ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳಚರಂಡಿ ಕಾಮಗಾರಿಗಳ ಏಕರೂಪ ಅನುಸೂಚಿ ದರಪಟ್ಟಿ : 2021-22

ಸಂಪುಟ - V

WATER SUPPLY AND UGD WORKS COMMON SCHEDULE OF RATES 2021-22

Volume - V

ಕರ್ನಾಟಕ ಸರ್ಕಾರ

ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳಚರಂಡಿ ಕಾಮಗಾರಿಗಳ

ಏಕರೂಪ ಅನುಸೂಚಿ ದರಪಟ್ಟಿ : ೨೦೨೧–೨೨

ಸಂಪುಟ – V

WATER SUPPLY & UGD WORKS

COMMON SCHEDULE OF RATES: 2021-22

VOLUME - V

Grams: "Water Sup" Bangalore Phone: 080-22945353

BANGALORE WATER SUPPLY AND SEWERAGE BOARD

Office of the Chief Engineer (D), Cauvery Bhavan, 9th Floor, K.G. Road, Banglaore - 560 009.

No. BWSSB/CED/ACE(D)/TA(D)/2659/2021-22 Date:25-03-2022

MEMORANDUM

Sub: Implementation of Common Departmental Schedule of Rates for the work of Water Supply, UGD and Sanitation for the Year 2021-22.

Ref: 1. Proceedings of the Common SR committee meeting held on 22.01.2022 in the Chamber of CE (D), Cauvery Bhavan, Bengaluru.
2. G.O. No. PWD 51 RDF 2019, Bengaluru, dated: 25.03.2022

Preamble:-

Government of Karnataka constituted Technical Working Group (TWG) vide G. O. No. FD 259 F-2/2018 dated: 17.02.2020 to guide and suggest the Departments / Organization to prepare the Common Schedule of Rates (CSR) for the same nature of work related Departments / Organisations. As such, they have grouped Bengaluru Water Supply and Sewerage Board, Karnataka Urban Water Supply & Drainage Board and Karnataka Rural Drinking Water & Sanitation Department to prepare the Common Schedule of Rates pertaining to Water Supply and Underground Drainage Works. The TWG have proposed BWSSB has nodal organisation to publish this SR, the same is consented by Secretary PWD during his meeting in this regard. Accordingly, the following committee has been constituted vide G.O. No. UDD 08/MNI 2021 (E-Office), Bengaluru , dtd: 04.12.2021.

Sl. No.	Designation	Remarks
1	Chief Engineer (Design), BWSSB	Chairman cum Implementing Officer
2	Additional Chief Engineer (Design), BWSSB	Co-ordinating and Working member
3	Superintendent Engineer (Design & Monitoring), KUWS&DB	Co-ordinating and Working member
4	Superintendent Engineer, Bengaluru Circle, KRDW & SD	Co-ordinating and Working member

During the CSR Review Committee meeting held on 17.12.2020, the committee decided to consider 10% Over Head Charges (OHC) and 6.5% Contractors Profit (CP) as against the TWG recommendation of 10% each. As the water supply & UGD works involves material component at 70% of the estimated cost, the Contractor's Profit is considered at 6.5% instead of 10%. The lowest Quotation rates were considered for all major items like DI/MS/RCC/PVC/HDPE pipes, DI fittings and Valves. For Construction materials and Usage charges of machineries, rates furnished by TWG / as in Common SR is considered.

BWSSB has developed an IT Tool for the preparation of Schedule of Rates during the year 2017-18 with mechanism for regular updation methodology automatically. This IT application tool is used for developing Schedule of Rates for each item with frame work assimilation using basic items viz., materials, labour, tools and plants and others with the standard procedures, practices and methodologies for arriving the finished rate, wherein the back-end data are revised for the materials and the labour.

During the Common Schedule of Rates Review Committee meeting held on 17.12.2020, the Committee discussed to adopt Electronically Integrated Schedule of Rates as developed previously by BWSSB in respect of water supply, sanitary and bore well items. Members raised several

queries on the Departmental Schedule of Rates (Water Supply & UGD) prepared for improvements and for better understanding. The draft common SR prepared for Water supply and UGD works has been published in the BWSSB web site for Review, comments and suggestions by the GOK officials, Contractors and Public.

Chief Engineer (D) stated during the meeting of the committee on 22.02.2022 that the queries raised from the above publication have been addressed in preparation of Departmental Schedule of Rates (Water Supply & UGD) and each item of the S.R. has been verified. Members present in the meeting expressed their satisfaction over the Departmental Schedule of Rates (Water Supply & UGD) prepared and opined to implement the same.

The developed Departmental Schedule of Rates (Water Supply & UGD) IT tool provides the following components:

1. Volume 1 - Electronically Integrated Final SR
2. Volume 2 - Rates Analysis for SR

ORDERS THERE ON:

Common Departmental Schedule of Rates for the work of implementation of Water Supply, UGD and Sanitation for the Year 2021-22 is approved by the Govt. vide G.O. No. PWD 51 RDF 2019, Bengaluru, dated: 25.3.2022 for adoption with effect from 25.03.2022, the same is herewith issued and shall be in force until further orders.

Sd/-
Chief Engineer (Design)
Bengaluru Water Supply and Sewerage Board
Chairman cum Implementing Officer, Common SR Committee

GENERAL NOTES

1. Area specific loading provided in the respective PWD Schedules of Rates / Common SR for the year 2022 shall be applicable.
2. Common SR is applicable for Earthwork Excavation, Concrete items and common rates.
3. The items for which there is no specific rate in the Departmental Common S.R, the prevailing S.R of respective PWD/Water Resource Department (Minor Irrigation)/National Highways/KPTCL/ ESCOM of the respective Circle shall be adopted.
4. "The prevailing market rates of all pipes will be assessed by considering the basic rates, the Common SR Committee formed above shall issue the new finished rates & published quarterly i.e., 1st April, 1st July, 1st October & 1st January as per actual variation in price or whenever the variation in previous basic rate is more /less than 10% over the previous basic rates. The common SR committee should obtain the basic rates from manufacturers / vendors with GST registration or to be arrived from change in Price indices. These rates shall be adopted for preparation of estimates and evaluation of tenders. The basic rates of pipes presently considered in preparation of SR is belongs to second quareter of 2021-22.
5. The basic rates of Cement and Fe 500 Reinforcement Steel considered for preparation of Departmental Schedule of Rates (Water Supply & UGD) for the year 2021-22 is Rs.6984/- per ton and Rs.58777/- per ton respectively. However, cost of Cement and Steel as notified by the respective PWD circles from time to time shall be considered for the preparation of estimates and for Evaluation of Tenders.
6. The rates for finished item of works indicated in the Schedule of rates are inclusive of all lead, lift, loading and unloading charges irrespective of mode / type of lead involved. Additional lift and lead charges to be considered as per PWD and Common S.Rs.
7. Data Rates for any specialized items or non – scheduled items shall be prepared and shall be got approved by the Common SR Committee formed above.
8. All the pipes, valves, specials and other materials shall conform to relevant BIS specification with latest amendments.
9. Royalty charges for materials supplied / used by the Contractors from the Government land and quarries shall be recovered as per the latest orders of Govt.
10. The material rates considered in analysis are the basic rates excluding GST. GST of 12% presently or as prevailing shall be added separately in the estimate as per Govt. Order.
11. The Natural / River sand to be used shall be clean, sieved and of good quality. As far as possible natural / river sand shall be used. Whenever there is scarcity of natural / river sand, manufactured sand / crushed sand can be used to a maximum extent of 50% of total sand quantity for plastering items and 100% for concrete items. The certification by the concerned Executive Engineer is mandatory for usage of artificial / manufactured sand.
12. The use of filtered sand is totally banned in all items of civil works.

Dr. K.S. Krishna Reddy
B.E., MSc (Engg.,), Phd., K.E.S

Secretary to Government of Karnataka
Public Works Department

Tel : 080 2225 1548, 080 2203 4852
Karnataka Government Secretariat
#334, 3rd Floor, Vikasa Soudha
Dr. B.R. Amedkar Veedhi,
Bangalore - 560 001
secytech-pwd@karnataka.gov.in

MESSAGE

Bangalore, dated 18-03-2022.

Mysore PWD – Public Works Department - came in to existence in the year 1856 and was looking after all Engineering works in the State. Subsequent to reorganisation of states in 1956, the Department was known as KPWD (Karnataka Public Works Department). Over a period of time, KPWD has been divided into many Engineering departments such as KPWD, Water Resource Department, Minor Irrigation, Rural Development and Panchayath Raj, KUWSSB, BWSSB etc,. All these departments have their own Schedule of rates and the number of SR's is 32 and number of pages is around 7000 pages, with different rates for materials and items. To eliminate this anomaly, the Government vide GO. No. PWD 65 RDF 2018 dated 04-04-2019 has constituted two committees namely UNI SR Preparation Committee headed by the Secretary, PWD and UNI SR Acceptance Committee headed by the Additional Chief Secretary to Government, KPWD to bring out Common SR applicable for the entire State. Subsequently, vide Government Order No.FD/259/F-2 2018 Dated: 17.02.2020 has also constituted Technical Working Group (TWG) to come out Uni SR with one rate for one material, one rate for one item in the State.

