Each	**1447355.93**
5.7.84	Discharge 161 to 180 LPS and head 81 to 90 M	Each	**1572318.64**
5.7.85	Discharge 181 to 200 LPS and head 20 to 30 M	Each	**727326.27**
5.7.86	Discharge 181 to 200 LPS and head 31 to 40 M	Each	**982800.85**
5.7.87	Discharge 181 to 200 LPS and head 41 to 50 M	Each	**1086682.20**
5.7.88	Discharge 181 to 200 LPS and head 51 to 60 M	Each	**1319377.97**
5.7.89	Discharge 181 to 200 LPS and head 61 to 70 M	Each	**1447355.93**
5.7.90	Discharge 181 to 200 LPS and head 71 to 80 M	Each	**1694632.20**
5.7.91	Discharge 181 to 200 LPS and head 81 to 90 M	Each	**1873750.85**
5.8	Providing and fixing at site with necessary packing, Horizontal Centrifugal Split Casting pumps with 4 pole induction motor operating at synchronised speed of speed 1500 RPM as per IS 12615: 2011 or amended up to date , CI casing and casing ring, SS 316 impeller, SS 410 Shaft and shaft sleeve, coupling guard, common base plate, foundation bolts, Cement concrete foundation etc. complete with all respect as per the specification and scope of work and direction of Engineer in Charge of following range of duty conditions. Note: Duty condition of required pump shall also be mentioned in BoQ. **Rates are exclusive of GST.**		
5.8.1	Discharge 201 to 220 LPS and head 20 to 30 M	Each	**727326.27**
5.8.2	Discharge 201 to 220 LPS and head 31 to 40 M	Each	**982800.85**
5.8.3	Discharge 201 to 220 LPS and head 41 to 50 M	Each	**1319377.97**
5.8.4	Discharge 201 to 220 LPS and head 51 to 60 M	Each	**1447355.93**
5.8.5	Discharge 201 to 220 LPS and head 61 to 70 M	Each	**1572318.64**
5.8.6	Discharge 221 to 240 LPS and head 20 to 30 M	Each	**839394.07**
5.8.7	Discharge 221 to 240 LPS and head 31 to 40 M	Each	**1086682.20**
5.8.8	Discharge 221 to 240 LPS and head 41 to 50 M	Each	**1319377.97**
5.8.9	Discharge 221 to 240 LPS and head 51 to 60 M	Each	**1572318.64**
5.8.10	Discharge 221 to 240 LPS and head 61 to 70 M	Each	**1694632.20**
5.8.11	Discharge 241 to 260 LPS and head 20 to 30 M	Each	**839394.07**
5.8.12	Discharge 241 to 260 LPS and head 31 to 40 M	Each	**1134233.05**
5.8.13	Discharge 241 to 260 LPS and head 41 to 50 M	Each	**1319377.97**
5.8.14	Discharge 241 to 260 LPS and head 51 to 60 M	Each	**1572318.64**
5.8.15	Discharge 241 to 260 LPS and head 61 to 70 M	Each	**1873750.85**
5.8.16	Discharge 261 to 280 LPS and head 20 to 30 M	Each	**982800.85**
5.8.17	Discharge 261 to 280 LPS and head 31 to 40 M	Each	**1319377.97**
5.8.18	Discharge 261 to 280 LPS and head 41 to 50 M	Each	**1447355.93**
5.8.19	Discharge 261 to 280 LPS and head 51 to 60 M	Each	**1694632.20**
5.8.20	Discharge 261 to 280 LPS and head 61 to 70 M	Each	**2019512.71**
5.8.21	Discharge 281 to 300 LPS and head 20 to 30 M	Each	**982800.85**
5.8.22	Discharge 281 to 300 LPS and head 31 to 40 M	Each	**1319377.97**
5.8.23	Discharge 281 to 300 LPS and head 41 to 50 M	Each	**1572318.64**
5.8.24	Discharge 281 to 300 LPS and head 51 to 60 M	Each	**1694632.20**
5.8.25	Discharge 281 to 300 LPS and head 61 to 70 M	Each	**2019512.71**

Sr. No.	Description	Unit	Rate (Rs.)
5.8.26	Discharge 301 to 325 LPS and head 20 to 30 M	Each	**1086682.20**
5.8.27	Discharge 301 to 325 LPS and head 31 to 40 M	Each	**1319377.97**
5.8.28	Discharge 301 to 325 LPS and head 41 to 50 M	Each	**1694632.20**
5.8.29	Discharge 301 to 325 LPS and head 51 to 60 M	Each	**1873750.85**
5.8.30	Discharge 301 to 325 LPS and head 61 to 70 M	Each	**2247000.85**
5.8.31	Discharge 326 to 350 LPS and head 20 to 30 M	Each	**1086682.20**
5.8.32	Discharge 326 to 350 LPS and head 31 to 40 M	Each	**1447355.93**
5.8.33	Discharge 326 to 350 LPS and head 41 to 50 M	Each	**1694632.20**
5.8.34	Discharge 326 to 350 LPS and head 51 to 60 M	Each	**2019512.71**
5.8.35	Discharge 326 to 350 LPS and head 61 to 70 M	Each	**2247000.85**
5.8.36	Discharge 351 to 400 LPS and head 20 to 30 M	Each	**1319377.97**
5.8.37	Discharge 351 to 400 LPS and head 31 to 40 M	Each	**1572318.64**
5.8.38	Discharge 351 to 400 LPS and head 41 to 50 M	Each	**1873750.85**
5.8.39	Discharge 351 to 400 LPS and head 51 to 60 M	Each	**2247000.85**
5.8.40	Discharge 351 to 400 LPS and head 61 to 70 M	Each	**2468372.03**

Chapter 6

Valves and Appurtenances

Note : All rates are exclusive of GST.

S. No.	Description	Unit	Rate (Rs.)
6.1	Providing, lowering, aligning, fixing in position in pipe line, **CI D/F Sluice valves** straight and pocket less body passage of approved make of following Pressure rating & dia complete, confirming to IS:14846 (amended up to date) and of following specifications: Body, Bonnet, Wedge, Gland, Thrust Plate, Cap & Hand wheel of Grey cast iron of IS:210/ FG200 Stem - AISI- 410 ,Body Seat ring, Wedge facing ring & Bushes - LTB2/ SS , Face to face dimensions as per IS 14846/2000 (amended up to date) ,Epoxy (Non-Toxic- suitable for drinking water) applied inside and outside, Flanges Drilled as per IS 1538. Nut-Bolt confirming to IS:1363 and IS: 1367/ CS/ galvanised steel Insertion rubber of black EPDM 6mm thick . Sluice valves including all jointing & jointing material, labour, testing and commissioning along with pipe line as per Technical Specifications and as per direction of Engineer-in-charge. Note 1 : Rates are exclusive of tail piece/ dismantling joints and earth work. **Note 2 : Rates are exclusive of GST.**		
6.1.1	**Manually Operated CI Sluice valve of Class PN-1.0**		
6.1.1.1	80 mm HW	Each	**5339.83**
6.1.1.2	100 mm HW	Each	**7329.66**
6.1.1.3	125 mm HW	Each	**9468.64**
6.1.1.4	150 mm HW	Each	**11521.19**
6.1.1.5	200 mm HW	Each	**19155.08**
6.1.1.6	250 mm HW	Each	**30272.88**
6.1.1.7	300 mm HW	Each	**38459.32**
6.1.1.8	350 mm with Gear	Each	**73591.53**
6.1.1.9	400 mm with Gear	Each	**96150.00**
6.1.1.10	450 mm with Gear	Each	**125139.83**
6.1.1.11	500 mm with Gear	Each	**156681.36**
6.1.1.12	600 mm with Gear	Each	**223025.42**
6.1.2	**Motorized Sluice Valves with Electric Actuator with integral starter of Class PN 1.0**		
6.1.2.1	80 mm dia	Each	**100420.34**
6.1.2.2	100 mm dia	Each	**103638.98**
6.1.2.3	125 mm dia	Each	**107344.07**
6.1.2.4	150 mm dia	Each	**113065.25**
6.1.2.5	200 mm dia	Each	**128256.78**
6.1.2.6	250 mm dia	Each	**145382.20**
6.1.2.7	300 mm dia	Each	**154897.46**
6.1.2.8	350 mm dia	Each	**188554.24**
6.1.2.9	400 mm dia	Each	**212672.88**
6.1.2.10	450 mm dia	Each	**247186.44**
6.1.2.11	500 mm dia	Each	**290473.73**
6.1.2.12	600 mm dia.	Each	**359796.61**

S. No.	Description	Unit	Rate (Rs.)
6.2	Providing, lowering, laying, aligning, fixing in position **CI D/F short body pattern type butterfly valves** having body, disc and end cover in graded cast iron generally conforming to (IS13095/1991amended up to date), synthetic rubber faced ring secured on disc by retaining ring with SS steel screw stub shaft of SS riding in Teflon bearing including C.C. foundation/ structural steel support, material, labour, testing along with pipe line and commissioning as per Technical Specifications and as per direction of Engineer in charge. Note 1 : Rates are exclusive of tail piece/ dismantling joints and earth work. **Note 2 : Rates are exclusive of GST.**		
6.2.1	Manually Operated Butterfly Valve PN-1.0		
6.2.1.1	100 mm dia (With lever operated)	Each	**10815.25**
6.2.1.2	125 mm dia (With lever operated)	Each	**14900.00**
6.2.1.3	150 mm dia (With lever operated)	Each	**18539.83**
6.2.1.4	200 mm dia (With Gear Operated)	Each	**27900.85**
6.2.1.5	250 mm dia (With Gear Operated)	Each	**35421.19**
6.2.1.6	300 mm dia (With Gear Operated)	Each	**44172.03**
6.2.1.7	350 mm dia (With Gear Operated)	Each	**55089.83**
6.2.1.8	400 mm dia (With Gear Operated)	Each	**71406.78**
6.2.1.9	450 mm dia (With Gear Operated)	Each	**86111.02**
6.2.1.10	500 mm dia (With Gear Operated)	Each	**107237.29**
6.2.1.11	600 mm dia (With Gear Operated)	Each	**145637.29**
6.2.1.12	700 mm dia (With Gear Operated)	Each	**198508.47**
6.2.1.13	800 mm dia (With Gear Operated)	Each	**283121.19**
6.2.1.14	900 mm dia (With Gear Operated)	Each	**364820.34**
6.2.1.15	1000 mm dia (With Gear Operated)	Each	**471538.14**
6.3	Providing, lowering, aligning, fixing in position in pipe line, **CI double flanged swing type Non Return Valves (NRV)** of approved make of following Pressure rating & dia complete, confirming to IS: 5312 (part -1)/ 2004 (amended up to date) and of following specifications: Body, Cover & disc of Grey cast iron of IS:210/ FG200. Face to face dimensions as per IS 5312 (part -1):2004 , Flanges Drilled as per IS:1538. Epoxy (Non-Toxic & suitable for drinking water) applied on body, cover and disc inside and outside . Body seat ring of SS/CS Door face ring - EPDM/ Neoprene (food grade quality) ,Shaft of SS- AISI- 410 ,Hinge Malleable cast iron / SS AISI 316 ,Bonnet Gasket EPDM, Bush- Leaded tin Bronze/ PTET, Gasket EPDM/NBR ,Nut-Bolt as per IS:1363 and IS: 1367 (galvanised steel) ,Insertion rubber of black EPDM 6mm thick. Suitable support structure as per directions of EIC including jointing & jointing material, labour, testing and commissioning along with pipeline as per Technical Specification & as per direction of Engineer-in-charge. Note 1 : Rates are exclusive of tail piece/ dismantling joints and earth work. **Note 2 : Rates are exclusive of GST.**		
6.3.1	**Class PN 1.0**		
6.3.1.1	80 mm dia	Each	**5270.34**
6.3.1.2	100 mm dia	Each	**6756.78**
6.3.1.3	125 mm dia	Each	**8857.63**
6.3.1.4	150 mm dia	Each	**11107.63**
6.3.1.5	200 mm dia	Each	**19083.90**
6.3.1.6	250 mm dia	Each	**30982.20**
6.3.1.7	300 mm dia	Each	**42721.19**
6.3.1.8	350 mm dia	Each	**75272.88**
6.3.1.9	400 mm dia	Each	**107671.19**

S. No.	Description	Unit	Rate (Rs.)
6.3.1.10	450 mm dia	Each	**136503.39**
6.3.1.11	500 mm dia	Each	**196720.34**
6.3.1.12	600 mm dia	Each	**291575.42**
6.4	Providing, lowering, aligning, fixing in position in pipe line, **CI double flanged Dual plate check valve** of approved make of following Pressure rating & dia complete, as per API: 594/ API: 598 and of following specifications: Body & Cover of Grey cast iron of IS:210/ FG200 , Disc / plates - Cast steel ,Disc seal ring of EPDM/ NBR (food grade quality) ,Body seat of SS ,Face to face dimensions as per API: 594 ,Flanges Drilled as per IS:1538. Epoxy (Non-Toxic & suitable for drinking water) applied on body & cover inside and outside . Shaft/Stop Pin of SS- AISI- 304/410 , Hinge SS AISI 316/304 / CS ,Spring SS AISI 316/304 , Bonnet Gasket EPDM ,Bush- Brass with EPDM/NBR "O "ring seal.Nut-Bolt confirming to IS:1363 and IS: 1367 (galvanised steel) ,Insertion rubber of black EPDM 6mm thick . Suitable support structure as per directions of EIC including jointing & jointing material, labour, testing and commissioning along with pipeline as per Technical Specification & as per direction of Engineer-in-charge. Note 1 : Rates are exclusive of tail piece/ dismantling joints and earth work. **Note 2 : Rates are exclusive of GST.**		
6.4.1	**Class PN 1.0**		
6.4.1.1	80 mm dia	Each	**5131.36**
6.4.1.2	100 mm dia	Each	**6520.34**
6.4.1.3	125 mm dia	Each	**8169.49**
6.4.1.4	150 mm dia	Each	**10778.81**
6.4.1.5	200 mm dia	Each	**18552.54**
6.4.1.6	250 mm dia	Each	**29337.29**
6.4.1.7	300 mm dia	Each	**39296.61**
6.4.1.8	350 mm dia	Each	**52180.51**
6.4.1.9	400 mm dia	Each	**74890.68**
6.4.1.10	450 mm dia	Each	**92147.46**
6.4.1.11	500 mm dia	Each	**98725.42**
6.4.1.12	600 mm dia	Each	**130346.61**
6.5	Providing, lowering, aligning, fixing in position and Jointing in pipe line, **CI single Air Valve Flanged/ Screwed type** of approved makes for following pressure rating & dia complete, confirming to IS: 14845-2000 (amended up to date) and of following specifications: Body , Cover and Cowl - Grey Cast Iron as per IS:210- FG 200 ,Float - Stainless Steel AISI 304 / IS: 3444 ,Float Guide- HBT1,Body seat ring - Leaded tin bronze/ SS , Seal ring and face ring - EPDM/NBR, Ends flanged according to IS 6418 or Screwed type shall have external pipe threads conforming to IS 554 Fasteners - CS Epoxy paint inside outside of food grade safe for drinking water ,Valves including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer in charge. Note 1 : Rates are exclusive of connecting tee, pipe piece and earth work. **Note 2 : Rates are exclusive of GST.**		
6.5.1	**Class PN 1.0**		
6.5.1.1	15 mm S-1 Type	Each	**2053.39**
6.5.1.2	25 mm S-1 Type	Each	**2665.25**
6.5.1.3	40 mm S-1 Type	Each	**3315.25**
6.5.1.4	50 mm S-2 Type	Each	**3889.83**
6.5.2	**Class PN 1.6**		
6.5.2.1	15 mm S-1 Type	Each	**2192.37**
6.5.2.2	25 mm S-1 Type	Each	**2793.22**

S. No.	Description	Unit	Rate (Rs.)
6.5.2.3	40 mm S-1 Type	Each	**3428.81**
6.5.2.4	50 mm S-2 Type	Each	**4077.12**
6.6	Providing, lowering, aligning, fixing in position and Jointing in pipe line, **CI Double Acting Kinetic Air Valve** with isolating Sluice Valve of approved makes for following pressure rating & dia complete, confirming to IS: 14845-2000 (amended up to date) and of following specifications: Body , Cover and Cowl - Grey Cast Iron as per IS:210- FG 200 ,Float - Stainless Steel AISI 304 / IS: 3444 , Float Guide- HBT1.HP Orifice- HTB2/ SS,Body seat ring - Leaded tin bronze/ SS .Seal ring and face ring - EPDM/NBR ,Ends flanged according to IS 6418,Fastners - CS, Epoxy paint inside outside of food grade safe for drinking water ,Valves including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer in charge. Note 1 : Rates are exclusive of connecting tee, pipe piece and earth work. **Note 2 : Rates are exclusive of GST.**		
6.6.1	**Class PN 1.0**		
6.6.1.1	40 mm	Each	**9844.07**
6.6.1.2	50 mm	Each	**11215.25**
6.6.1.3	80 mm	Each	**14501.69**
6.6.1.4	100 mm	Each	**19703.39**
6.6.1.5	150 mm	Each	**41181.36**
6.6.1.6	200 mm	Each	**62797.46**
6.6.2	**Class PN 1.6**		
6.6.2.1	40 mm	Each	**10534.75**
6.6.2.2	50 mm	Each	**11971.19**
6.6.2.3	80 mm	Each	**15133.90**
6.6.2.4	100 mm	Each	**20494.92**
6.6.2.5	150 mm	Each	**43320.34**
6.6.2.6	200 mm	Each	**65858.47**
6.7	Providing, lowering, aligning, fixing in position and Jointing in pipe line, **CI Body Flanged End Tamper proof Kinetic Air Valve** of approved makes of following pressure rating and dia and as per following specifications: Governing standard - AWWA C512/ IS:14845:2000(amended up to date),Body, High pressure cover , Low pressure cover, Cowl and Joint support ring - Grey cast iron of grade IS:210/FG200 ,Float- LP ball & HP ball : AISI 304 stainless Steel, Float Guide- HTB1,Seat ring & Gasket - EPDM/NBR, HP Orifice & HP orifice plug : HTB2/ SS ,Bush: Bronze , Flanges as per IS/ BS, Drilled as per IS:1538. Epoxy paint (Non-Toxic & suitable for drinking water) applied on body & cover inside and outside Fasteners - CS/ Galvanised steel ,Outlet of big orifice will have a screen to prevent Tamper of float, with CI metal seated D/F Non rising stem Sluice Valves as per (IS: 14846 amended up to date) PN 1.0 ratings Valves including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer in charge. Note 1 : Rates are exclusive of connecting tee, pipe piece and earth work. **Note 2 : Rates are exclusive of GST.**		
6.7.1	**Class PN 1.0**		
6.7.1.1	40 mm	Each	**10856.78**
6.7.1.2	50 mm	Each	**11896.61**
6.7.1.3	80 mm	Each	**14664.41**
6.7.1.4	100 mm	Each	**19683.90**

S. No.	Description	Unit	Rate (Rs.)
6.7.1.5	150 mm	Each	**33517.80**
6.7.1.6	200 mm	Each	**48806.78**
6.8	Providing, lowering, aligning, fixing in position in pipe line at work site, **DI D/F Resilient seated (soft seated) Sluice Valves** (Gate Valves) , Vacuum tight(bubble tight), straight and pocket less body passage of approved make of following class & dia complete confirming to BS-EN-1171/ AWWA C-509 and of following specifications: Body & bonnet of Ductile cast iron of grade GGG40/GGG50 as per DIN 1693 or GR SG-400/12 as per IS 1865 or equivalent grade as per IS :3896-part2-1985 and subsequent revisions, Wedge of same material as body & shall vulcanised rubber lined with EPDM (food grade quality) and seals of NBR Face to face dimensions as per BS 5163-89/ IS 14846/2000 (amended up to date) /Din 3202 F4, Stem/ spindle of SS AISI 316/410 Electrostatic epoxy powder(EP-P)/ Fusion bond epoxy (Non-Toxic- suitable for drinking water) coated with minimum thickness of 250 microns inside and outside, Drilled as per IS 1538. Nut-Bolt confirming to IS:1363 and IS: 1367 (Galvanised steel) Insertion rubber of black EPDM 6mm thick. Suitable support structure as per directions of EIC, Sluice valves including all jointing & jointing material, labour, testing and commissioning along with pipe line as per Technical Specifications and as per direction of Engineer-in-charge. Note 1 : Rates are exclusive of tail piece/ dismantling joints and earth work. **Note 2 : Rates are exclusive of GST.**		
6.8.1	**Manually Operated Resilient Seated Sluice Valves of Class PN 1.6**		
6.8.1.1	80 mm dia	Each	**7743.22**
6.8.1.2	100 mm dia	Each	**9791.53**
6.8.1.3	125 mm dia	Each	**14480.51**
6.8.1.4	150 mm dia	Each	**16194.07**
6.8.1.5	200 mm dia	Each	**24911.86**
6.8.1.6	250 mm dia	Each	**41339.83**
6.8.1.7	300 mm dia	Each	**52650.85**
6.8.1.8	350 mm dia	Each	**98790.68**
6.8.1.9	400 mm dia	Each	**129385.59**
6.8.1.10	450 mm dia	Each	**172717.80**
6.8.1.11	500 mm dia	Each	**222147.46**
6.8.1.12	600 mm dia.	Each	**326484.75**
6.8.1.13	700 mm dia. With Gear	Each	**607768.64**
6.8.1.14	800 mm dia. With Gear	Each	**858921.19**
6.8.1.15	900 mm dia. With Gear	Each	**1186764.41**
6.8.1.16	1000 mm dia. With Gear	Each	**1554505.08**
6.8.2	**Motorized Sluice Valves with Electric Actuator and integral starter of Class PN 1.0**		
6.8.2.1	80 mm dia	Each	**102077.12**
6.8.2.2	100 mm dia	Each	**105006.78**
6.8.2.3	125 mm dia	Each	**111639.83**
6.8.2.4	150 mm dia	Each	**115932.20**
6.8.2.5	200 mm dia	Each	**131406.78**
6.8.2.6	250 mm dia	Each	**150708.47**
6.8.2.7	300 mm dia	Each	**165231.36**
6.8.2.8	350 mm dia	Each	**216541.53**
6.8.2.9	400 mm dia	Each	**245100.00**
6.8.2.10	450 mm dia	Each	**305127.97**

S. No.	Description	Unit	Rate (Rs.)
6.8.2.11	500 mm dia	Each	**358989.83**
6.8.2.12	600 mm dia.	Each	**446239.83**
6.8.3	**Motorized Sluice Valves with Electric Actuator and integral starter of Class PN 1.6**		
6.8.3.1	80 mm dia	Each	**102794.07**
6.8.3.2	100 mm dia	Each	**105714.41**
6.8.3.3	125 mm dia	Each	**112679.66**
6.8.3.4	150 mm dia	Each	**118390.68**
6.8.3.5	200 mm dia	Each	**131653.39**
6.8.3.6	250 mm dia	Each	**150579.66**
6.8.3.7	300 mm dia	Each	**164342.37**
6.8.3.8	350 mm dia	Each	**217055.08**
6.8.3.9	400 mm dia	Each	**243626.27**
6.8.3.10	450 mm dia	Each	**300576.27**
6.8.3.11	500 mm dia	Each	**351483.05**
6.8.3.12	600 mm dia.	Each	**442027.97**
6.9	Providing, lowering, aligning, fixing in position in pipe line, **DI D/F resilient seated (soft seated) short body pattern type double eccentric Butterfly valves** of approved make of following class & dia complete confirming to BS EN 593/ BS 5155/ IS 13095/1991 amended up to date and of following specifications: Body, disc and end cover of Ductile cast iron of grade GGG40/GGG50 as per DIN 1693 or GR SG-400/12 as per IS 1865 or equivalent grade as per IS :3896-part2-1985 and subsequent revisions, Face to face dimensions as per DIN 3202 F4/ IS 13095 Drilled as per IS:1538. Electrostatic Epoxy Powder(EP-P) / Fusion Bonded Epoxy (Non-Toxic & suitable for drinking water) coated with minimum thickness of 250 micron applied on both body and disc inside and outside. Disc seal ring of EPDM/ Neoprene (food grade quality) and disc seal retaining ring of SS/CS. Shaft of SS- AISI- 410/316 & shaft bearings- bronze/ PTET or Teflon with EPDM/NBR "O "ring seal, Nut-Bolt confirming to IS:1363 and IS: 1367 (Galvanised steel) Insertion rubber of black EPDM 6mm thick. Suitable support structure as per directions of EIC including jointing & jointing material, labour, testing and commissioning along with pipeline as per Technical Specification & as per direction of Engineer-in-charge. Note 1 : Rates are exclusive of tail piece/ dismantling joints and earth work. **Note 2 : Rates are exclusive of GST.**		
6.9.1	**Class PN 1.6, Manually Operated with Gear**		
6.9.1.1	100 mm dia	Each	**42377.12**
6.9.1.2	150 mm dia	Each	**48761.02**
6.9.1.3	200 mm dia	Each	**50709.32**
6.9.1.4	250 mm dia	Each	**56136.44**
6.9.1.5	300 mm dia	Each	**63297.46**
6.9.1.6	350 mm dia	Each	**79274.58**
6.9.1.7	400 mm dia	Each	**104524.58**
6.9.1.8	450 mm dia	Each	**132704.24**
6.9.1.9	500 mm dia	Each	**166315.25**
6.9.1.10	600 mm dia	Each	**206577.97**
6.9.1.11	700 mm dia	Each	**283032.20**
6.9.1.12	800 mm dia.	Each	**376938.14**
6.9.1.13	900 mm dia.	Each	**488268.64**
6.9.1.14	1000 mm dia.	Each	**636385.59**