It is a great pleasure to mention that the TWG with the support of all Stake holders has come out with Uni SR and rates for specific items in the concerned Departments with 8 volumes and about 1200 pages. Also with the publication of SR for the first time to Ports & Airports.

I am sure this is a unique attempt by the Government and will be well received by the Stake Holders. Any suggestion to improve Uni SR is highly appreciated.

(Dr. K.S. Krishna Reddy)
Secretary to Government,
Public Works Department &
Chairman, UNI SR
Preparation Committee

ಕರ್ನಾಟಕ ಸರ್ಕಾರದ ನಡವಳಿಗಳು

ವಿಷಯ:- 2021-22ನೇ ಸಾಲಿನ ಏಕರೂಪ ಅನುಸೂಚಿತ ದರಪಟ್ಟಿಯ ಪ್ರಕಟಣೆ ಬಗ್ಗೆ.

ಓದಲಾಗಿದೆ. – 1. ಸರ್ಕಾರದ ಆದೇಶ ಸಂಖ್ಯೆ ಪಿಡಬ್ಲ್ಯುಡಿ 65 ಆರ್‌ಡಿಎಫ್ 2018 ದಿನಾಂಕ 04-04-2019
2. ಸರ್ಕಾರದ ಆದೇಶ ಸಂಖ್ಯೆ ಆಇ 259 ಆಕೋ-2/2018 ದಿನಾಂಕ 17-02-2020.
3. ಮುಖ್ಯ ಇಂಜಿನಿಯರ್, BWSSB ಇವರ ಪತ್ರ ದಿನಾಂಕ 15-03-2022.
4. ಮುಖ್ಯ ಇಂಜಿನಿಯರ್, BWSSB ಇವರ ಪತ್ರ ದಿನಾಂಕ 24-03-2022.

******

ಪೀಠಿಕೆ:-

ರಾಜ್ಯದ ಪ್ರಮುಖ ಇಲಾಖೆಗಳಾದ ಲೋಕೋಪಯೋಗಿ ಇಲಾಖೆ, ಜಲಸಂಪನ್ಮೂಲ ಇಲಾಖೆ, ನಗರಾಭಿವೃದ್ಧಿ ಇಲಾಖೆ, ವಸತಿ ಇಲಾಖೆ, ಇಂಧನ ಇಲಾಖೆ ಮುಂತಾದವುಗಳು ತಮ್ಮದೇ ಆದ ಅನುಸೂಚಿ ದರಗಳನ್ನು (Schedule of Rates) ತಯಾರಿಸಿದ್ದು, ವಿವಿಧ ಕಾಮಗಾರಿಗಳ ಅಂದಾಜುಗಳ ತಯಾರಿಕೆಯಲ್ಲಿ ಬೇರೆ ಬೇರೆ ಇಲಾಖೆಗಳ ದರಗಳನ್ನು ಅಳವಡಿಸಿ ಅಂದಾಜುಗಳನ್ನು ತಯಾರಿಸಲಾಗುತ್ತಿದೆ. GST ಅನುಷ್ಠಾನವಾದ ನಂತರದ ಅವಧಿಯಲ್ಲಿ ಒಂದು ಇಲಾಖೆಯಲ್ಲಿ GST ಪೂರ್ವ ದರಗಳಿದ್ದಲ್ಲಿ, ಲೋಕೋಪಯೋಗಿ ಇಲಾಖೆಯಲ್ಲಿ GST ನಂತರದ ದರಗಳೂ ಅಸ್ತಿತ್ವದಲ್ಲಿದೆ, ಇದರಿಂದ ಅಂದಾಜುಗಳನ್ನು ತಯಾರಿಸಲು ಮತ್ತು ಟೆಂಡರ್ ಮೌಲ್ಯಮಾಪನ ಮಾಡುವಲ್ಲಿ ಅನೇಕ ಸಮಸ್ಯೆಗಳು ಉದ್ಭವವಾಗುತ್ತಿವೆ. ಈ ಹಿನ್ನೆಲೆಯಲ್ಲಿ ರಾಜ್ಯದಲ್ಲಿ ಏಕರೂಪ ಸಮಗ್ರ ಅನುಸೂಚಿ ದರಗಳನ್ನು ತಯಾರಿಸಿ ಪ್ರಕಟಿಸುವುದು ಸೂಕ್ತವೆಂದು ನಿರ್ಧರಿಸಲಾಗಿದ್ದು, ಮೇಲೆ ಓದಲಾದ ಕ್ರ.ಸಂ-1ರ ಆದೇಶದಂತೆ ಲೋಕೋಪಯೋಗಿ ಇಲಾಖೆಯನ್ನು ನೋಡಲ್ ಇಲಾಖೆಯನ್ನಾಗಿ ನೇಮಿಸಿ, ಎಲ್ಲಾ ಪ್ರಮುಖ ಇಲಾಖೆಗಳ ಪ್ರತಿನಿಧಿಗಳನ್ನೊಳಗೊಂಡ ಸಮಿತಿಯನ್ನು ರಚಿಸಿ, ಸದರಿ ಸಮಿತಿ ಮೂಲಕ ಸಮಗ್ರವಾದ ಅನುಸೂಚಿ ದರಗಳನ್ನು ತಯಾರಿಸಿ ಪ್ರಕಟಿಸಲು ನಿರ್ಧರಿಸಲಾಯಿತು. ಅದರಂತೆ ಕೆಳಕಂಡ ಸಮಿತಿಗಳನ್ನು ಮೇಲೆ ಓದಲಾದ ಸರ್ಕಾರದ ಆದೇಶ-1ರಂತೆ ರಚಿಸಲಾಯಿತು.

1. ಅನುಸೂಚಿ ದರಗಳ ರಚನಾ ಸಮಿತಿ- ಸರ್ಕಾರದ ಕಾರ್ಯದರ್ಶಿಗಳು, ಲೋಇ ಇವರ ಅಧ್ಯಕ್ಷತೆ
2. ಅನುಸೂಚಿ ದರಗಳ ಪರಿಶೀಲನಾ ಸಮಿತಿ:- ಸರ್ಕಾರದ ಅಪರ ಮುಖ್ಯ ಕಾರ್ಯದರ್ಶಿಗಳು, ಲೋಇ ಇವರ ಅಧ್ಯಕ್ಷತೆ.

ಈ ಸಮಿತಿಗಳು ಅನುಸೂಚಿ ದರಗಳ ತಯಾರಿ ಮತ್ತು ಪ್ರಕಟಣೆ ಕುರಿತು ಅಗತ್ಯ ಕ್ರಮವನ್ನು ಶೀಘ್ರವಾಗಿ ತೆಗೆದುಕೊಳ್ಳುವಂತೆ ಮತ್ತು ಸದರಿ ಅನುಸೂಚಿ ದರಗಳ

ತಯಾರಿ ಕಾರ್ಯವನ್ನು 3 ತಿಂಗಳೊಳಗಾಗಿ ಅಂತಿಮಗೊಳಿಸಿ ದಿನಾಂಕ 01-06-2019ರಿಂದ ಕಡ್ಡಾಯವಾಗಿ ಜಾರಿಗೊಳಿಸಲು ಮೇಲ್ಕಂಡ ಆದೇಶಗಳಲ್ಲಿ ತಿಳಿಸಲಾಗಿದೆ.