S. No.	Description	Unit	Rate (Rs.)
6.9.2	**Class PN 1.0, Motorised Operated**		
6.9.2.1	200 mm dia	Each	**133650.00**
6.9.2.2	250 mm dia	Each	**146261.86**
6.9.2.3	300 mm dia	Each	**163752.54**
6.9.2.4	350 mm dia	Each	**177888.98**
6.9.2.5	400 mm dia	Each	**203683.05**
6.9.2.6	450 mm dia	Each	**234323.73**
6.9.2.7	500 mm dia	Each	**253480.51**
6.9.2.8	600 mm dia	Each	**293946.61**
6.9.2.9	700 mm dia	Each	**382791.53**
6.9.2.10	800 mm dia.	Each	**495289.83**
6.9.2.11	900 mm dia.	Each	**591446.61**
6.9.2.12	1000 mm dia.	Each	**750472.03**
6.9.3	**Class PN 1.6, Motorised Operated**		
6.9.3.1	200 mm dia	Each	**136281.36**
6.9.3.2	250 mm dia	Each	**149378.81**
6.9.3.3	300 mm dia	Each	**168516.95**
6.9.3.4	350 mm dia	Each	**183103.39**
6.9.3.5	400 mm dia	Each	**209658.47**
6.9.3.6	450 mm dia	Each	**241244.92**
6.9.3.7	500 mm dia	Each	**265671.19**
6.9.3.8	600 mm dia	Each	**312112.71**
6.9.3.9	700 mm dia.	Each	**404288.14**
6.9.3.10	800 mm dia.	Each	**524284.75**
6.9.3.11	900 mm dia.	Each	**631189.83**
6.9.3.12	1000 mm dia.	Each	**795634.75**
6.10	Providing, lowering, aligning, fixing in position in pipe line, **DI resilient seated (soft seated) Concentric Wafer type, Butterfly valves** of approved make of following Pressure rating & dia complete confirming to BS EN 593/ BS 5155/ IS 13095/1991 amended up to date and of following specifications: Body- Ductile cast iron of grade GGG40/GGG50 as per DIN 1693 or GR SG-400/12 as per IS 1865 or equivalent grade as per IS :3896-part2-1985 and subsequent revisions, Disc - DI (same as body material) / CS, Face to face dimensions as per DIN 3202 F4/ IS 13095 , Flanges Drilled as per IS:1538 ,Electrostatic Epoxy Powder(EP-P) / Fusion Bonded Epoxy (Non-Toxic & suitable for drinking water) coated with minimum thickness of 250 micron applied on both body and disc inside and outside . Liner & Disc seal - EPDM/ Neoprene (food grade quality) ,Shaft of SS- AISI- 410/420 & shaft bearings- bronze/ PTET or Teflon with EPDM/NBR "O "ring seal , Nut-Bolt confirming to IS:1363 and IS: 1367/ Galvanised steel, Insertion rubber of black EPDM 6mm thick ,Suitable support structure as per directions of EIC including jointing & jointing material, labour, testing and commissioning along with pipeline as per Technical Specification & as per direction of Engineer-in-charge. Note 1 : Rates are exclusive of tail piece/ dismantling joints and earth work. **Note 2 : Rates are exclusive of GST.**		
6.10.1	**Class PN 1.6, Wafer Type**		
6.10.1.1	80 mm (Lever Operated)	Each	**8970.34**
6.10.1.2	100 mm (Lever Operated)	Each	**10833.05**
6.10.1.3	125 mm (Lever Operated	Each	**18261.02**
6.10.1.4	150 mm (Lever Operated)	Each	**19827.97**
6.10.1.5	200 mm (with Gear)	Each	**29901.69**
6.10.1.6	250 mm (with Gear)	Each	**38606.78**

S. No.	Description	Unit	Rate (Rs.)
6.10.1.7	300 mm (with Gear)	Each	**42856.78**
6.11	Providing, lowering, aligning, fixing in position in pipe line, DI D/F resilient seated (soft seated) **Swing type Non Return Valve** of approved make of following Pressure rating & dia complete, generally confirming to IS: 5312 (part -1)/ 2004 (amended up to date) and of following specifications: Body, Bonnet & disc of Ductile cast iron of grade GGG40/GGG50 as per DIN 1693 or GR SG-400/12 as per IS 1865 or equivalent grade as per IS :3896-part2-1985 and subsequent revisions, Face to face dimensions as per IS 5312 (part -1):2004 Drilled as per IS:1538. Electrostatic Epoxy Powder(EP-P) / Fusion Bonded Epoxy (Non-Toxic & suitable for drinking water) coated with minimum thickness of 250 micron applied on body, cover and disc inside and outside . Disc seal ring of EPDM/ Neoprene (food grade quality) and disc seal retaining ring of SS/CS.Shaft of SS- AISI- 410, Hinge SS AISI 316/410 ,Bonnet Gasket EPDM ,Bush- Brass with EPDM/NBR "O "ring seal Nut-Bolt confirming to IS:1363 and IS: 1367 (galvanised steel) Insertion rubber of black EPDM 6mm thick. Suitable support structure as per directions of EIC including jointing & jointing material, labour, testing and commissioning along with pipeline as per Technical Specification & as per direction of Engineer-in-charge. Note 1 : Rates are exclusive of tail piece/ dismantling joints and earth work. **Note 2 : Rates are exclusive of GST.**		
6.11.1	**Class PN 1.6**		
6.11.1.1	80 mm dia	Each	**8015.25**
6.11.1.2	100 mm dia	Each	**10676.27**
6.11.1.3	125 mm dia	Each	**15062.71**
6.11.1.4	150 mm dia	Each	**18492.37**
6.11.1.5	200 mm dia	Each	**31365.25**
6.11.1.6	250 mm dia	Each	**47273.73**
6.11.1.7	300 mm dia	Each	**64905.08**
6.11.1.8	350 mm dia	Each	**108849.15**
6.11.1.9	400 mm dia	Each	**140453.39**
6.11.1.10	450 mm dia	Each	**181966.95**
6.11.1.11	500 mm dia	Each	**217063.56**
6.11.1.12	600 mm dia	Each	**286434.75**
6.12	Providing, lowering, aligning, fixing in position in pipe line, **DI double flanged resilient seated Dual plate check valve of approved make of following Pressure rating & dia complete, as per API: 594/ API: 598 and of following specifications:** Body & Bonnet of Ductile cast iron of grade GGG40/GGG50 as per DIN 1693 or GR SG-400/12 as per IS 1865 or equivalent grade as per IS :3896-part2-1985 and subsequent revisions, Disc / plates - SG-400/12 or CF-8M,Face to face dimensions as per API: 594 , Flanges Drilled as per IS:1538. Electrostatic Epoxy Powder(EP-P) / Fusion Bonded Epoxy (Non-Toxic & suitable for drinking water) coated with minimum thickness of 250 micron applied on body and cover inside and outside . Disc seal ring of EPDM/ Neoprene (food grade quality) and disc seal retaining ring of SS/CS. Shaft of SS- AISI- 410 , Hinge SS AISI 316/304,Spring SS AISI 316/304,Bonnet Gasket EPDM ,Bush- Brass with EPDM/NBR "O "ring seal, Nut-Bolt confirming to IS:1363 and IS: 1367 (galvanised steel) , Insertion rubber of black EPDM 6mm thick .Suitable support structure as per directions of EIC including jointing & jointing material, labour, testing and commissioning along with pipeline as per Technical Specification & as per direction of Engineer-in-charge. Note 1 : Rates are exclusive of tail piece/ dismantling joints and earth work. **Note 2 : Rates are exclusive of GST.**		

S. No.	Description	Unit	Rate (Rs.)
6.12.1	**Class PN 1.6**		
6.12.1.1	80 mm dia	Each	**9816.95**
6.12.1.2	100 mm dia	Each	**11323.73**
6.12.1.3	125 mm dia	Each	**12054.24**
6.12.1.4	150 mm dia	Each	**17745.76**
6.12.1.5	200 mm dia	Each	**30940.68**
6.12.1.6	250 mm dia	Each	**46671.19**
6.12.1.7	300 mm dia	Each	**65654.24**
6.12.1.8	350 mm dia	Each	**70522.88**
6.12.1.9	400 mm dia	Each	**91072.03**
6.12.1.10	450 mm dia	Each	**109116.10**
6.12.1.11	500 mm dia	Each	**128472.03**
6.13	Providing, lowering, aligning, fixing in position and Jointing in pipe line, DI Body Flanged End **Tamper proof Kinetic Air Valve** of approved makes of following pressure rating and dia and as per following specifications: Governing standard - AWWA C512/ IS:14845:2000(amended up to date) Body, High pressure cover , Low pressure cover, Cowl and Joint support ring - Ductile cast iron of grade GGG40/GGG50 as per DIN 1693 or GR SG-400/12 as per IS 1865, Float- LP ball & HP ball : AISI 304 stainless Steel, Seat ring & Gasket - EPDM/NBR ,HP Orifice & HP orifice plug : Bronze/ SS ,Bush: Bronze ,Flanges as per IS/ BS, Drilled as per IS:1538. Electrostatic Epoxy Powder(EP-P) / Fusion Bonded Epoxy (Non-Toxic & suitable for drinking water) coated with minimum thickness of 250 micron applied on body & cover inside and outside fasteners - CS/ Galvanised steel, Outlet of big orifice will have a screen to prevent Tamper of float, with DI metal seated D/F Non rising stem Sluice Valves as per (IS: 14846 amended up to date) PN 1.6 ratings Valves including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer in charge. Note 1 : Rates are exclusive of connecting tee, pipe piece and earth work. **Note 2 : Rates are exclusive of GST.**		
6.13.1	**Class PN 1.6**		
6.13.1.1	40 mm dia	Each	**11034.75**
6.13.1.2	50 mm dia	Each	**11439.83**
6.13.1.3	80 mm dia	Each	**14606.78**
6.13.1.4	100 mm dia	Each	**19872.03**
6.13.1.5	150 mm dia	Each	**34035.59**
6.13.1.6	200 mm dia	Each	**46626.27**

S. No.	Description	Unit	Rate (Rs.)
6.14	Providing, lowering, aligning, fixing in position and Jointing in pipe line, **combination Air Release Valve Kinetic type with single chamber housed Double orifice and have 3 functions,** large Air exhaust, small Air venting and large air intake during vacuum of pipeline of approved makes of following pressure rating and dia and as per following specifications: Governing standard - AWWA C512 ,Body and bonnet of Ductile cast iron of grade GGG40/GGG50 as per DIN 1693 or GR SG-400/12 as per IS 1865,Float & internal trim: AISI 304 stainless Steel, Seat ring & Gasket - EPDM/NBR Drilled as per IS:1538. Electrostatic Epoxy Powder(EP-P) / Fusion Bonded Epoxy (Non-Toxic & suitable for drinking water) coated with minimum thickness of 250 micron applied on body & cover inside and outside Fasteners - CS/ Galvanised steel ,Outlet of big orifice will have a screen to prevent Tamper of float, Big orifice size should be equal or larger than the inlet flange bore, for fully comply with AWWA C512.), Valve including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer in charge. Note 1 : Rates are exclusive of connecting tee, pipe piece and earth work. **Note 2 : Rates are exclusive of GST.**		
6.14.1	**Class PN 1.6**		
6.14.1.1	50 mm dia	Each	**15308.47**
6.14.1.2	80 mm dia	Each	**19668.64**
6.14.1.3	100 mm dia	Each	**26314.41**
6.14.1.4	150 mm dia	Each	**42002.54**
6.14.1.5	200 mm dia	Each	**52724.58**
6.15	Providing, lowering, aligning & fixing in position **DI D/F Plunger Type Flow Control Valve** of approved make of following Pressure rating & dia complete and of following specifications: Body- Ductile cast iron of grade GGG40/GGG50 as per DIN 1693 or EN-JS 1030, Plunger/ Piston - Stainless steel AISI- 304/ Gr 1.4301, Piston Guides- Bronze Welded Overlay / SS Shaft/Crank/Spindle- Stainless steel AISI- 410/ Gr 1.4021 Body Seat Ring- Stainless steel AISI- 316/304/ Bronze IS:318- LTB2 ,Seal (O- ring / Quad ring)- EPDM/ NBR, Bearing Bush - Bronze IS:318- LTB2,Slotted cylinder / Strainer / Diffuser- AISI- 420/ 304,Nut- Bolts - SS, Face to Face- as per ANSI B 16.1/ EN 558-1 and Flange ends should be as per ANSI B-16.5, Class 150 and Class 300/ EN-1092-2. Insertion rubber of black EPDM 6mm thick ,Electrostatic Epoxy Powder(EP-P) / Fusion Bonded Epoxy (Non-Toxic & suitable for drinking water) coated with minimum thickness of 250 micron applied both inside and outside . Suitable support structure as per directions of EIC including jointing & jointing material, labour, testing and commissioning as per Technical Specification & as per direction of Engineer-In- Charge. Note 1 : Rates are exclusive of tail piece/ dismantling joints and earth work. **Note 2 : Rates are exclusive of GST.**		
6.15.1	**Plunger Type Flow Control Valve**		
6.15.1.1	80 mm dia	Each	**286471.19**
6.15.1.2	100mm dia	Each	**312235.59**
6.15.1.3	125 mm dia	Each	**348009.32**
6.15.1.4	150mm dia	Each	**381820.34**
6.15.1.5	200mm dia	Each	**467811.86**
6.15.1.6	250mm dia	Each	**547178.81**
6.15.1.7	300mm dia	Each	**668030.51**
6.15.1.8	350mm dia	Each	**702854.24**

S. No.	Description	Unit	Rate (Rs.)
6.15.1.9	400mm dia	Each	**972111.86**
6.15.1.10	450mm dia	Each	**1024545.76**
6.15.1.11	500mm dia	Each	**1334505.93**
6.15.1.12	600mm dia	Each	**1697044.07**
6.15.1.13	700mm dia	Each	**2762951.69**
6.15.1.14	800mm dia	Each	**3545650.85**
6.15.1.15	900mm dia	Each	**4874003.39**
6.15.1.16	1000mm dia	Each	**5057383.90**
6.16	Providing, lowering, aligning and fixing in position **DI D/F Diaphragm type Pressure Reducing / Flow Control Valve** of approved make of following Pressure rating & dia complete and of following specifications: Body & Bonnet - Ductile cast iron of grade GGG40/GGG50 as per DIN 1693 or ASTM A 536, Diaphragm and Resilient seal disc - Flexible, non-wicking nylon fabric reinforced synthetic elastomer -Buna-N / EPDM (FDA / WRAS approved), Body Seat Ring - Cast stainless steel ASTM- A 351 GR. CF8M / AISI- 316, raised, replaceable inline & onsite Stem - Stainless Steel, AISI-316/410, raised, replaceable inline & onsite Spring & Bearing bush- Stainless Steel, AISI-316 ,Disc guide, disc retainer & diaphragm washer - Stainless Steel, AISI-304/ 316/Bronze ,Seal- EPDM/ NBR ,Pilot Body- Stainless Steel, AISI-304/ CF8 or Brass Tubing - Stainless Steel, AISI-304 / Copper ,Solenoid Valve- Stainless Steel, AISI-316 ,Throttling plug - Stainless Steel, AISI-304, Nut- Bolts - SS Face to Face- as per ANSI B 16.1/ EN 558-1 and Flange ends should be as per ANSI B-16.5, Class 150 and Class 300/ EN-1092-2. insertion rubber of black EPDM 6mm thick Electrostatic Epoxy Powder(EP-P) / Fusion Bonded Epoxy (Non-Toxic & suitable for drinking water) coated with minimum thickness of 250 micron applied both inside and outside. Suitable support structure as per directions of EIC including jointing & jointing material, labour, testing and commissioning as per Technical Specification & as per direction of Engineer-In- Charge. Note 1 : Rates are exclusive of tail piece/ dismantling joints and earth work. **Note 2 : Rates are exclusive of GST.**		
6.16.1	**Pilot operated SCADA Compatible Diaphragm Type Pressure Reducing Valves (Class PN 1.6)**		
6.16.1.1	80 mm dia	Each	**97164.41**
6.16.1.2	100 mm dia	Each	**105245.76**
6.16.1.3	125 mm dia	Each	**121301.69**
6.16.1.4	150 mm dia	Each	**143369.49**
6.16.1.5	200 mm dia	Each	**177787.29**
6.16.1.6	250 mm dia	Each	**242020.34**
6.16.1.7	300 mm dia	Each	**319295.76**
6.16.1.8	350 mm dia	Each	**443811.86**
6.16.1.9	400 mm dia	Each	**565696.61**
6.16.1.10	450 mm dia	Each	**759973.73**
6.16.1.11	500 mm dia	Each	**1040708.47**
6.16.1.12	600 mm dia	Each	**1394378.81**
6.16.2	**Diaphragm Type Flow Control Valve With Electrical Actuator suitable for SCADA (PN 1.6)**		
6.16.2.1	80 mm dia	Each	**91810.17**
6.16.2.2	100 mm dia	Each	**101694.07**
6.16.2.3	125 mm dia	Each	**118766.10**
6.16.2.4	150 mm dia	Each	**131450.00**
6.16.2.5	200 mm dia	Each	**153797.46**

S. No.	Description	Unit	Rate (Rs.)
6.16.2.6	250 mm dia	Each	**221102.54**
6.16.2.7	300 mm dia	Each	**307106.78**
6.16.2.8	350 mm dia	Each	**419936.44**
6.16.2.9	400 mm dia	Each	**745329.66**
6.16.2.10	450 mm dia	Each	**1029147.46**
6.16.2.11	500 mm dia	Each	**1237614.41**
6.16.2.12	600 mm dia	Each	**1811887.29**
	Dismantling/ Expansion Joints		
6.17	Providing, lowering, laying, aligning, fixing in position and jointing CI dismantling joint (Suitable for Sluice valves etc.) as per IS specifications complete of the following sizes including all jointing material, cost of all labour, testing and commissioning Technical Specifications and as per direction of Engineer. Class PN 1.0 **Rates are exclusive of GST.**		
6.17.1	80 mm dia	Each	**2668.64**
6.17.2	100 mm dia.	Each	**3106.78**
6.17.3	125 mm dia.	Each	**4061.02**
6.17.4	150 mm dia.	Each	**4879.66**
6.17.5	200 mm dia.	Each	**7257.63**
6.17.6	250 mm dia.	Each	**9939.83**
6.17.7	300 mm dia.	Each	**11884.75**
6.17.8	350 mm dia.	Each	**15463.56**
6.17.9	400 mm dia.	Each	**20944.92**
6.17.10	450 mm dia.	Each	**24369.49**
6.17.11	500 mm dia.	Each	**28975.42**
6.17.12	600 mm dia.	Each	**40935.59**
6.18	Providing, lowering, laying, aligning, fixing in position and jointing MS dismantling joint (Fabricated Steel) as per IS specifications complete of the following sizes including all jointing material, cost of all labour, testing and commissioning Technical Specifications and as per direction of Engineer. **Rates are exclusive of GST.**		
6.18.1	80 mm dia	Each	**3588.14**
6.18.2	100 mm dia.	Each	**4348.31**
6.18.3	125 mm dia.	Each	**5761.86**
6.18.4	150 mm dia.	Each	**8122.03**
6.18.5	200 mm dia.	Each	**10013.56**
6.18.6	250 mm dia.	Each	**12977.12**
6.18.7	300 mm dia.	Each	**16204.24**
6.18.8	350 mm dia.	Each	**22710.17**
6.18.9	400 mm dia.	Each	**30343.22**
6.18.10	450 mm dia.	Each	**35685.59**
6.18.11	500 mm dia.	Each	**43336.44**
6.18.12	600 mm dia.	Each	**55400.00**
6.18.13	700 mm dia.	Each	**78611.02**
6.18.14	800 mm dia.	Each	**101307.63**
6.18.15	900 mm dia.	Each	**131265.25**
6.18.16	1000 mm dia.	Each	**155537.29**

S. No.	Description	Unit	Rate (Rs.)
6.19	Providing, installation, testing and commissioning of following Stain less steel AISI 304 Expansion bellows of 10/16 bar rating with tie rods as per technical specifications and layout drawings including jointing material like nuts, bolts, rubber gaskets etc. complete in all respect as per technical specification and as per direction of Engineer. **Rates are exclusive of GST.**		
6.19.1	80 mm dia.	Each	**6151.69**
6.19.2	100 mm dia.	Each	**7066.95**
6.19.3	125 mm dia.	Each	**8148.31**
6.19.4	150 mm dia.	Each	**9699.15**
6.19.5	200 mm dia.	Each	**10977.97**
6.19.6	250 mm dia.	Each	**13431.36**
6.19.7	300 mm dia.	Each	**16622.03**
6.19.8	350 mm dia.	Each	**20083.05**
6.19.9	400 mm dia.	Each	**25867.80**
6.19.10	450 mm dia.	Each	**30458.47**
6.19.11	500 mm dia.	Each	**48450.85**
6.19.12	600 mm dia.	Each	**58755.08**
6.19.13	700 mm dia.	Each	**80157.63**
6.19.14	800 mm dia.	Each	**100238.98**
6.19.15	900 mm dia.	Each	**119438.14**
6.19.16	1000 mm dia.	Each	**156495.76**
6.20	**Removing** of existing CI/ DI Double flange sluice valves, non return valves, butter fly valves etc. in existing Distribution/ Rising Main/ Transmission Main pipe line of following sizes, works include de-jointing of valve, dewatering, taking it out of the pit with adequate safety arrangement at site and then refill the pit from excavated sand by ramming it at sides of pipe & up to ground level. Work shall be done as per specification, scope of work and direction of Engineer-in-charge. All old material shall be removed safely & all old material shall be deposited in Divisional Store. Note: Rates are exclusive of earth work and road cutting. **Rates are exclusive of GST.**		
6.20.1	80 mm	Each	**405.93**
6.20.2	100 mm	Each	**440.68**
6.20.3	125 mm	Each	**547.46**
6.20.4	150 mm	Each	**583.05**
6.20.5	200 mm	Each	**635.59**
6.20.6	250 mm	Each	**812.71**
6.20.7	300 mm	Each	**1197.46**
6.20.8	350 mm	Each	**1396.61**
6.20.9	400 mm	Each	**1567.80**
6.20.10	450 mm	Each	**2129.66**
6.20.11	500 mm	Each	**2350.85**
6.20.12	600 mm	Each	**2607.63**

Chapter 7

DOL / Star delta starter type LT panels

Note : All rates are exclusive of GST.

S. No.	Description	Unit	Rate (Rs.)
7.1	SITC **DOL** Starter type LT Panel of following rating, all switchgears are of PHED approved makes, CRCA sheet of Panel enclosure is of TATA/ Essar 1.6mm/ 2.0mm thick duly Electrostatic Powder Coated with angle frame including other ancillaries (Insulators, Acrylic Sheet , Backlight Sheet, Hardware, Wire, Name Plates, Lugs, Pvc Channel , Mcb Chanel , Lock, Hing , Bidding , Connectors, Neutral Links , Spiral , Saddle & Packing Material) etc. complete as per Technical Specifications and as per direction of Engineer-In-Charge. **Rates are exclusive of GST.**		
7.1.1	**DOL STARTER 2.2 KW (3 HP)- : For 2 motors (1 W+ 1S)** **I/C -** MCB 25A ,FP, 10 KA, C Curve (1) , Analog Voltmeter 96*96mm (0-500V) (1), Volt Selector Switch (1) , Analog Ammeter 96*96mm (0-60A) (1), Amp. Selector Switch (1), C. T. 30/5A CL 1.0 5VA (3) , Indicating Lights (Red-1, Yellow -1) (2), Indicating Lights (Blue - 1) (1), Control MCB 6A SP 10 KA C Curve (3) and **O/G-** MCB 16A ,TP, 10 KA, C Curve (2), Power Cont 9A TP AC3 Duty(2), 2 NO+2 NC Aux. Block(2), Thermal Overload Relay (4-6A)(2), Control MCB 6A SP 10 KA C Curve (2), Single Phase Preventer (2), Indicating Lights (Red- 1, Green - 1, Amber-1)(6), Push Button 22.5 (Red - 1, Green - 1)(4), Selector Switch 1 Pole, 2 Way (2), Capacitor 440VAC Heavy Duty MPP Type 2 Kvar (2)	Each	**41827.12**
7.1.2	**DOL STARTER 3.7KW (5 HP) - : For 2 motors (1 W+ 1S)** **I/C** - MCB 32A ,FP, 10 KA, C Curve (1) , Analog Voltmeter 96*96mm (0-500V) (1), Volt Selector Switch (1) , Analog Ammeter 96*96mm (0-60A) (1), Amp. Selector Switch (1), C. T. 30/5A CL 1.0 5VA (3) , Indicating Lights (Red-1, Yellow -1) (2), Indicating Lights (Blue - 1) (1), Control MCB 6A SP 10 KA C Curve (3) and **O/G-** MCB 25A ,TP, 10 KA, C Curve (2), Power Cont 12A TP AC3 Duty(2), 2 NO+2 NC Aux. Block(2), Thermal Overload Relay (7-10A)(2), Control MCB 6A SP 10 KA C Curve (2), Single Phase Preventer (2), Indicating Lights (Red- 1, Green - 1, Amber-1)(6), Push Button 22.5 (Red - 1, Green - 1)(4), Selector Switch 1 Pole, 2 Way (2), Capacitor 440VAC Heavy Duty MPP Type 2 Kvar (2)	Each	**42722.88**
7.1.3	**DOL STARTER 5.5 KW (7.5HP) - : For 2 motors (1 W+ 1S)** I/C - MCB 40A ,FP, 10 KA, C Curve (1) , Analog Voltmeter 96*96mm (0-500V) (1), Volt Selector Switch (1) , Analog Ammeter 96*96mm (0-60A) (1), Amp. Selector Switch (1), C. T. 30/5A CL 1.0 5VA (3) , Indicating Lights (Red-1, Yellow -1) (2), Indicating Lights (Blue - 1) (1), Control MCB 6A SP 10 KA C Curve (3) and **O/G-** MCB 25A ,TP, 10 KA, C Curve (2), Power Cont 12A TP AC3 Duty(2), 2 NO+2 NC Aux. Block(2), Thermal Overload Relay (7-10A)(2), Control MCB 6A SP 10 KA C Curve (2), Single Phase Preventer (2), Indicating Lights (Red- 1, Green - 1, Amber-1)(6), Push Button 22.5 (Red - 1, Green - 1)(4), Selector Switch 1 Pole, 2 Way (2), Capacitor 440VAC Heavy Duty MPP Type 2 Kvar (2)	Each	**43600.00**