ದಿನಾಂಕ 05-02-2020ರಂದು ಸರ್ಕಾರದ ಕಾರ್ಯದರ್ಶಿಗಳು, ಆರ್ಥಿಕ ಇಲಾಖೆ (ವೆಚ್ಚ) ಇವರ ಅಧ್ಯಕ್ಷತೆಯಲ್ಲಿ ನಡೆದ ಸಭೆಯಲ್ಲಿ ಏಕರೂಪ ಅನುಸೂಚಿ ದರಗಳನ್ನು ತಯಾರಿಸುವ ನಿಟ್ಟಿನಲ್ಲಿ ಏಕರೂಪ ಅನುಸೂಚಿ ದರಗಳನ್ನು ತಯಾರಿಸಲು ತಾಂತ್ರಿಕ ಕಾರ್ಯನಿರತ ತಂಡವನ್ನು (Technical Working Group) ರಚಿಸಲು ಮೇಲೆ ಓದಲಾದ ಸರ್ಕಾರದ ಆದೇಶ-2ರಂತೆ ಶ್ರೀ ಆರ್. ಜ್ಯೆಪ್ರಸಾದ್, ನಿವೃತ್ತ ಪ್ರಧಾನ ಇಂಜಿನಿಯರ್, ಇವರ ಅಧ್ಯಕ್ಷತೆಯಲ್ಲಿ ವಿವಿಧ ಇಲಾಖೆಗಳ ನಿವೃತ್ತ ಹಾಗೂ ಅಧಿಕಾರಿಗಳನ್ನು ಒಳಗೊಂಡಂತೆ ಆದೇಶ ಹೊರಡಿಸಲಾಯಿತು. ಅಧೀಕ್ಷಕ ಇಂಜಿನಿಯರ್, ಲೋಇ ವೃತ್ತ, ಬೆಂಗಳೂರು ಇವರು ಈ ತಂಡದ ಸದಸ್ಯ ಕಾರ್ಯದರ್ಶಿ/ಸಮನ್ವಯಾಧಿಕಾರಿಯನ್ನಾಗಿ ಸಹ ನೇಮಿಸಲಾಯಿತು. ಸದರಿ ತಂಡವು ಮಾರ್ಚ್-2020ರ ಮಾಹೆಯೊಳಗೆ ಏಕರೂಪ ದರಪಟ್ಟಿಯನ್ನು ತಯಾರಿಸಿ ಸರ್ಕಾರಕ್ಕೆ ಮುಂದಿನ ಕ್ರಮಕ್ಕಾಗಿ ಸಲ್ಲಿಸಲು ಸಹ ಸೂಚಿಸಲಾಯಿತು.

ತಾಂತ್ರಿಕ ಕಾರ್ಯನಿರತ ತಂಡವು ವಿವಿಧ ಇಲಾಖೆಗಳ ಒಟ್ಟು 32 ದರಪಟ್ಟಿಗಳನ್ನು ಅಧ್ಯಯನ ಮಾಡಿ, ಆಯಾ ಇಲಾಖೆಯ ಅಧಿಕಾರಿಗಳೊಂದಿಗೆ ಸಮಾಲೋಚಿಸಿ, ವಿವಿಧ ಇಲಾಖೆಗಳನ್ನು ಒಗ್ಗೂಡಿಸಿ, ರಾಜ್ಯವ್ಯಾಪಿ ಏಕರೂಪ ಅನುಸೂಚಿತ ದರಪಟ್ಟಿಯನ್ನು ಕೆಳಕಂಡಂತೆ ತಯಾರಿಸಲು ನಿರ್ಧರಿಸಿತು.

SR's OF ORGANIZATIONS CONCERNED UNDER	NODAL ORGANIZATION
PWD (C&B), NH & PRED	PRAMC
WRDO, MI & KPCL	WRDO
BWSSB , KUWSDB & RWS	BWSSB
KPTCL, ESCOMS, PWD ELECTRICAL	BESCOM
PORTS & IWTD & Airports	PORTS
FOREST, WATERSHED, HORTICULTURE	FOREST

ಮೇಲೆ ತಿಳಿಸಿದಂತೆ ವಿವಿಧ ಇಲಾಖೆಗಳನ್ನು ಒಗ್ಗೂಡಿಸಿ 6 ಏಕರೂಪ ಅನುಸೂಚಿತ ದರಗಳನ್ನು ತಯಾರಿಸಲು ನಿರ್ಧರಿಸಲಾಯಿತು. ಹಾಗೂ ವಿವಿಧ ಇಲಾಖೆಗಳು ತಮ್ಮ ಹಿಂದಿನ ದರಪಟ್ಟಿಯ ತಯಾರಿಕೆಯಲ್ಲಿ ಅಳವಡಿಸಿಕೊಳ್ಳುತ್ತಿದ ಕೆಳಕಂಡ ಅಂಶಗಳನ್ನು ಪರಿಶೀಲಿಸಿ rationalization ಮಾಡಲಾಗಿರುತ್ತದೆ.

- ನಿರ್ಮಾಣ ಸಾಮಗ್ರಿಗಳ ದರಗಳನ್ನು ಎಲ್‌ಲ ಇಲಾಖೆಗಳಿಗೆ ಅನ್ವಯವಾಗುವಂತೆ ಏಕರೂಪ ದರಪಟ್ಟಿಯಲ್ಲಿ ಅಳವಡಿಸಿದೆ.
- ಕೂಲಿ ಕಾರ್ಮಿಕರ ದರಗಳನ್ನು ಕಾರ್ಮಿಕ ಇಲಾಖೆಯು ಪ್ರಕಟಿಸಿರುವಂತೆ ಕನಿಷ್ಟ ದರಗಳನ್ನು ಸಹ ಏಕರೂಪ ದರಪಟ್ಟಿಯಲ್ಲಿ ಅವಳಡಿಸಲಾಗಿದೆ.
- **Ministry of Road Transport and Highways-2019 Standard data book** ತಂತ್ರಾಂಶದಂತೆ ಯಂತ್ರೋಪಕರಣಗಳ ಬಾಡಿಗೆ ದರಗಳನ್ನು ಏಕರೂಪ ದರಪಟ್ಟಿಯಲ್ಲಿ ಅಳವಡಿಸಲಾಗಿದೆ.
- ಗುತ್ತಿಗೆದಾರರ ಲಾಭಾಂಶವನ್ನು ಗರಿಷ್ಟ ಶೇ10% ಅಥವಾ ಆಯಾ ಇಲಾಖೆಗಳು ನಿಗಧಿಪಡಿಸಿರುವ ಇವುಗಳಲ್ಲಿ ಯಾವುದು ಕಡಿಮೆ ಏಕರೂಪ ದರಪಟ್ಟಿಯಲ್ಲಿ ಅಳವಡಿಸಲಾಗಿದೆ.
- **Overhead charges** ದರಗಳನ್ನು ಗರಿಷ್ಟ ಶೇ10% ಅಥವಾ ಆಯಾ ಇಲಾಖೆಗಳು ನಿಗಧಿಪಡಿಸಿರುವ ಇವುಗಳಲ್ಲಿ ಯಾವುದು ಕಡಿಮೆಯೋ ಅದನ್ನು ಏಕರೂಪ ದರಪಟ್ಟಿಯಲ್ಲಿ ಅಳವಡಿಸಲಾಗಿದೆ.
- Area specific loading ಅಂಶವನ್ನು ಎಲ್ಲ ಇಲಾಖೆಗಳ ಕಾಮಗಾರಿಗಳಿಗೆ ಅನ್ವಯವಾಗುವಂತೆ ಏಕರೂಪ ದರಪಟ್ಟಿಯಲ್ಲಿ ಅಳವಡಿಸಲಾಗಿದೆ.
- Earth work, Cement concrete items with shuttering and surveying ಐಟಂಗಳನ್ನು ಸಹ ಈ ದರಪಟ್ಟಿಯಲ್ಲಿ ಎಲ್ಲ ಇಲಾಖೆಗಳಿಗೆ ಅನ್ವಯವಾಗುವಂತೆ ಅಳವಡಿಸಿರುತ್ತದೆ.
- ಇತರೆ ಇಂಜಿನಿಯರಿಂಗ್ ಇಲಾಖೆಗಳು ತಮ್ಮ ಕಾರ್ಯಕ್ಷೇತ್ರಕ್ಕೆ ಅವಶ್ಯವಿರುವಂತಹ specific construction materials and itemsಗಳನ್ನು ತಮ್ಮ ದರಪಟ್ಟಿಯಲ್ಲಿ ಪ್ರತ್ಯೇಕವಾಗಿ ಅಳವಡಿಸಿಕೊಳ್ಳುವುದು.

ಮೇಲಿನ ಅಂಶಗಳನ್ನು ಪರಿಗಣಿಸಿ ಬೆಂಗಳೂರು ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳಚರಂಡಿ ಮಂಡಳಿ ಇವರ ನೇತೃತ್ವದಲ್ಲಿ ಕೆಯುಡಬ್ಲ್ಯುಎಸ್&ಎಸ್‌ಬಿ ಮತ್ತು ಗ್ರಾಮೀಣ ಕುಡಿಯುವ ನೀರು ಸರಬರಾಜು ಮತ್ತು ನೈರ್ಮಲೀಕರಣ ಇಲಾಖೆ ಒಳಗೊಂಡ ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳಚರಂಡಿ ಐಟಂಗಳ ಏಕರೂಪ ಅನುಸೂಚಿತ ದರಗಳ ಪಟ್ಟಿಯನ್ನು ತಾಂತ್ರಿಕ ಕಾರ್ಯ ನಿರತ ತಂಡದ ಮಾರ್ಗದರ್ಶನದಂತೆ ತಯಾರಿಸಲಾಗಿರುತ್ತದೆ.