S. No.	Description	Unit	Rate (Rs.)
7.2	*SITC* **STAR DELTA** Starter type LT Panel of following rating: all switchgears are of PHED approved makes, CRCA sheet of Panel enclosure is of TATA/ Essar 1.6mm/ 2.0mm thick duly Electrostatic Powder Coated with angle frame including other ancillaries (Insulators, Acrylic Sheet , Backlight Sheet, Hardware, Wire, Name Plates, Lugs, Pvc Channel , Mcb Chanel , Lock, Hing , Bidding , Connectors, Neutral Links , Spiral , Saddle & Packing Material) etc. and 100A/ 125A ,TPN, Aluminium Bus Bar with Colour coated heat shrinkage sleeves complete as per Technical Specifications and as per direction of Engineer-In-Charge. **Rates are exclusive of GST.**		
7.2.1	**STAR DELTA STARTER 7.5 KW (10.0 HP) - : For 2 motors (1 W+ 1S)** I/C - MCB 63A ,FP, 10 KA, C Curve (1) , Analog Voltmeter 96*96mm (0-500V) (1), Volt Selector Switch (1) , Analog Ammeter 96*96mm (0-60A) (1), Amp. Selector Switch (1), C. T. 60/5A CL 1.0 5VA (3) , Indicating Lights (Red-1, Yellow -1) (2), Indicating Lights (Blue - 1) (1), Control MCB 6A SP 10 KA C Curve (3) and **O/G-** MCB 32A ,TP, 10 KA, C Curve (2), Power Cont 18A TP AC3 Duty(2), 2 NO+2 NC Aux. Block(2), Thermal Overload Relay (7-10A)(2), Control MCB 6A SP 10 KA C Curve (2), Single Phase Preventer (2), Indicating Lights (Red- 1, Green - 1, Amber-1)(6), Push Button 22.5 (Red - 1, Green - 1)(4), Selector Switch 1 Pole, 2 Way (2), Capacitor 440VAC Heavy Duty MPP Type 5Kvar (2), S/D Timer(2)	Each	**55150.00**
7.2.2	**STAR DELTA STARTER 9.3 KW (12.5 HP) - : For 2 motors (1 W+ 1S)** I/C - MCB 63A ,FP, 10 KA, C Curve (1) , Analog Voltmeter 96*96mm (0-500V) (1), Volt Selector Switch (1) , Analog Ammeter 96*96mm (0-60A) (1), Amp. Selector Switch (1), C. T. 60/5A CL 1.0 5VA (3) , Indicating Lights (Red-1, Yellow -1) (2), Indicating Lights (Blue - 1) (1), Control MCB 6A SP 10 KA C Curve (3) and **O/G-** MCB 40A ,TP, 10 KA, C Curve (2), Power Cont 18A TP AC3 Duty(2), 2 NO+2 NC Aux. Block(2), Thermal Overload Relay (7-10A)(2), Control MCB 6A SP 10 KA C Curve (2), Single Phase Preventer (2), Indicating Lights (Red- 1, Green - 1, Amber-1)(6), Push Button 22.5 (Red - 1, Green - 1)(4), Selector Switch 1 Pole, 2 Way (2), Capacitor 440VAC Heavy Duty MPP Type 5Kvar (2), S/D Timer(2)	Each	**56727.12**
7.2.3	**STAR DELTA STARTER 11.0 KW (15.0 HP) - : For 2 motors (1 W+ 1S)** I/C - MCB 63A ,FP, 10 KA, C Curve (1) , Analog Voltmeter 96*96mm (0-500V) (1), Volt Selector Switch (1) , Analog Ammeter 96*96mm (0-60A) (1), Amp. Selector Switch (1), C. T. 60/5A CL 1.0 5VA (3) , Indicating Lights (Red-1, Yellow -1) (2), Indicating Lights (Blue - 1) (1), Control MCB 6A SP 10 KA C Curve (3) and **O/G-** MCB 40A ,TP, 10 KA, C Curve (2), Power Cont 25A TP AC3 Duty(2), 2 NO+2 NC Aux. Block(2), Thermal Overload Relay (9-13A)(2), Control MCB 6A SP 10 KA C Curve (2), Single Phase Preventer (2), Indicating Lights (Red- 1, Green - 1, Amber-1)(6), Push Button 22.5 (Red - 1, Green - 1)(4), Selector Switch 1 Pole, 2 Way (2), Capacitor 440VAC Heavy Duty MPP Type 7.5Kvar (2), S/D Timer(2)	Each	**59797.46**

S. No.	Description	Unit	Rate (Rs.)
7.2.4	**STAR DELTA STARTER 15.0 KW (20.0 HP) : For 2 motors (1 W+ 1S)** I/C- MCCB 100A TPN 25 KA With T/M Based Over Current & Short Circuit Protection (1),Spreaders (2),Extended Rotary Handle (1) , Analog Voltmeter 96*96mm (0-500V) (1), Volt Selector Switch (1) , Analog Ammeter 96*96mm (0-60A) (1), Amp. Selector Switch (1), C. T. 100/5A CL 1.0 5VA (3) , Indicating Lights (Red-1, Yellow -1) (2), Indicating Lights (Blue - 1) (1), Control MCB 6A SP 10 KA C Curve (3) and **O/G-** MCCB 63A TPN 25 KA With T/M Based Over Current & Short Circuit Protection (2), Power Cont 32A TP AC3 Duty(2), 2 NO+2 NC Aux. Block(2), Thermal Overload Relay (12-18A)(2), Control MCB 6A SP 10 KA C Curve (2), Single Phase Preventer (2), Indicating Lights (Red- 1, Green - 1, Amber-1)(6), Push Button 22.5 (Red - 1, Green - 1)(4), Selector Switch 1 Pole, 2 Way (2), Capacitor 440VAC Heavy Duty MPP Type 7.5Kvar (2), S/D Timer(2)	Each	**84089.83**
7.2.5	**STAR DELTA STARTER 18.5 KW (25.0 HP) - : For 2 motors (1 W+ 1S)** I/C- MCCB 125A TPN 25 KA With T/M Based Over Current & Short Circuit Protection (1),Spreaders (2),Extended Rotary Handle (1) , Analog Voltmeter 96*96mm (0-500V) (1), Volt Selector Switch (1) , Analog Ammeter 96*96mm (0-60A) (1), Amp. Selector Switch (1), C. T. 125/5A CL 1.0 5VA (3) , Indicating Lights (Red-1, Yellow -1) (2), Indicating Lights (Blue - 1) (1), Control MCB 6A SP 10 KA C Curve (3) and **O/G-** MCCB 100A TPN 25 KA With T/M Based Over Current & Short Circuit Protection (2), Power Cont 32A TP AC3 Duty(2), 2 NO+2 NC Aux. Block(2), Thermal Overload Relay (16-24A)(2), Control MCB 6A SP 10 KA C Curve (2), Single Phase Preventer (2), Indicating Lights (Red- 1, Green - 1, Amber-1)(6), Push Button 22.5 (Red - 1, Green - 1)(4), Selector Switch 1 Pole, 2 Way (2), Capacitor 440VAC Heavy Duty MPP Type 10 Kvar (2), S/D Timer(2)	Each	**91977.97**
7.2.6	**STAR DELTA STARTER 22.0 KW (30.0 HP) - : For 2 motors (1 W+ 1S)** I/C- MCCB 125A TPN 25 KA With T/M Based Over Current & Short Circuit Protection (1),Spreaders (2),Extended Rotary Handle (1) , Analog Voltmeter 96*96mm (0-500V) (1), Volt Selector Switch (1) , Analog Ammeter 96*96mm (0-60A) (1), Amp. Selector Switch (1), C. T. 125/5A CL 1.0 5VA (3) , Indicating Lights (Red-1, Yellow -1) (2), Indicating Lights (Blue - 1) (1), Control MCB 6A SP 10 KA C Curve (3) and **O/G-** MCCB 100A TPN 25 KA With T/M Based Over Current & Short Circuit Protection (2), Power Cont 40A TP AC3 Duty(2), 2 NO+2 NC Aux. Block(2), Thermal Overload Relay (23-32A)(2), Control MCB 6A SP 10 KA C Curve (2), Single Phase Preventer (2), Indicating Lights (Red- 1, Green - 1, Amber-1)(6), Push Button 22.5 (Red - 1, Green - 1)(4), Selector Switch 1 Pole, 2 Way (2), Capacitor 440VAC Heavy Duty MPP Type 12.5 Kvar (2), S/D Timer(2)	Each	**103438.14**

Chapter 8

Construction of pump house and boundary wall

Note : All rates are exclusive of GST.

S. No.	Description	Unit	Rate (Rs.)
8.1	Construction of Pump house of brick/ stone masonry of required size suitable for installation of maximum 4 no. Monoblock pump sets as per approved GA drawing, scope of work and technical specification complete work in all respect including electrical works for lighting and fans, rain water drainage. The plinth area of pump house shall be area of measurement. **Rate is exclusive of GST.**	sqm	**17161.86**
8.2	Construction of boundary wall of Brick/ stone masonry as per enclosed GA drawing, scope of work and technical specifications complete work in all respect. Brief details of boundary wall parameter is as below: 1. Depth of foundation- 900 mm. 2. PCC in M-10, width -900 mm and thickness 100 mm, 3. Stone masonry in CM: 1:6 section of foundation above PCC, 600 mm (W)x 450 mm (D) and 450 mm (W) x 450 mm (D) 4. Superstructure work: Stone masonry in CM: 1:6, W-300, height-1650 mm,/ Brick work in CM: 1:6 W-230 mm, height- 1650 mm. 5. Cement mortar pointing on Stone masonry and cement mortar plaster 20 mm thick on brick masonry in CM 1:6. 6. Expansion joint shall be on every 30 mtr. 7. On top of wall there shall be CC Coping 75 mm thick (1:2:4) shall be provided. 8. Pillar for main gate 350x350 mm in size is part of boundary wall. 9. Cement paint of approved colour in 3 coat shall be done. **Rate is exclusive of GST.**	RMT	**4932.20**
8.3	Providing and fixing steel, gate, grating and grills made of angles, tees, square bars, flats or black pipe with hold fast and fitting complete as per design and drawing including cutting welding and fabrication with priming coat of red oxide and two coat of enamel paints. **Rate is exclusive of GST.**	Kg	**102.54**
8.4	Construction of Pump house of RCC framed structure as per approved standard GA, structure, electrical drawing, scope of work and technical specification complete work in all respect including electrical works for indoor and outdoor lighting and fans, rain water drainage, sanitary, plumbing, monorail/ EOT crane etc for Earth quake zone II and SBC equal to or more than 7 T/sqm. **Note:** Standard drawings can be viewed on website https://pheddms.rajasthan.gov.in/private/public/dms_document.aspx. **Rates are exclusive of GST.**		
8.4.1	Type I (72.3 Sqm)	Each	**1657847.46**
8.4.2	Type II (111.34 Sqm)	Each	**2343830.51**
8.4.3	Type III (150.6 Sqm)	Each	**2849118.64**
8.4.4	Type IV (212.9 Sqm)	Each	**4416076.27**
8.4.5	Type V (381.5 Sqm)	Each	**7462847.46**
8.4.6	Type VI (407.48 Sqm)	Each	**8358830.51**
8.4.7	Type VII (692.72 Sqm)	Each	**11647322.03**

8.5	Construction of Pump house of RCC framed structure with pump pit in RCC walls as per scope of work and technical specification complete work in all respect including electrical works for indoor and outdoor lighting and fans, rain water drainage, sanitary, plumbing, monorail/ EOT crane etc. complete as per direction of Engineer-in-charge. The GA, structure, electrical, sanitary, P&ID, SLD to be prepared by the contractor and submitted to department for approval for earth quake zone II. **Rates are exclusive of GST.**		
8.5.1	Pump House with Monorail arrangement	sqm	**18915.25**
8.5.2	Pump House with suitable EOT arrangement with Girder	sqm	**20737.29**
8.5.3	Add 4% for earth quake zone III on above item no. 8.5.1 & 8.5.2		
8.5.4	Add 8% for earth quake zone IV on above item no. 8.5.1 & 8.5.2		

Chapter 9

Construction of Valve Chamber

Note : All rates are exclusive of GST.

S. No.	Description	Unit	Rate (Rs.)
9.1	Construction of **RCC Sluice valve chamber** for different type of valves including earthwork excavation, 100mm PCC M15 as levelling course, RCC M25 grade for base slab, side wall & cover slab , including cost of steel reinforcement , form work, Pre-cast slabs, plastic encapsulated CI/MS Foot Rest, MS flats for the support of pre-cast, proper curing of concrete work complete in all respect as per specifications and standard drawings and as per direction of Engineer-in-Charge. **Rates are exclusive of GST.**		
9.1.1.	**For Class-AA loading**		
9.1.1.1	Sluice valve chamber of size 1.13 m x0.85 m x1.325 m- for pipe size-up to 100 mm	Each	**31101.69**
9.1.1.2	Sluice valve chamber of size 1.17m x 0.95m x1.47m for pipe size-from 125-to-150mm	Each	**34661.02**
9.1.1.3	Sluice valve chamber of size 1.26m x1.185m x1.88m for pipe size-from 200-to-300mm	Each	**44322.03**
9.1.1.4	Sluice valve chamber of size 1.39m x1.43m x2.245m for pipe size-from 350-to-450mm	Each	**55338.98**
9.1.1.5	Sluice valve chamber of size 1.61m x1.75m x2.85m for pipe size-from 500-to-700mm	Each	**76186.44**
9.1.2	**For Class-A loading**		
9.1.2.1	Sluice valve chamber of size1.13m x0.85m x1.27m for pipe size-upto100mm	Each	**25254.24**
9.1.2.2	Sluice valve chamber of size1.17m x0.95m x1.415m for pipe size-from 125-to-150mm	Each	**28389.83**
9.1.2.3	Sluice valve chamber of size1.26m x1.185m x1.82m for pipe size-from 200-to-300mm	Each	**36864.41**
9.1.2.4	Sluice valve chamber of size1.39m x1.43m x2.185m for pipe size-from 350-to-450mm	Each	**47288.14**
9.1.2.5	Sluice valve chamber of size1.61m x1.75m x2.795m for pipe size-from 500-to-700mm	Each	**66864.41**
9.1.3	**For in-campus Valve Chambers**		
9.1.3.1	Sluice valve chamber of size1.13m x0.85m x1.225m for pipe size-upto100mm	Each	**24406.78**
9.1.3.2	Sluice valve chamber of size1.17m x0.95m x1.37m for pipe size-from 125-to-150mm	Each	**27372.88**
9.1.3.3	Sluice valve chamber of size1.26m x1.185m x1.76m for pipe size-from 200-to-300mm	Each	**35338.98**
9.1.3.4	Sluice valve chamber of size1.39m x1.43m x2.125m for pipe size-from 350-to-450mm	Each	**44661.02**
9.1.3.5	Sluice valve chamber of size1.61m x1.75m x2.72m for pipe size-from 500-to-700mm	Each	**61525.42**

S. No.	Description	Unit	Rate (Rs.)
9.2	Construction of **RCC Air valve chamber** for different type of valves including earthwork excavation, 100mm PCC M15 as levelling course, RCC M25 grade for base slab, side wall & cover slab , including cost of steel reinforcement , form work, Pre-cast slabs, Plastic encapsulated CI/MS Foot Rest, MS flats for the support of pre-cast, proper curing of concrete work complete in all respect as per specifications and standard drawings and as per direction of Engineer-in-Charge. **Rates are exclusive of GST.**		
9.2.1	**For Class-AA loading**		
9.2.1.1	Air valve chamber of size0.9m x1m x1.695m for air valve size-from 50 mm-to-80mm	Each	**33559.32**
9.2.1.2	Air valve chamber of size1m x1.1m x1.945m for air valve size of 100mm	Each	**38813.56**
9.2.1.3	Air valve chamber of size1.05m x1.4m x2.42m for air valve size of 150mm	Each	**49915.25**
9.2.1.4	Air valve chamber of size1.325m x1.7m x2.875m for air valve size of 200mm	Each	**68728.81**
9.2.2	**For Class-A loading**		
9.2.2.1	Air valve chamber of size0.9m x1m x1.71m for air valve size-from 50 mm-to-80mm	Each	**28389.83**
9.2.2.2	Air valve chamber of size1m x1.1m x1.96m for air valve size of 100mm	Each	**33474.58**
9.2.2.3	Air valve chamber of size1.05m x1.4m x2.42m for air valve size of 150mm	Each	**43305.08**
9.2.2.4	Air valve chamber of size1.325m x1.7m x2.9m for air valve size of 200mm	Each	**60000.00**
9.2.3	**For in-campus Valve Chambers**		
9.2.3.1	Air valve chamber of size0.9m x1m x1.66m for air valve size-from 50 mm-to-80mm	Each	**27457.63**
9.2.3.2	Air valve chamber of size1m x1.1m x1.91m for air valve size of 100mm	Each	**32457.63**
9.2.3.3	Air valve chamber of size1.05m x1.4m x2.37m for air valve size of 150mm	Each	**41949.15**
9.2.3.4	Air valve chamber of size1.325m x1.7m x2.825m for air valve size of 200mm	Each	**56694.92**
9.3	Construction of **RCC Scour valve chamber wet type** for different type of valves including earthwork excavation, 100mm PCC M15 as levelling course, RCC M25 grade for base slab, side wall & cover slab , including cost of steel reinforcement , form work, Pre-cast slabs, Plastic encapsulated CI/MS Foot Rest, MS flats for the support of pre-cast, proper curing of concrete work complete in all respect as per specifications and standard drawings and as per direction of Engineer-in-Charge. **Rates are exclusive of GST.**		
9.3.1	**For Class-AA loading**		
9.3.1.1	Scour valve chamber of size1.13m x0.85m x1.985m for connecting pipe size-upto100mm	Each	**37118.64**

S. No.	Description	Unit	Rate (Rs.)
9.3.1.2	Scour valve chamber of size1.175m x0.95m x2.285m for connecting pipe size-more than 100 mm & up to 150mm	Each	**40000.00**
9.3.1.3	Scour valve chamber of size1.2m x1.08m x2.485m for connecting pipe size- more than 150 mm & up to 200mm	Each	**45084.75**
9.3.2	**For Class-A loading**		
9.3.2.1	Scour valve chamber of size1.13m x0.85m x1.95m for connecting pipe size-upto100mm	Each	**32293.22**
9.3.2.2	Scour valve chamber of size1.175m x0.95m x2.25m for connecting pipe size-more than 100 mm & upto150mm	Each	**34800.00**
9.3.2.3	Scour valve chamber of size1.2m x1.08m x2.45m for connecting pipe size-more than 150 mm & upto200mm	Each	**39223.73**
9.4	Construction of **RCC Scour valve chamber dry type** for different type of valves including earthwork excavation, 100mm PCC M15 as levelling course, RCC M25 grade for base slab, side wall & cover slab , including cost of steel reinforcement , form work, Pre-cast slabs, Plastic encapsulated CI/MS Foot Rest, MS flats for the support of pre-cast, proper curing of concrete work complete in all respect as per specifications and standard drawings and as per direction of Engineer-in-Charge. **Rates are exclusive of GST.**		
9.4.1	**For Class-AA loading**		
9.4.1.1	Scour valve chamber of size1.13m x0.85m x1.985m for connecting pipe size-upto100mm	Each	**32288.14**
9.4.1.2	Scour valve chamber of size1.175m x0.95m x2.285m for connecting pipe size- more than 100 mm & up to 150mm	Each	**34237.29**
9.4.1.3	Scour valve chamber of size1.2m x1.08m x2.485m for connecting pipe size- more than 150 mm & up to 200mm	Each	**41694.92**
9.4.2	**For Class-A loading**		
9.4.2.1	Scour valve chamber of size1.13m x0.85m x1.95m for connecting pipe size-upto100mm	Each	**28090.68**
9.4.2.2	Scour valve chamber of size1.175m x0.95m x2.25m for connecting pipe size-more than 100 mm & upto150mm	Each	**29786.44**
9.4.2.3	Scour valve chamber of size1.2m x1.08m x2.45m for connecting pipe size-more than 150 mm & upto200mm	Each	**36274.58**
9.5	Construction of RCC pillar for following size of air valves including earthwork excavation, RCC M25 grade for base slab, vertical pillar, including cost of steel reinforcement ,GI (class-B)/MS vertical pipe, form work, proper curing of concrete work complete in all respect as per standard specifications and drawings and as per direction of Engineer-in-Charge. **Rates are exclusive of GST.**		
9.5.1	Air valve pillar for air valves size of 80mm dia	Each	**16779.66**
9.5.2	Air valve pillar for air valves size of 100mm dia	Each	**18474.58**
9.5.3	Air valve pillar for air valves size of 150mm dia	Each	**25762.71**
9.5.4	Air valve pillar for air valves size of 200mm dia	Each	**30932.20**

Chapter 10

Solar based water supply schemes

Note : All rates are exclusive of GST.

S. No.	Description	Unit	Rate (Rs.)
10.1	Supply, installation, testing and commissioning of MNRE approved **Grid tied Solar Panels with inverter, meter, cable etc.** suitable for Rooftop installation as well as Utility Scale Solar Power Projects with 25 years of Linear Generation warranty. Work includes designing of solar panel area and MS frame and foundation on ground/roof of Pump house or CWR, showing arrangement of panel in available space, installation of PV module on MS frame as per approved design and drawings. Mounting structure shall be suitably designed to withstand wind velocity up to 150km/hr. Grid Tie Transformer less inverters, Multiple independent MPPTs, Peak efficiency of >98%. Connect up to multiple strings PV arrays, Easy & fast connection, Built-in string-level monitoring, IP65 protection level, Wi-Fi / internet based remote monitoring with 5 years warranty. All cabling up to panel and metre, earthing etc. required accessories are inclusive. The work shall be executed as per detailed technical specifications, approved drawing and direction of Engineer in Charge. Note: There shall be 5 year service warranty for panel, inverter, meter, cable etc. and suitable provision shall be included in tender document. **Rates are exclusive of GST.**		
10.1.1	Solar panels up to 10 KW at a single location.	Watt	**50.85**
10.1.2	Solar panels more than 10 KW and up to 50 KW at a single location.	Watt	**48.31**
10.2	Supply, installation, testing and commissioning of MNRE approved **off Grid Solar Panels for running of motor pumps** with 25 years of Linear Generation warranty, Work includes designing of solar panel area and MS frame and foundation on ground/roof of Pump house or CWR, showing arrangement of panel in available space, installation of PV module on MS frame as per approved design and drawings. Mounting structure shall be suitably design to withstand wind velocity up to 150km/hr. The work shall be executed as per detailed technical specifications, approved drawing and direction of Engineer in Charge. Note: There shall be 5 year service warranty for solar panel and mounting structure and suitable provision shall be included in tender document. **Rate is exclusive of GST.**	Watt	**36.44**

S. No.	Description	Unit	Rate (Rs.)
10.3	Supply, installation, testing and commissioning of MNRE approved **off Grid Solar Panels for running of motor pumps** with 25 years of Linear Generation warranty, Work includes designing of solar panel area and MS fabricated structure 120 micron hot dip galvanized iron , showing arrangement of panel in available space and installation of PV module on frame structure such that minimum height of lower edge of panel shall be **4.0 mtr from ground level** to safeguard against damage and theft as per indicative drawing enclosed with the bid document. The foundation of structure shall be in RCC. Mounting structure shall be suitably designed to withstand wind velocity up to 150km/hr. The work shall be executed as per detailed technical specifications, approved drawing and direction of Engineer in Charge. Note: There shall be 5 year service warranty for solar panel and mounting structure and suitable provision shall be included in tender document. **Rate is exclusive of GST.**	Watt	**50.85**
10.4	Supply, installation, testing and commissioning of MNRE approved **off Grid Solar Panels for running of motor pumps** with 25 years of Linear Generation warranty, Work includes designing of solar panel area and structure, showing arrangement of panel **on rectangular OHSR with flat roof/ MS fabricated structure with polyethylene tank** and installation of PV module on above structure as per approved design and drawings. Mounting structure shall be suitably design to withstand wind velocity up to 150km/hr. The work shall be as per detailed technical specifications, approved drawing and direction of Engineer in Charge. This item does not include cost of OHSR/ MS fabricated structure with tank but includes cost of items required for installation of solar panels on top of the tank. Note: There shall be 5 year service warranty for solar panel and mounting structure and suitable provision shall be included in tender document. **Rate is exclusive of GST.**	Watt	**43.22**
10.5	Providing, installation, testing and commissioning of **AC submersible pump sets** with inbuilt or individual solar pump controller with Maximum power point tracking (MPPT) for optimally use the solar panel and maximize water discharge to deliver maximum water during the day including PVC flat submersible cable from controller to motor pumps.. Solar pump shall be of Stainless steel construction and performance shall be as per scope of work and minimum lift of water shall be as per defined in scope . Pump controller shall have Adequate protection against dry operation of motor pump set, and against hails and storms. Full protection against open circuit, accidental short circuit and reverse polarity should be provided. A good reliable on/off switch be provided. The cable shall be ISI marked three core PVC flat submersible cable as per IS 694:1990 or amended up to date (standard insulation) and conductor as per class 5 of IS 8130:1980 or amended up to date. The duty condition of pump set shall be as per scope of work and entire work shall be executed as per technical specification and direction of Engineer in charge. **Rates are exclusive of GST.**		