ದಿನಾಂಕ 14-01-2022ರಂದು ನಡೆದ ಏಕರೂಪ ಅನುಸೂಚಿ ದರಗಳ ರಚನಾ ಸಮಿತಿಯ ಸಭೆಯಲ್ಲಿ ಆಯಾ ಇಲಾಖೆಗಳು ತಯಾರಿಸಿರುವ ಏಕರೂಪ ದರಪಟ್ಟಿಯನ್ನು ಏಕರೂಪ ದರಪಟ್ಟಿಗೆ ಸಕ್ಷಮ ಪ್ರಾಧಿಕಾರದ ಅನುಮೋದನೆ ಪಡೆದು ಆಯಾ ಇಲಾಖೆಯ ವೆಬ್‌ಸೈಟ್‌ನಲ್ಲಿ ಪ್ರಕಟಿಸಲು ಸೂಚಿಸಲಾಯಿತು. ಹಾಗೂ ಈ ದರಪಟ್ಟಿಯ ಬಗ್ಗೆ ವಿವಿಧ stake holdersಗಳ ಅಭಿಪ್ರಾಯ/ ಸಲಹೆ/ ಆಕ್ಷೇಪಣೆಗಳನ್ನು ಪಡೆಯಲು

ನಿರ್ಧರಿಸಲಾಯಿತು. ಅದರಂತೆ ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳಚರಂಡಿ ಐಟಂಗಳ ಏಕರೂಪ ದರಪಟ್ಟಿಯನ್ನು bwssb.karnataka.gov.in ವೆಬ್‌ಸೈಟ್‌ನಲ್ಲಿ ದಿನಾಂಕ 04-02-2022ರಂದು ಪ್ರಕಟಿಸಲಾಗಿದೆ. ಹಾಗೂ ಈ ಬಗ್ಗೆ ವಿಜಯವಾಣಿ ಮತ್ತು ದಿ ಹಿಂದೂ ದಿನ ಪತ್ರಿಕೆಯಲ್ಲಿ ಸಹ ದಿನಾಂಕ 06-02-2022ರಂದು ಪ್ರಕಟಣೆ ಹೊರಡಿಸಲಾಗಿದೆ.

ಮೇಲೆ ಓದಲಾದ ಉಲ್ಲೇಖ-3ರ ಪತ್ರದಲ್ಲಿ ಈ ಅನುಸೂಚಿತ ಏಕರೂಪ ದರಪಟ್ಟಿಗೆ ಅನುಮೋದನೆ ಕೋರಿ ಕರಡು ದರಪಟ್ಟಿಯನ್ನು ಏಕರೂಪ ಅನುಸೂಚಿ ದರಗಳ ಪರಿಶೀಲನಾ ಸಮಿತಿಗೆ ಸಲ್ಲಿಸಲಾಗಿದೆ.

ದಿನಾಂಕ 22-03-2022ರಂದು ಸರ್ಕಾರದ ಅಪರ ಮುಖ್ಯ ಕಾರ್ಯದರ್ಶಿಗಳು, ಲೋಕೋಪಯೋಗಿ ಇಲಾಖೆ ಇವರ ಅಧ್ಯಕ್ಷತೆಯಲ್ಲಿ ನಡೆದ ಏಕರೂಪ ಅನುಸೂಚಿತ ದರಗಳ ಪರಿಶೀಲನಾ ಸಮಿತಿಯ ಸಭೆಯಲ್ಲಿ ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳಚರಂಡಿ ಕಾಮಗಾರಿಗಳ ಏಕರೂಪ ಅನುಸೂಚಿತ ದರಪಟ್ಟಿಯನ್ನು ಪರಿಶೀಲಿಸಿ ಚರ್ಚಿಸಿದ್ದು, ಬಿಡಬ್ಲ್ಯುಎಸ್‌ಎಸ್‌ಬಿ, ಕೆಯುಡಬ್ಲ್ಯುಎಸ್&ಎಸ್‌ಬಿ ಮತ್ತು ಆರ್‌ಡಿಡಬ್ಲ್ಯುಎಸ್&ಎಸ್‌ಡಿ ಇಲಾಖೆಗಳು ಅಂತಿಮಗೊಳಿಸಿರುವ ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳಚರಂಡಿ ಐಟಂಗಳ ಏಕರೂಪ ದರಪಟ್ಟಿ ಸಂಪುಟ-Vನ್ನು ಅಂಗೀಕರಿಸಿ ಜಾರಿಗೆ ತರಲು ನಿರ್ಧರಿಸಲಾಗಿರುತ್ತದೆ.

ಅಂತಿಮಗೊಳಿಸಿದ ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳಚರಂಡಿ ಕಾಮಗಾರಿಗಳ ಏಕರೂಪ ಅನುಸೂಚಿತ ದರಪಟ್ಟಿ ಸಂಪುಟ-Vನ್ನು ಮುಖ್ಯ ಇಂಜಿನಿಯರ್ ಬಿಡಬ್ಲ್ಯುಎಸ್‌ಎಸ್‌ಬಿ, ಬೆಂಗಳೂರು ಇವರು ಮೇಲೆ ಓದಲಾದ ಕ್ರ.ಸಂ-4ರಲ್ಲಿ ಸರ್ಕಾರದಿಂದ ಅನುಮೋದನೆ ದೊರಕಿಸಿಕೊಡಲು ಸಲ್ಲಿಸಿರುತ್ತಾರೆ.

ಈ ವಿವರಗಳನ್ನು ಪರಿಶೀಲಿಸಿ ಕೆಳಕಂಡಂತೆ ಆದೇಶಿಸಲಾಗಿದೆ.

ಸರ್ಕಾರದ ಆದೇಶ ಸಂಖ್ಯೆ ಲೋಇ 51 ಆರ್‌ಡಿಎಫ್ 2019, ಬೆಂಗಳೂರು ದಿನಾಂಕ 25-03-2022

ತಾಂತ್ರಿಕ ಕಾರ್ಯನಿರತ ತಂಡದ ಮಾರ್ಗದರ್ಶನದಲ್ಲಿ ಬಿಡಬ್ಲ್ಯುಎಸ್‌ಎಸ್‌ಬಿ ಇವರ ನೇತೃತ್ವದಲ್ಲಿ ತಯಾರಿಸಿರುವ ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳಚರಂಡಿ ಕಾಮಗಾರಿಗಳ ಅನುಸೂಚಿತ ಏಕರೂಪ ದರಪಟ್ಟಿ-2021-22 ಸಂಪುಟ-V ಅನ್ನು ರಾಜ್ಯವ್ಯಾಪಿ ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳಚರಂಡಿ ಕಾಮಗಾರಿಗಳನ್ನು ಕೈಗೊಳ್ಳುವ ಎಲ್ಲ ಇಲಾಖೆಗಳಿಗೆ ಅನ್ವಯವಾಗುವಂತೆ ತಕ್ಷಣದಿಂದ ಹಾಗೂ ಮುಂದಿನ ಆದೇಶದವರೆಗೆ ಜಾರಿಗೆ ತರಲಾಗಿದೆ.

ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳಚರಂಡಿ ಕಾಮಗಾರಿಗಳನ್ನು ನಿರ್ವಹಿಸುವ ಸರ್ಕಾರದ ಎಲ್ಲಾ ಇಲಾಖೆಗಳು/ನಿಗಮ/ಮಂಡಳಿ/ ಸಂಸ್ಥೆಗಳು ತಕ್ಷಣದಿಂದಲೇ ಜಾರಿಗೆ

ಬರುವಂತೆ ಸದರಿ ದರಗಳನ್ನು ಅಂದಾಜು ತಯಾರಿಕೆ, ಟೆಂಡರ್ ಪ್ರಕ್ರಿಯೆ ಮತ್ತು ಅನುಷ್ಠಾನಗೊಳಿಸುವಲ್ಲಿ ಅಳವಡಿಕೊಳ್ಳತಕ್ಕದ್ದು.

ಈ ಏಕರೂಪ ಅನುಸೂಚಿತ ಸಂಪುಟವನ್ನು-V ಅನ್ನು ಆಯಾ ಸಂಬಂಧಪಟ್ಟ ಇಲಾಖೆಗಳ ಹಾಗೂ ಲೋಕೋಪಯೋಗಿ ಇಲಾಖೆಯ ಅಂತರ್ಜಾಲದಲ್ಲಿ ಪ್ರಕಟಿಸುವುದು.

ಮುಖ್ಯ ಇಂಜಿನಿಯರ್, ಬಿಡಬ್ಲ್ಯುಎಸ್ಎಸ್‌ಬಿ ಇವರು ಕೆಯುಡಬ್ಲ್ಯುಎಸ್ಎಸ್‌ಬಿ ಮತ್ತು ಆರ್‌ಡಿಡಬ್ಲ್ಯು&ಎಸ್‌ಡಿ ಇಲಾಖೆಗಳೊಂದಿಗೆ ಸಮಾಲೋಚಿಸಿ ಎಲ್ಲಾ ರೀತಿಯ ಕೊಳವೆಗಳ (Pipes) ಬೆಲೆಗಳನ್ನು ಪ್ರತಿ ತ್ರೈಮಾಸಿಕ ಅವಧಿಗೆ ಅಥವಾ ಶೇ.10 ಕ್ಕಿಂತ ದರ ವ್ಯತ್ಯಾಸವಾದಲ್ಲಿ ಪರಿಷ್ಕೃತ ದರಗಳನ್ನು ಪ್ರಕಟಿಸುವುದು.