S. No.	Description	Unit	Rate (Rs.)
10.5.1	0.75 KW (1.0 HP)	Each	**62886.44**
10.5.2	1.5 KW (2.0 HP)	Each	**67119.49**
10.5.3	2.2 KW (3.0 HP)	Each	**97279.66**
10.5.4	3.7 KW (5.0 HP)	Each	**124927.97**
10.5.5	5.5 KW (7.5 HP)	Each	**153896.61**
10.5.6	7.5 KW (10.0 HP)	Each	**167738.98**
10.5.7	9.3 KW (12.5 HP)	Each	**188838.98**
10.5.8	11 KW (15.0 HP)	Each	**207146.61**
10.6	Supply, installation, testing and commissioning of **DC submersible pump sets** with inbuilt or individual solar pump controller with Maximum power point tracking (MPPT) for optimally use the solar panel and maximize water discharge to deliver maximum water during the day including PVC flat submersible cable from controller to motor pumps. Solar pump shall be of Stainless steel construction and performance shall be as per scope of work and minimum lift of water shall be as per defined in scope . Pump controller shall have Adequate protection against dry operation of motor pump set, and against hails and storms. Full protection against open circuit, accidental short circuit and reverse polarity should be provided. A good reliable on/off switch suitable for DC use is to be provided. The cable shall be ISI marked three core PVC flat submersible cable as per IS 694:1990 or amended up to date (standard insulation) and conductor as per class 5 of IS 8130:1980 or amended up to date. The duty condition of pump set shall be as per scope of work and entire work shall be as per technical specification and direction of Engineer in charge. **Rates are exclusive of GST.**		
10.6.1	0.75 KW (1.0 HP)	Each	**94943.22**
10.6.2	1.5 KW (2.0 HP)	Each	**111731.36**
10.6.3	2.2 KW (3.0 HP)	Each	**139567.80**
10.7	Supply, installation, testing and commissioning of Remote monitoring unit on off grid solar controller for remote ON/OFF, parameter setting, monitoring and troubleshooting through mobile etc. complete. Web charges and data charges for 5 year during service warranty etc. complete in all respect as per technical specification and as per direction of Engineer. **Rate is exclusive of GST.**	Each	**38838.98**

S. No.	Description	Unit	Rate (Rs.)
10.8	Providing, installation, testing and commissioning structural steel work riveted or bolted in built up sections, trusses and framed work, including cutting, hoisting for following staging and capacity of Rotational Moulded Polyethylene water storage tank on it as per indicative drawing given in the bid document. On the Polyethylene tanks, there shall be provision of suitable space for installation of solar panels up to 5.0 KW and further additional 2.5 KW on the side of Steel structure if required as per indicative drawing. Cost of solar panels is not included in this item . The structural steel shall be 120 micron hot dip galvanized iron and foundation of structure shall be in RCC with minimum depth as 2.0 mtr (other than rocky strata). The work includes P&F of Polyethylene Water Storage Tank(IS: 12701, ISI marked, indicating the BIS license No.) of approved make with cover. Providing & fixing 50 mm dia ISI marked G.I. class B pipe for inlet, outlet and over flow pipe and 32 mm GI class B pipe for wash out with GM gate valves at inlet and outlet pipe Including making connection etc. complete as per drawing, technical specification and direction of Engineer in In charge. The scope includes inlet GI pipe from ground level to water tank and outlet pipe from water tank to ground and up to 2.0 mtr away from foundation and overflow pipe is to be interconnected in distribution pipe line. Wash out pipe shall be taken up to a suitable point minimum 5.0 mtr away from tank. Water level controller shall installed to monitor level in tank and shall automatically shut off motor when tank is filled . Note: There shall be 5 year service warranty for structure, tank, fittings etc. and suitable provision shall be included in tender document. **Rates are exclusive of GST.**		
10.8.1	5000 Litre X 2 Nos. PE water tank, staging 10 meter.	Each	**564038.14**
10.8.2	7500 Litre X 2 Nos. PE water tank, staging 10 meter.	Each	**619712.71**
10.8.3	5000 Litre X 2 Nos. PE water tank , staging 12 meter.	Each	**639482.20**
10.8.4	7500 Litre X 2 Nos. PE water tank, staging 12 meter.	Each	**692143.22**

Chapter 11

Instrumentation

Note : All rates are exclusive of GST.

S. No.	Description	Unit	Rate (Rs.)
	Electromagnetic Flow meter		
11.1	SITC of **D/F Full bore type Electromagnetic Flow Meter** of approved make of following dia and specifications complete: Media : Water (Raw/ Chlorinated) , Pressure : up to 1.5MPa, Process temp: - 50 deg C, Flow/Meter Tube : SS 304, Electrode : SS AISI 316L / Hastelloy C276/ Tantalum, Lining Material : Hard Rubber/ Neoprene / Poly-urethane (PU) , Flange : SS / CS, Flange Standard & Rating : ANSI 150, Coil housing : SS AISI 304/ Carbon Steel/ Die Cast Aluminium, with anticorrosive paint & provide completely sealed (leak proof) construction as per requirement of IEC 60529, Accuracy : ± 0.5 % M.V.- velocity 0.3 to 10 m/s, Transmitter/ signal convertor Enclosure : Die Cast Aluminium, Power Supply : 80-240 V AC - 50Hz, Output 1 : 4-20 mA, Output 2: Pulse, Communication Output : RS 485/ Heart, Display Type : LCD/ LED Display, Cable Entry : M20 X 1.5, Provision of RAM/PROM to store calibration and configuration parameters and totalizer value during power failure, Protection category- IP 68 for sensor (flow tube) and IP 67 for transmitter/ convertor, including Surge Arrester, if required, and all materials required for making connection etc. complete in all respect as per technical specification and direction of Engineer In-Charge. Note 1 : Rates are exclusive of tail piece / dismantling joints and earth work. **Note 2 : Rates are exclusive of GST.**		
11.1.1	EFM 50 mm	Each	**78749.15**
11.1.2	EFM 80 mm	Each	**87827.12**
11.1.3	EFM100 mm	Each	**96147.46**
11.1.4	EFM 125 mm	Each	**107187.29**
11.1.5	EFM 150 mm	Each	**118378.81**
11.1.6	EFM 200 mm	Each	**120315.25**
11.1.7	EFM 250 mm	Each	**150372.03**
11.1.8	EFM 300 mm	Each	**185833.05**
11.1.9	EFM 400 mm	Each	**233307.63**
11.1.10	EFM 450 mm	Each	**328107.63**
11.1.11	EFM 500 mm	Each	**359564.41**
11.1.12	EFM 600 mm	Each	**441500.00**

S. No.	Description	Unit	Rate (Rs.)
	ULTRASONIC FLOW METER		
11.2	SITC of Ultrasonic Flow Meter of approved make of following dia sized pipelines and specifications complete: Media : Water (Raw/Clear) , Pressure : up to 1.5MPa, Process temp: - 50 deg C, Flow velocity range: -10 m/s to +10m/s (bidirectional), Power supply- 80 to 240 v/ AC, 50 Hz.,Output 1 : 4-20 mA, Communication Output : RS 485, Display Type : LCD/ LED Display, Cable Entry : M20 X 1.5, Acoustic path: single/ dual, Accuracy : ± 1% of M.V (max.) for size 50-300mm and ± 2% of M.V (max.) for size 350-2000mm (single path) , Transmitter Enclosure: Cast Aluminium, Sensor cable: encapsulated, Sensor mounting method: V / Z type, Protection type: IP 67, including all materials required for Ultrasonic Flow Meter complete in all respect as per technical specification and as per direction of Engineer In-Charge. **Rates are exclusive of GST.**		
11.2.1	UFM 200mm -600 mm (CLAMP ON TYPE)	Each	**286881.36**
11.2.2	UFM 200mm -600 mm (INSERTION TYPE)	Each	**333804.24**
	BULK FLOW METER (MECHANICAL TURBINE TYPE)		
11.3	SITC of Bulk Flow Meter with removable mechanism class "B" confirming to ISO:4064:2005/ IS: 2373 of approved make of following dia sized pipelines and specifications complete: Media : Water (Clear), Temp. 50 deg., Pr. rating: PN16, Protection type: IP- 68, Body Material : IS-210 Gr. FG-200, Accuracy Class :Class B (±2 % @ Nominal flow rate), Magnetic Drive, Dry Dial, Epoxy powder coated, Pulse out put option, Anti-magnetic protection including all materials and making connection with existing pipeline required for Bulk Flow Meter including cutting the existing pipeline etc. complete in all respect as per technical specification and as per direction of Engineer In-Charge. Note 1 : Rates are exclusive of tail piece / dismantling joints and earth work. **Note 2 : Rates are exclusive of GST.**		
11.3.1	BFM 80 mm	Each	**10752.54**
11.3.2	BFM100 mm	Each	**13132.20**
11.3.3	BFM 125 mm	Each	**18244.07**
11.3.4	BFM 150 mm	Each	**20357.63**
11.3.5	BFM 200 mm	Each	**25774.58**
11.3.6	BFM 250 mm	Each	**54610.17**
11.3.7	BFM 300 mm	Each	**73444.92**
11.3.8	BFM 400 mm	Each	**123219.49**
11.3.9	BFM 450 mm	Each	**141127.97**
11.3.10	BFM 500 mm	Each	**209717.80**
11.3.11	BFM 600 mm	Each	**224944.07**

S. No.	Description	Unit	Rate (Rs.)
	ULTRASONIC LEVEL SENSOR		
11.4	SITC of Ultrasonic Level Transmitter suitable for measuring water level in reservoir, Normal Powered 24VDC, Type of Transmitter: Two Wire (4-20 mA), Cable Entry:1/2" NPT (F), Sensor Material: PP, slip-on Flange: 2 ½" Flange, Material of Construction for Slip-on flange: PP, output 4~20mA, HART compatible, accuracy +/_ 0.2 % as per detailed Technical specification, scope of work and direction of Engineer in charge. **Rate is exclusive of GST.**		
11.4.1	Measuring range 0.0 to 6.0 mtr	Each	**55753.39**
11.5	SITC of Ultrasonic Level Transmitter suitable for measuring water level in reservoir, powered by solar panel with minimum 48 power back up or internal installed battery (5 years battery life with replacement warranty), with out put as GSM/GPRS + data logger , Sensor Material: PP, accuracy +/_ 0.2 %, as per detailed Technical specification, scope of work and direction of Engineer in charge. **Rate is exclusive of GST.**		
11.5.1	Measuring range 0.0 to 6.0 mtr	Each	**100937.29**

Chapter 12

Earth Work & Civil Works related to Storage Tank, Filter media work

Note : All rates are exclusive of GST.