ಶೇ. 12% ಜಿಎಸ್‌ಟಿ ಪ್ರತಿಶತವನ್ನು ಅಂದಾಜುಪಟ್ಟಿಯಲ್ಲಿ ಪ್ರತ್ಯೇಕವಾಗಿ ಸೇರ್ಪಡೆ ಮಾಡುವುದು.

ಗುತ್ತಿಗೆ ಅವಧಿಯನ್ನು ಗುತ್ತಿಗೆದಾರರ ವಿಳಂಬದಿಂದ ವಿಸ್ತರಿಸಿದಲ್ಲಿ ವಿಸ್ತೃತ ಗುತ್ತಿಗೆ ಅವಧಿಯಲ್ಲಿ ಆಗುವ ಜಿಎಸ್‌ಟಿ ಹೆಚ್ಚಳವನ್ನು ಗುತ್ತಿಗೆದಾರರೇ ಭರಿಸತಕ್ಕದ್ದು.

ಈ ಅನುಸೂಚಿ ಏಕರೂಪ ದರಪಟ್ಟಿ ಸಂಪುಟ-Vಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತೆ ಎಲ್ಲ ಸಾಧ್ಯತೆ ಮತ್ತು ಭಾದ್ಯತೆಗಳನ್ನು ಸಂಬಂಧಪಟ್ಟ (BWSSB, KUWS&SB, RDWS&SD) ಇಲಾಖೆಗಳು ಹೊಂದಿರುತ್ತವೆ.

ಕರ್ನಾಟಕ ರಾಜ್ಯಪಾಲರ ಆದೇಶಾನುಸಾರ
ಮತ್ತು ಅವರ ಹೆಸರಿನಲ್ಲಿ

ಸಹಿ/- 25/3/2022
(ಬಿ.ಹೆಚ್. ಅನಿಲ್ ಕುಮಾರ್)
ಸರ್ಕಾರದ ಅಪರ ಮುಖ್ಯ ಕಾರ್ಯದರ್ಶಿ
ಹಾಗೂ ಅಧ್ಯಕ್ಷರು, ಅನುಸೂಚಿ
ದರಗಳ ಪರಿಶೀಲನಾ ಸಮಿತಿ,
ಲೋಕೋಪಯೋಗಿ ಇಲಾಖೆ

ಇವರಿಗೆ:
1. ಮಹಾಲೇಖಪಾಲರು, (ಲೆಕ್ಕ ಪರೀಕ್ಷೆ-II), ಕರ್ನಾಟಕ, ಬೆಂಗಳೂರು.
2. ಸರ್ಕಾರದ ಅಪರ ಮುಖ್ಯ ಕಾರ್ಯದರ್ಶಿಗಳು, ಆರ್ಥಿಕ ಇಲಾಖೆ, ಬೆಂಗಳೂರು.
3. ಸರ್ಕಾರದ ಅಪರ ಮುಖ್ಯ ಕಾರ್ಯದರ್ಶಿಗಳು, ಲೋಕೋಪಯೋಗಿ ಇಲಾಖೆ.
4. ಸರ್ಕಾರದ ಅಪರ ಮುಖ್ಯ ಕಾರ್ಯದರ್ಶಿಗಳು, ಇಂಧನ ಇಲಾಖೆ, ಬೆಂಗಳೂರು
5. ಸರ್ಕಾರದ ಅಪರ ಮುಖ್ಯ ಕಾರ್ಯದರ್ಶಿಗಳು, ನಗರಾಭಿವೃದ್ಧಿ ಇಲಾಖೆ, ಬೆಂಗಳೂರು.

6. ಸರ್ಕಾರದ ಅಪರ ಮುಖ್ಯ ಕಾರ್ಯದರ್ಶಿಗಳು, ಅರಣ್ಯ, ಪರಿಸರ ಮತ್ತು ಜೀವಿಶಾಸ್ತ್ರ, ಇಲಾಖೆ, ಬೆಂಗಳೂರು.
7. ಸರ್ಕಾರದ ಅಪರ ಮುಖ್ಯ ಕಾರ್ಯದರ್ಶಿಗಳು, ಗ್ರಾಮೀಣಾಭಿವೃದ್ಧಿ ಇಲಾಖೆ
8. ಸರ್ಕಾರದ ಪ್ರಧಾನ ಕಾರ್ಯದರ್ಶಿಗಳು, ವಸತಿ ಇಲಾಖೆ.
9. ಸರ್ಕಾರದ ಕಾರ್ಯದರ್ಶಿಗಳು, ಆರ್ಥಿಕ ಇಲಾಖೆ (ವೆಚ್ಚ), ಬೆಂಗಳೂರು.
10. ಸರ್ಕಾರದ ಕಾರ್ಯದರ್ಶಿಗಳು ಜಲಸಂಪನ್ಮೂಲ ಇಲಾಖೆ, ಬೆಂಗಳೂರು
11. ಸರ್ಕಾರದ ಕಾರ್ಯದರ್ಶಿಗಳು, ಸಣ್ಣನೀರಾವರಿ ಇಲಾಖೆ, ಬೆಂಗಳೂರು.
12. ಪ್ರಧಾನ ಇಂಜಿನಿಯರ್, ರಸ್ತೆ, ಯೋಜನೆ ಮತ್ತು ಆಸ್ತಿ ನಿರ್ವಹಣೆ ಕೇಂದ್ರ,(PRAMC), ಬೆಂಗಳೂರು- ಇವರು ಈ ಸಂಪುಟವನ್ನು ಲೋಕೋಪಯೋಗಿ ಇಲಾಖೆಯ ಅಂತರ್ಜಾಲದಲ್ಲಿ ಪ್ರಕಟಿಸುವುದು.
13. ಮುಖ್ಯ ಇಂಜಿನಿಯರ್, ಸಂಪರ್ಕ ಮತ್ತು ಕಟ್ಟಡಗಳು (ದಕ್ಷಿಣ), (ಉತ್ತರ), (ಈಶಾನ್ಯ) ಮತ್ತು ಕೇಂದ್ರ ವಲಯಗಳು, ಬೆಂಗಳೂರು, ಧಾರವಾಡ, ಕಲಬುರಗಿ, ಶಿವಮೊಗ್ಗ.
14. ಮುಖ್ಯ ಇಂಜಿನಿಯರ್, ಬಿಡಬ್ಲ್ಯುಎಸ್ಎಸ್‌ಬಿ, ಕೆಯುಡಬ್ಲ್ಯುಎಸ್&ಎಸ್‌ಬಿ ಮತ್ತು ಆರ್‌ಡಿಡಬ್ಲ್ಯುಎಸ್&ಎಸ್‌ಡಿ-ತಮ್ಮ ಇಲಾಖೆಯ ವೆಬ್‌ಸೈಟ್‌ನಲ್ಲಿ ಪ್ರಕಟಿಸಲು
15. ಎಲ್ಲಾ ಮುಖ್ಯ ಇಂಜಿನಿಯರ್‌ಗಳು, ಇತರೆ ಇಲಾಖೆಗಳು.
16. ಎಲ್ಲಾ ಅಧೀಕ್ಷಕ ಇಂಜಿನಿಯರ್‌ಗಳು, ಲೋಇ ಮತ್ತು ಇತರೆ ಇಲಾಖೆಗಳು.
17. ಎಲ್ಲಾ ಕಾರ್ಯಪಾಲಕ ಇಂಜಿನಿಯರ್‌ಗಳು, ಲೋಇ ಮತ್ತು ಇತರೆ ಇಲಾಖೆಗಳು.

ಕರ್ನಾಟಕ ಸರ್ಕಾರದ ನಡವಳಿಗಳು

ವಿಷಯ :– ಎಸ್.ಆರ್. ದರಗಳನ್ನು ಪ್ರಕಟಿಸಲು **ಅನುಸೂಚಿ ದರಗಳ ಪರಿಶೀಲನಾ ಸಮಿತಿ** ರಚಿಸುವ ಕುರಿತು.

ಓದಲಾಗಿದೆ – 1) ಸರ್ಕಾರದ ಸಮ ಸಂಖ್ಯೆ ಪತ್ರ ದಿನಾಂಕ 04–09–2018

2) ಮುಖ್ಯ ಇಂಜನಿಯರ್, ಸಂಕದ ಇವರ ಪತ್ರ ಸಂಖ್ಯೆ:ಮುಅ:ಸಂಕದ:ಸಾಕೋ:ಸಇ–4:2018–19 ದಿನಾಂಕ: 01–10–2018.