S. No.	Description	Unit	Rate (Rs.)
	STORAGE TANKS		
12.1	Earth work in excavation over area (for Sedimentation cum storage tank) Exceeding 30 cm in depth 1.5 Mtrs in width as well as 10 Sqm on plan) including disposal of excavated earth lead up to 50 M and all lift. Disposed earth to be levelled and neatly dressed including stacking of useful material if any available during excavation for all kind of soil. Earth work to be carried out by means of mechanical system i.e. Tractor craw or any other mechanical system. No extra payment shall be done for lift of any limit. This work also involves dressing of sides & bottom for lining purpose which is to be done manually, slope of sides to be maintained as per specification. Work is to be done as per direction of Engineer In Charge and technical specifications. **Rate is exclusive of GST.**	Cum	**78.81**
12.2	Silt clearance from Sedimentation cum storage tank with all lift and lead up to 50 Mtr. Silt to be disposed outside the Headworks boundaries. Disposed silt to be levelled and neatly dressed including stacking of useful material if any available during excavation for all kind of soil. Silt clearance is to be carried out by means of mechanical system i.e. Tractor craw/Trolley or any other mechanical system. No extra payment shall be done for lift . This work also involves dressing of bottom which is to be done manually and there shall be no damage to lining and LDPE film of tank. Work is to be done as per direction of Engineer In Charge and technical specifications. **Rate is exclusive of GST.**	Cum	**99.15**
	NOTE :- For additional lead, beyond 50M, every additional lead will be paid as per PWD BSR. But for lead of 500M, 1 km. and onward; initial rate of 50M will be deducted from concern rates of above said leads		
12.3	**SINGLE FLAT BRICK LINING WITH 250 MICRON LDPE FILM:-** Preparing surface levelled & dressed to proper slope & laying over it on sand properly rammed and watered in 2 Layers of 5 cm each. Providing and laying 250 micron LDPE film as per ISS:2506-1984 including overlapping on the finished surface of compacted sand. Over LDPE film 15 mm thick cement sand mortar 1:3 shall be provided and laid which shall be cured properly. Over the base mortar single layer Ist class brick lining in cement sand mortar 1:3 shall be provided with joints not more than 8 mm wide and curing shall be done for 14 days. This also includes providing weedicides & anti-termite treatment, complete work as per technical specifications. **Rate is exclusive of GST.**	Sqm	**499.15**

S. No.	Description	Unit	Rate (Rs.)
12.4	Providing and fixing PVC float in Raw Water Storage tank with CI tail piece 150mm dia-2 Nos, CI puddle collar-150mm dia- 1.20 M- 1 No. and PVC hose pipe- 150mm dia -6 M & all accessories complete in all respect as per Instructions of Engineer In Charge. Complete Job **Rate is exclusive of GST.**	Job	**13393.22**
	FILTER MEDIA		
12.5	Providing and placing of new graded gravel as (i) Size of Gravel vary from 50 mm at the bottom to 2. to 5 mm at the top as detailed: (a) Passing 80 mm screen but held on 10 mm- 150 mm layer (b) Passing 25 mm screen but held on 10 mm- 50 mm layer (c) Passing 10 mm screen but held on 5 mm- 50 mm layer Passing (d) 5 mm screen but held on 2 mm- 50 mm layer (ii) The filter gravel shall be as spherical as possible, hard, clean and uniform in quality and also shall not contain such impurities as dirt and clay as per IS: 8419 (Part-I) for filter gravel specifications. The work also includes washing the gravel with required concentration of HCL acid and finally with water and placing the same in filter beds as per direction of Engineer- In- Charge and technical specification complete in all respect. The gravel shall not contain more than 5% acid soluble matter as determined by solubility test in Appendix B of IS: 8419 (Part-I) amended up to date. (For RGF) **Rate is exclusive of GST.**	Cum	**3327.12**
12.6	Supply and charging of filter media (Gravel) as per department specification including screaming, washing with 5% HCL solution to make Gravel (Size 4 to 6mm, 8 to 12mm, 10 to 20mm - Hard Coarse grit from approved quarry) free from silt, clay and other all impurities work to be executed as per scope of work fixed by the department at the time of tendering (for SSF) **Rate is exclusive of GST.**	Cum	**1767.80**
12.7	Providing and Placing of new filter media as (i) Sand shall be hard and resistant quartz or quartzite and free of clay, fine particles, soft grains and dirt of any description. (ii) Effective size shall be 0.45 to 0.70 mm. (iii) Uniformity Coefficient not be more than 1.70 nor less than 1.30. (iv) Ignition loss should not exceed 0.70% by weight. (v) Soluble fraction in HCL acid shall not exceed 5.0% by weight, (vi) Silica content should not be less than 95% (vii) Specific Gravity shall be in the range between 2.55 to 2.65 (viii) Wearing loss shall not exceed 3.0%. and as per specifications given in IS: 8419 (Part-I). Filter media (fine sand and coarse sand) should be processed through disintegrator and dust separator in automatic plant including screening of sand to desired specification and washing and cleaning of sand with water by aqua wash technology at quarry site. (For RGF) **Rate is exclusive of GST.**	Cum	**3550.85**

S. No.	Description	Unit	Rate (Rs.)
12.8	Providing and Placing of new filter media as (i) Sand shall be hard and resistant quartz or quartzite and free of clay, fine particles, soft grains and dirt of any description. (ii) Effective size shall be 0.20 to 0.30 mm. (iii) Uniformity Coefficient not be more than 5.0 nor less than 3.0. (iv) Ignition loss should not exceed 0.70% by weight. (v) Soluble fraction in HCL acid shall not exceed 7.0% by weight, (vi) Silica content should not be less than 95% (vii) Specific Gravity shall be in the range between 2.55 to 2.65 (viii) Wearing loss shall not exceed 3.0%. and as per specifications given in IS: 8419 (Part-I). (ix) The sand should not contain more than 2% of calcium and manganese calculated as carbonate. Filter media (fine sand and coarse sand) should be processed through. Disintegrator and dust separator in automatic plant including screening of sand to desired. Specification and washing and cleaning of sand with water by aqua wash technology at quarry site. The sand shall not contain more than 5% acid soluble matter as determined by solubility test in Appendix B of IS: 8419 (Part-I) (Fine sand 0.2 to 0.3mm and coarse sand 1.0 to 1.7mm) (For SSF) **Rate is exclusive of GST.**	Cum	**3550.85**
12.9	Fixing of pipes for under drainage system including plugging pipes with CM 1:4 on one end and fixing other end in collecting channel with CM 1:4 with all Material etc.(Excl.cost of pipes) This job, also, includes Making 4mm dia holes in pipes @15 cm c/c in zig-zag pattern and testing of under drainage system as per instruction of Engineer-in-charge. **Rate is exclusive of GST.**	RM	**27.12**
12.10	Removing & Re-fixing of pipes for under drainage system including cleaning of one end plugged pipes and fixing /embedded in CM 1:4 on one end and fixing other end in collecting channel with CM 1:4 with all Material etc.(Excl.cost of pipes) This job, also, includes Making 4mm dia holes if required in pipes @15 cm c/c in zig-zag pattern. **Rate is exclusive of GST.**	RM	**22.03**
12.11	Making 4mm dia hole in pipes of under drainage system of filters duly drilled. Carriage of pipe from stacks to filter site, making two per rows on pipe and points of making holes in Zig-Zag pattern in two hold raw. Making 4mm dia holes with drill machine @ 15cm c/c in zig-zag pattern. **Rate is exclusive of GST.**	Each	**1.69**
12.12	Labour charges for screening of old sand (received from filter beds) through the standard sieves, washing the sand with HCL acid of required concentration as directed by the Engineer- In- Charge, so as to remove all the mud and other deposits from sand grains and then clean with water till the sand is as neat and clean that it impart no colour to clean while washing. It also includes placing this washed filter media (sand) in filter beds in layer as instructed by the Engineer- In- Charge. (RGF, SSF) **Rate is exclusive of GST.**	Cum	**775.42**

S. No.	Description	Unit	Rate (Rs.)
12.13	Labour charges for screening of old gravel (received from filter beds) through the standard different sizes sieves for required sizes of gravel, washing the gravel with HCL acid of required concentration as directed by the Engineer- In- Charge, so as to remove all the mud and other deposits from gravel grains and then clean with water till the gravel is as neat and clean that it impart no colour to clean while washing. It also includes placing this washed gravel in filter beds in layer as instructed by the Engineer- In- Charge. (RGF, SSF) **Rate is exclusive of GST.**	Cum	**580.51**

Chapter 13

Construction and Commissioning of Water treatment Plant (WTP)

Note : All rates are exclusive of GST.

S. No.	Description	Unit	Rate (Rs.)
13.1	Design, construction, commissioning & testing of Non Mechanical Rapid Gravity Filter Plant of capacity as under. This work includes construction of RCC receiving chamber, baffle channel, flocculate, clarifier, collecting channel, filter beds , operation gallery, clear water chamber, channel, chlorination chamber, Back wash tank, pipe system for carrying raw water from Pump House to inlet of RGF, clear water from Plant to CWR, De-sludging system including providing pipe system from clarifier , flocculate & back wash water chamber to existing storage tank, over head back wash tank, back wash pumps (1W+1S) set with piping system, air blowers (1W+1S) as per design, interconnection of raw water, clear water, sludge pipes etc. including allied works such for construction ,commissioning of system as defined in scope of work, technical specifications and provisions of CPHEEO manual at various water supply schemes **Rates are exclusive of GST.**		
13.1.1	Up to 40 KLH capacity	KLH	80,508.47
13.1.2	Above 45 KLH and up to 60 KLH	KLH	76,271.19
13.1.3	Above 65 KLH and up to 90 KLH	KLH	66,101.69
13.1.4	Above 100 KLH and up to 125 KLH	KLH	60,169.49
13.1.5	Above 130 KLH and up to 160 KLH	KLH	55,932.20
13.1.6	Above 170 KLH and up to 200 KLH	KLH	52,542.37
13.1.7	Above 205 KLH and up to 300 KLH (Deduct 1% per 5 KLH in rate of item 13.1.6	KLH	
13.2	Design, construction, testing and commissioning of Rapid Gravity Filter Treatment Plant including all relevant civil, electrical , mechanical ,instrumentation, automization and SCADA works, chemical building and stores along with ancillary civil works as defined in scope of work, technical specification and provisions of CPHEEO manuals for the following capacity . **Rates are exclusive of GST.**		
13.2.1	Cost of 200 KLH	Each	**22,542,372.88**
13.2.2	Add per KLH above 200 KLH and up to 500 KLH	KLH	**95,084.75**
13.2.3	Cost of 500 KLH	Each	**51,067,796.61**
13.2.4	Add per KLH above 500 KLH and up to 2000 KLH	KLH	**86,271.19**
13.2.5	Cost of 2000 KLH	Each	**180,474,576.27**
13.2.6	Add per KLH above 2000 KLH and up to 5000 KLH	KLH	**76,779.66**
13.2.7	Cost of 5000 KLH	Each	**410,813,559.32**
13.2.8	Add per KLH above 5000 KLH and up to 75000 KLH	KLH	**67,033.90**

Chapter 14
Miscellaneous

Note : All rates are exclusive of GST.

S. No.	Description	Unit	Rate (Rs)
14.1	Survey by Electronic Total station/DGPS of villages with a view of preparing "village index plan "indicating roads/ streets, surface and width of road/ streets along with places of importance such as Panchayat Bhawan, Hospital, School, Post office, Temple Water Supply structures (GLRs, PSPs, pumping station physical boundary of village north etc. including levels at some important points as per instruction of engineer in charge. Hydraulic Design of Distribution network in Loop/Water Gem/EPANET or any other compatible software. Preparation of Auto CAD Drawing (A-3/A-2) with complete hydraulic design out put details, such as pipe no, node no, pipe length, pressure at node etc. Submission of three sets of colour print prepared in Auto CAD. **Rates are exclusive of GST.**		
14.1.1	Rate for length up to 2.5 km	No.	**6779.66**
14.1.2	Add extra for length more than 2.5 km	Km	**1694.92**
14.2	Survey of all properties, preparation of GIS based consumer mapping of consumer water connection database, plotting assets on GIS map **etc.** **(Satellite image will be provided by the Department)** **Rates are exclusive of GST.**	FHTC	**36.02**
14.3	Data entry of existing FHTCs in rural area under JJM on website ejalshakti.gov.in; work includes visiting the village for collecting basic data consumers like i.e. Aadhar no./ration card/voter ID/BPL card/ PAN card/driving license/passport/Antyodaya card/mobile no. etc. and entering the details on the above website. The cost also includes computer and operator. **Rates are exclusive of GST.**	FHTC	**25.42**
14.4	Preparation of DPRs for single and small multi village rural water supply schemes under JJM for Administrative & Financial Sanction and Technical sanction, the work includes: Survey by Electronic Total station/DGPS of villages with a view of preparing village index plan, existing HW plan and survey for route of rising/ trunk mains, indicating roads/ streets, surface and width of road/ streets along with places of importance such as Panchayat Bhawan, Hospital, School, Post office, Temple Water Supply structures (GLRs, PSPs, pumping station physical boundary of village north etc. including levels and TBM at important places as per instruction of engineer in charge. Preparation of technical report, forecasting of population and design demand, source design, techno-economic design of rising mains, selection and design of pumps sets, capacities of CWR, OHSR etc. complete work as per departmental prevailing guidelines and practice. Hydraulic Design of Distribution network in Loop/Water Gem/EPANET or any other compatible software. Preparation of Auto CAD Drawing (A-3/A-2) with complete hydraulic design output details, such as pipe no, node no, pipe length, pressure at node etc.		

S. No.	Description	Unit	Rate (Rs)
	Preparation of estimate of various components based on prevailing BSRs in PHED and non BSR if any with detailed analysis. Preparation of conceptual drawings, L-sections for rising mains, HW plan, GA drawings of P.S., ESR, CWR, GLSR, valve chambers etc. Printing of DPR in 6 copies, including drawings in appropriate size of paper for A&F and technical sanctions separately as per direction of EIC. Reply of observation raised by department for A&F and TS shall be submitted within timeframe as per scope of work. Work excludes preparation of Bid document. The DPR shall include all other habitation and main village in a unit. **Rates are exclusive of GST.**		
14.4.1	For present population 100-500 souls	Per village	**23728.81**
14.4.2	For present population 501-1500 souls	Per village	**27455.93**
14.4.3	For present population 1501-4000 souls	Per village	**37000.85**
14.4.4	For present population above 4001 souls	Per village	**38087.29**

(Ravindra Garg)
S.E. (D&S)