3) ಸರ್ಕಾರದ ಸಮ ಸಮಸಂಖ್ಯೆ ಪತ್ರ ದಿನಾಂಕ:– 11–10–2018

*****

ಪ್ರಸ್ತಾವನೆ:

2018–19ನೇ ಸಾಲಿನ ಲೋಕೋಪಯೋಗಿ ಇಲಾಖೆಯ ದರಪಟ್ಟಿಯನ್ನು ತಯಾರಿಸುವ ಕುರಿತು ಸರ್ಕಾರದ ಆದೇಶ ಸಮ ಸಂಖ್ಯೆ ದಿನಾಂಕ 26–03–2018ರಲ್ಲಿ ಸಮಿತಿಯನ್ನು ಸೃಜಿಸಲಾಗಿತ್ತು. ಸದರಿ ಸಮಿತಿಯು ನೀಡಿದ ವರದಿಯಂತೆ ಉಲ್ಲೇಖ–2ರ ಪತ್ರದಲ್ಲಿ ಮುಖ್ಯ ಇಂಜನಿಯರ್, ಸಂಕದ ಇವರು 2018–19ನೇ ಸಾಲಿನ ಬೆಂಗಳೂರು ವೃತ್ತದ ಕರಡು ದರಪಟ್ಟಿಯನ್ನು ಸರ್ಕಾರದ ಅನುಮೋದನೆಗಾಗಿ ಸಲ್ಲಿಸಿರುತ್ತಾರೆ. ಉಲ್ಲೇಖ–3ರ ಪತ್ರದಲ್ಲಿ ಮುಖ್ಯ ಇಂಜಿನಿಯರ್‌ರವರು ಸಲ್ಲಿಸಿರುವ ಬೆಂಗಳೂರು ವೃತ್ತದ 2018–19ನೇ ಸಾಲಿನ ದರಪಟ್ಟಿಯನ್ನು ಮತ್ತು ಉಳಿದ ಎಲ್ಲಾ ವೃತ್ತಗಳು ದಿನಾಂಕ 10–10–2018ರಂದ ಅನ್ವಯವಾಗುವಂತೆ ಪ್ರಕಟಿಸಲು ಸೂಚಿಸಲಾಯಿತು. ಈ ವಿಷಯವನ್ನು ಆರ್ಥಿಕ ಇಲಾಖೆಯ ಗಮನಕ್ಕೆ ತರಲಾಗಿ ಈ ಕೆಳಕಂಡ ಅಂಶಗಳ ಕುರಿತು ಅಗತ್ಯ ಕ್ರಮವಹಿಸುವಂತೆ ತಿಳಿಸಲಾಗಿದೆ.

I. ಪ್ರಸ್ತುತ ರಾಜ್ಯದಲ್ಲಿನ ಪ್ರಮುಖ ಇಲಾಖೆಗಳಾದ ಲೋಕೋಪಯೋಗಿ ಇಲಾಖೆ, ಜಲ ಸಂಪನ್ಮೂಲ ಇಲಾಖೆ, ನಗರಾಭಿವೃದ್ಧಿ, ವಸತಿ ಇಲಾಖೆ, ಇಂಧನ ಇಲಾಖೆ ಮುಂತಾದವುಗಳು ತಮ್ಮದೇ ಆದ ಅನುಸೂಚಿ ದರಗಳನ್ನು (ಎಸ್.ಆರ್.) ತಯಾರಿಸಿದ್ದು, ವಿವಧ ಕಾಮಗಾರಿಗಳ ಅಂದಾಜುಗಳ ತಯಾರಿಕೆಯಲ್ಲಿ ಬೇರೆ ಬೇರೆ ಇಲಾಖೆಗಳ ದರಗಳನ್ನು ಅಳವಡಿಸಿ ಅಂದಾಜುಗಳನ್ನು ತಯಾರಿಸಲಾಗಿರುತ್ತದೆ. ಪ್ರಸಕ್ತ ಪರಿಸ್ಥಿತಿಯಲ್ಲಿ ಅಂದರೆ, ಜಿ.ಎಸ್.ಟಿ. ಅನುಷ್ಠಾನವಾದ ನಂತರ ಅವಧಿಯಲ್ಲಿ ಒಂದು ಇಲಾಖೆಯಲ್ಲಿ ಜಿ.ಎಸ್.ಟಿ. ಪೂರ್ವ ದರಗಳಿದ್ದಲ್ಲಿ, ಲೋಕೋಪಯೋಗಿ ಇಲಾಖೆಯಲ್ಲಿ ಜಿ.ಎಸ್.ಟಿ. ನಂತರದ ದರಗಳು

ಅಸ್ತಿತ್ವದಲ್ಲಿವೆ. ಇದರಿಂದಾಗಿ ಅಂದಾಜುಗಳನ್ನು ತಯಾರಿಸಲು ಮತ್ತು ಟೆಂಡರುಗಳನ್ನು ಮೌಲ್ಯಮಾಪನ ಮಾಡುವಲ್ಲಿ ಅನೇಕ ಸಮಸ್ಯೆಗಳು ಉದ್ಭವವಾಗುತ್ತಿವೆ.

II. ಈ ಹಿನ್ನೆಲೆಯಲ್ಲಿ ರಾಜ್ಯದಲ್ಲಿ ಏಕರೂಪದ ಸಮಗ್ರ ಅನುಸೂಚಿ ದರಗಳನ್ನು ತಯಾರಿಸಿ ಪ್ರಕಟಿಸುವುದು ಸೂಕ್ತವೆಂದು ಭಾವಿಸಲಾಗಿದೆ. ಇದಕ್ಕಾಗಿ ಲೊಕೋಪಯೋಗಿ ಇಲಾಖೆಯನ್ನು ನೋಡಲ್ ಇಲಾಖೆಯನ್ನಾಗಿ ನೇಮಿಸಿ, ಎಲ್ಲಾ ಪ್ರಮುಖ ಇಲಾಖೆಗಳ ಪ್ರತಿನಿಧಿಗಳನ್ನೊಳಗೊಂಡ ಸಮಿತಿಯನ್ನು ರಚಿಸಿ, ಸದರಿ ಸಮಿತಿಯ ಮೂಲಕ ಸಮಗ್ರವಾದ ಅನುಸೂಚಿ ದರಗಳನ್ನು (ಎಸ್.ಆರ್) ತಯಾರಿಸಿ ಹಾಗೂ ರಸ್ತೆ, ಸೇತುವೆ ಮತ್ತು ಕಟ್ಟಡಗಳ ಕುರಿತಾದ ಎಲ್ಲಾ ಎಸ್.ಆರ್ ದರಗಳನ್ನು ಪ್ರಕಟಿಸುವುದು ಸೂಕ್ತವಾಗಿರುತ್ತದೆ.

III. ದರಪಟ್ಟಿಯ ತಯಾರಿಸುವ ಬಗ್ಗೆ ಸೃಜಿಸಲಾಗಿರುವ ಅನುಸೂಚಿ ದರಗಳ ರಚನಾ ಸಮಿತಿಯು ತಯಾರಿಸಿರುವ ದರಪಟ್ಟಿಯನ್ನು ಪರಿಶೀಲಿಸಿ ಅಂತಿಮಗೊಳಿಸಲು, **"ಅನುಸೂಚಿ ದರಗಳ ಪರಿಶೀಲನಾ ಸಮಿತಿ"**ಯನ್ನು ರಚಿಸುವುದು.

ಮೇಲಿನ ಪ್ರಸ್ತಾವನೆಯಲ್ಲಿ ವಿವರಿಸಿರುವಂತೆ **"ಅನುಸೂಚಿ ದರಗಳ ಪರಿಶೀಲನಾ ಸಮಿತಿ"**ಯನ್ನು ರಚಿಸಲು ಕೆಳಕಂಡ ಆದೇಶ ಹೊರಡಿಸಲಾಗಿದೆ.

ಸರ್ಕಾರದ ಆದೇಶ ಸಂಖ್ಯೆ ಪಿಡಬ್ಲ್ಯುಡಿ 65 ಆರ್‌ಡಿಎಫ್ 2018 ದಿನಾಂಕ 04-04-2019

ಪ್ರಸ್ತಾವನೆಯಲ್ಲಿ ವಿವರಿಸಲಾದ ಅಂಶಗಳ ಹಿನ್ನೆಲೆಯಲ್ಲಿ, ಅನುಸೂಚಿ ದರಗಳ ರಚನಾ ಸಮಿತಿಯು ತಯಾರಿಸುವ 2019-20ನೇ ಸಾಲಿನ ಏಕರೂಪ ದರಪಟ್ಟಿಯನ್ನು ಪರಿಶೀಲಿಸಲು **"ಅನುಸೂಚಿ ದರಗಳ ಪರಿಶೀಲನಾ ಸಮಿತಿ"**ಯನ್ನು ಕೆಳಕಂಡಂತೆ ಸೃಜಿಸಲಾಗಿದೆ.

ಕ್ರ ಸಂ	ಅಧಿಕಾರಿಗಳ ಹೆಸರು/ಪದನಾಮ	
1	ಸರ್ಕಾರದ ಅಪರ ಮುಖ್ಯ ಕಾರ್ಯದರ್ಶಿ, ಲೋಕೋಪಯೋಗಿ, ಬಂದರು ಮತ್ತು ಒಳನಾಡು ಜಲಸಾರಿಗೆ, ಇಲಾಖೆ	ಅಧ್ಯಕ್ಷರು
2	ಸರ್ಕಾರದ ಅಪರ ಮುಖ್ಯ ಕಾರ್ಯದರ್ಶಿ/ ಕಾರ್ಯದರ್ಶಿ, ಇಂಧನ ಇಲಾಖೆ	ಸದಸ್ಯರು
3	ಸರ್ಕಾರದ ಅಪರ ಮುಖ್ಯ ಕಾರ್ಯದರ್ಶಿ/ ಕಾರ್ಯದರ್ಶಿ, ನಗರಾಭಿವೃದ್ಧಿ ಇಲಾಖೆ	ಸದಸ್ಯರು
4	ಅಪರ ಮುಖ್ಯ ಕಾರ್ಯದರ್ಶಿ / ಕಾರ್ಯದರ್ಶಿ, ಅರಣ್ಯ, ಪರಿಸರ ಮತ್ತು ಜೀವಿಶಾಸ್ತ್ರ ಇಲಾಖೆ.	ಸದಸ್ಯರು

ಕ್ರ ಸಂ	ಅಧಿಕಾರಿಗಳ ಹೆಸರು/ಪದನಾಮ	
5	ಸರ್ಕಾರದ ಪ್ರಧಾನ ಕಾರ್ಯದರ್ಶಿ/ ಕಾರ್ಯದರ್ಶಿ, ಗ್ರಾಮೀಣಾಭಿವೃದ್ಧಿ ಇಲಾಖೆ	ಸದಸ್ಯರು.
6	ಸರ್ಕಾರದ ಪ್ರಧಾನ ಕಾರ್ಯದರ್ಶಿ/ ಕಾರ್ಯದರ್ಶಿ, ವಸತಿ ಇಲಾಖೆ	ಸದಸ್ಯರು
7	ಸರ್ಕಾರದ ಕಾರ್ಯದರ್ಶಿ (ವೆಚ್ಚ), ಆರ್ಥಿಕ ಇಲಾಖೆ	ಸದಸ್ಯರು
8	ಸರ್ಕಾರದ ಕಾರ್ಯದರ್ಶಿ, ಜಲ ಸಂಪನ್ಮೂಲ ಇಲಾಖೆ	ಸದಸ್ಯರು
9	ಸರ್ಕಾರದ ಕಾರ್ಯದರ್ಶಿ, ಸಣ್ಣ ನೀರಾವರಿ ಮತ್ತು ಅಂತರ್ಜಲ ಅಭೀವೃದ್ಧಿ ಇಲಾಖೆ	ಸದಸ್ಯರು
10	ಸರ್ಕಾರದ ಕಾರ್ಯದರ್ಶಿ, ಲೋಕೋಪಯೋಗಿ ಇಲಾಖೆ	ಸದಸ್ಯ ಕಾರ್ಯದರ್ಶಿ

ಈ ಸಮಿತಿಯು ಅನುಸೂಚಿ ದರಗಳ ರಚನಾ ಸಮಿತಿಯು ತಯಾರಿಸುವ ದರಪಟ್ಟಿಯನ್ನು ಪರಿಶೀಲಿಸಿ ದಿನಾಂಕ 01–06–2019ರಿಂದ ಕಡ್ಡಾಯವಾಗಿ ಜಾರಿಗೊಳಿಸಲು ಕ್ರಮ ವಹಿಸುವುದು. ಈ ಆದೇಶವನ್ನು ಆರ್ಥಿಕ ಇಲಾಖೆಯ ಟಿಪ್ಪಣಿ ಸಂಖ್ಯೆ ಆಇ 259 ಆಕೋ–2/2018 ದಿನಾಂಕ: 14–03–2019ರನ್ವಯ ಹೊರಡಿಸಲಾಗಿದೆ.

ಕರ್ನಾಟಕ ರಾಜ್ಯಪಾಲರ ಆದೇಶಾನುಸಾರ
ಮತ್ತು ಅವರ ಹೆಸರಿನಲ್ಲಿ

(ಕೆ.ಎಸ್.ಹರೀಶ್) 04/04/2019

ಸರ್ಕಾರದ ಅಧೀನ ಕಾರ್ಯದರ್ಶಿ,
ಲೋಕೋಪಯೋಗಿ, ಬಂದರು ಮತ್ತು ಒಜಸಾ
ಇಲಾಖೆ (ನಬಾರ್ಡ್)

ಇವರಿಗೆ:

1) ಸನ್ಮಾನ್ಯ ಲೋಕೋಪಯೋಗಿ ಸಚಿವರ ಸಂಸದಿಯ ಕಾರ್ಯದರ್ಶಿಗಳು, ವಿಧಾನ ಸೌಧ.
2) ಸರ್ಕಾರದ ಅಪರ ಮುಖ್ಯ ಕಾರ್ಯದರ್ಶಿ, ಆರ್ಥಿಕ ಇಲಾಖೆ, ವಿಧಾನ ಸೌಧ.
3) ಸರ್ಕಾರದ ಅಪರ ಮುಖ್ಯ ಕಾರ್ಯದರ್ಶಿ, ಇಂದನ ಇಲಾಖೆ, ಬೆಂಗಳೂರು.
4) ಸರ್ಕಾರದ ಅಪರ ಮುಖ್ಯ ಕಾರ್ಯದರ್ಶಿ, ನಗರಾಭಿವೃದ್ಧಿ ಇಲಾಖೆ, ಬೆಂಗಳೂರು.
5) ಸರ್ಕಾರದ ಅಪರ ಮುಖ್ಯ ಕಾರ್ಯದರ್ಶಿ, ಅರಣ್ಯ, ಪರಿಸರ ಮತ್ತು ಜೀವಿಶಾಸ್ತ್ರ ಇಲಾಖೆ, ಬೆಂಗಳೂರು.

6) ಸರ್ಕಾರದ ಪ್ರಧಾನ ಕಾರ್ಯದರ್ಶಿ/ ಕಾರ್ಯದರ್ಶಿಗಳು, ಗ್ರಾಮೀಣ ಅಭಿವೃದ್ಧಿ ಇಲಾಖೆ, ಬೆಂಗಳೂರು.
7) ಸರ್ಕಾರದ ಪ್ರಧಾನ ಕಾರ್ಯದರ್ಶಿ, ವಸತಿ ಇಲಾಖೆ, ಬೆಂಗಳೂರು.
8) ಸರ್ಕಾರದ ಕಾರ್ಯದರ್ಶಿ, ಜಲ ಸಂಪನ್ಮೂಲ ಇಲಾಖೆ, ಬೆಂಗಳೂರು.
9) ಸರ್ಕಾರದ ಕಾರ್ಯದರ್ಶಿ, ಸಣ್ಣ ನೀರಾವರಿ ಮತ್ತು ಅಂತರ್ಜಲ ಅಭಿವೃದ್ಧಿ ಇಲಾಖೆ, ವಿಕಾಸ ಸೌಧ, ಬೆಂಗಳೂರು.

ಪ್ರತಿ:–

1) ಸರ್ಕಾರದ ಅಪರ ಮುಖ್ಯ ಕಾರ್ಯದರ್ಶಿಗಳ ಆಪ್ತ ಕಾರ್ಯದರ್ಶಿ, ಲೊಕೋಪಯೋಗಿ, ಬಂದರು ಮತ್ತು ಒಜಸಾ ಇಲಾಖೆ, ವಿಕಾಸ ಸೌಧ, ಬೆಂಗಳೂರು.
2) ಸರ್ಕಾರದ ಕಾರ್ಯದರ್ಶಿಗಳ ಆಪ್ತ ಕಾರ್ಯದರ್ಶಿ, ಲೊಕೋಪಯೋಗಿ, ಬಂದರು ಮತ್ತು ಒಜಸಾ ಇಲಾಖೆ, ವಿಕಾಸ ಸೌಧ, ಬೆಂಗಳೂರು.
3) ಶಾಖಾ ರಕ್ಷಣಾ ಕಡತ / ಹೆಚ್ಚುವರಿ ಪ್ರತಿಗಳು.

ಕರ್ನಾಟಕ ಸರ್ಕಾರದ ನಡವಳಿಗಳು

ವಿಷಯ :– ಎಸ್.ಆರ್. ದರಗಳನ್ನು ಪ್ರಕಟಿಸಲು **ಅನುಸೂಚಿ ದರಗಳ ರಚನಾ ಸಮಿತಿ** ರಚಿಸುವ ಕುರಿತು.

ಒದಲಾಗಿದೆ – 1) ಸರ್ಕಾರದ ಸಮ ಸಂಖ್ಯೆ ಪತ್ರ ದಿನಾಂಕ 04–09–2018

2) ಮುಖ್ಯ ಇಂಜನಿಯರ್, ಸಂಕದ ಇವರ ಪತ್ರ ಸಂಖ್ಯೆ:ಮುಅ:ಸಂಕದ:ಸಾಕೋ: ಸಇ–4:2018–19 ದಿನಾಂಕ: 01–10–2018.

3) ಸರ್ಕಾರದ ಸಮ ಸಮಸಂಖ್ಯೆ ಪತ್ರ ದಿನಾಂಕ:–11–10–2018

*****

ಪ್ರಸ್ತಾವನೆ:

2018–19ನೇ ಸಾಲಿನ ಲೋಕೋಪಯೋಗಿ ಇಲಾಖೆಯ ದರಪಟ್ಟಿಯನ್ನು ತಯಾರಿಸುವ ಕುರಿತು ಸರ್ಕಾರದ ಆದೇಶ ಸಮ ಸಂಖ್ಯೆ ದಿನಾಂಕ 26–03–2018ರಲ್ಲಿ ಸಮಿತಿಯನ್ನು ಸೃಜಿಸಲಾಗಿತ್ತು. ಸದರಿ ಸಮಿತಿಯು ನೀಡಿದ ವರದಿಯಂತೆ ಉಲ್ಲೇಖ–2ರ ಪತ್ರದಲ್ಲಿ ಮುಖ್ಯ ಇಂಜನಿಯರ್, ಸಂಕದ ಇವರು 2018–19ನೇ ಸಾಲಿನ ಬೆಂಗಳೂರು ವೃತ್ತದ ಕರಡು ದರಪಟ್ಟಿಯನ್ನು ಸರ್ಕಾರದ ಅನುಮೋದನೆಗಾಗಿ ಸಲ್ಲಿಸಿರುತ್ತಾರೆ. ಉಲ್ಲೇಖ–3ರ ಪತ್ರದಲ್ಲಿ ಮುಖ್ಯ ಇಂಜಿನಿಯರ್‌ರವರು ಸಲ್ಲಿಸಿರುವ ಬೆಂಗಳೂರು ವೃತ್ತದ 2018–19ನೇ ಸಾಲಿನ ದರಪಟ್ಟಿಯನ್ನು ಮತ್ತು ಉಳಿದ ಎಲ್ಲಾ ವೃತ್ತಗಳು ದಿನಾಂಕ 10–10–2018ರಂದ ಅನ್ವಯವಾಗುವಂತೆ ಪ್ರಕಟಿಸಲು ಸೂಚಿಸಲಾಯಿತು. ಈ ವಿಷಯವನ್ನು ಆರ್ಥಿಕ ಇಲಾಖೆಯ ಗಮನಕ್ಕೆ ತರಲಾಗಿ ಈ ಕೆಳಕಂಡ ಅಂಶಗಳ ಕುರಿತು ಅಗತ್ಯ ಕ್ರಮವಹಿಸುವಂತೆ ತಿಳಿಸಲಾಗಿದೆ.

I. ಪ್ರಸ್ತುತ ರಾಜ್ಯದಲ್ಲಿನ ಪ್ರಮುಖ ಇಲಾಖೆಗಳಾದ ಲೋಕೋಪಯೋಗಿ ಇಲಾಖೆ, ಜಲ ಸಂಪನ್ಮೂಲ ಇಲಾಖೆ, ನಗರಾಭಿವೃದ್ಧಿ, ವಸತಿ ಇಲಾಖೆ, ಇಂಧನ ಇಲಾಖೆ ಮುಂತಾದವುಗಳು ತಮ್ಮದೇ ಆದ ಅನುಸೂಚಿ ದರಗಳನ್ನು (ಎಸ್.ಆರ್.) ತಯಾರಿಸಿದ್ದು, ವಿವಿಧ ಕಾಮಗಾರಿಗಳ ಅಂದಾಜುಗಳ ತಯಾರಿಕೆಯಲ್ಲಿ ಬೇರೆ ಬೇರೆ ಇಲಾಖೆಗಳ ದರಗಳನ್ನು ಅಳವಡಿಸಿ ಅಂದಾಜುಗಳನ್ನು ತಯಾರಿಸಲಾಗಿರುತ್ತದೆ. ಪ್ರಸಕ್ತ ಪರಿಸ್ಥಿತಿಯಲ್ಲಿ ಅಂದರೆ, ಜಿ.ಎಸ್.ಟಿ. ಅನುಷ್ಠಾನವಾದ ನಂತರ ಅವಧಿಯಲ್ಲಿ ಒಂದು ಇಲಾಖೆಯಲ್ಲಿ ಜಿ.ಎಸ್.ಟಿ. ಪೂರ್ವ ದರಗಳಿದ್ದಲ್ಲಿ, ಲೋಕೋಪಯೋಗಿ ಇಲಾಖೆಯಲ್ಲಿ ಜಿ.ಎಸ್.ಟಿ. ನಂತರದ ದರಗಳು ಅಸ್ತಿತ್ವದಲ್ಲಿವೆ. ಇದರಿಂದಾಗಿ ಅಂದಾಜುಗಳನ್ನು ತಯಾರಿಸಲು ಮತ್ತು ಟೆಂಡರುಗಳನ್ನು ಮೌಲ್ಯಮಾಪನ ಮಾಡುವಲ್ಲಿ ಅನೇಕ ಸಮಸ್ಯೆಗಳು ಉದ್ಭವವಾಗುತ್ತಿವೆ.

II. ಈ ಹಿನ್ನೆಲೆಯಲ್ಲಿ ರಾಜ್ಯದಲ್ಲಿ ಏಕರೂಪದ ಸಮಗ್ರ ಅನುಸೂಚಿ ದರಗಳನ್ನು ತಯಾರಿಸಿ ಪ್ರಕಟಿಸುವುದು ಸೂಕ್ತವೆಂದು ಭಾವಿಸಲಾಗಿದೆ. ಇದಕ್ಕಾಗಿ ಲೋಕೋಪಯೋಗಿ ಇಲಾಖೆಯನ್ನು ನೋಡಲ್ ಇಲಾಖೆಯನ್ನಾಗಿ ನೇಮಿಸಿ, ಎಲ್ಲಾ ಪ್ರಮುಖ ಇಲಾಖೆಗಳ ಪ್ರತಿನಿಧಿಗಳನ್ನೊಳಗೊಂಡ ಸಮಿತಿಯನ್ನು ರಚಿಸಿ, ಸದರಿ ಸಮಿತಿಯ ಮೂಲಕ ಸಮಗ್ರವಾದ ಅನುಸೂಚಿ ದರಗಳನ್ನು (ಎಸ್.ಆರ್) ತಯಾರಿಸಿ ರಸ್ತೆ, ಸೇತುವೆ ಮತ್ತು ಕಟ್ಟಡಗಳ ಕುರಿತಾದ ಎಲ್ಲ ಎಸ್.ಆರ್ ದರಗಳನ್ನು ಪ್ರಕಟಿಸುವುದು ಸೂಕ್ತವಾಗಿರುತ್ತದೆ.

ಮೇಲಿನ ಪ್ರಸ್ತಾವನೆಯಲ್ಲಿ ವಿವರಿಸಿದಂತೆ ರಾಜ್ಯದಲ್ಲಿ ಏಕರೂಪದ ಸಮಗ್ರ ಅನುಸೂಚಿ ದರಗಳನ್ನು ತಯಾರಿಸಲು ಈ ಕೆಳಕಂಡ ಸದಸ್ಯರುಗಳನ್ನೊಳಗೊಂಡಂತೆ ಅನುಸೂಚಿ ದರಗಳ ರಚನಾ ಸಮಿತಿಯನ್ನು ರಚಿಸಲು ಕೆಳಕಂಡ ಆದೇಶ ಹೊರಡಿಸಲಾಗಿದೆ.

ಸರ್ಕಾರದ ಆದೇಶ ಸಂಖ್ಯೆ ಪಿಡಬ್ಲ್ಯೂಡಿ 65 ಆರ್‌ಡಿಎಫ್ 2018 ದಿನಾಂಕ 04-04-2019

ಪ್ರಸ್ತಾವನೆಯಲ್ಲಿ ವಿವರಿಸಲಾದ ಅಂಶಗಳ ಹಿನ್ನೆಲೆಯಲ್ಲಿ, 2019-20ನೇ ಸಾಲಿನ ಏಕರೂಪ ದರಪಟ್ಟಿಯನ್ನು ತಯಾರಿಸಲು **"ಅನುಸೂಚಿ ದರಗಳ ರಚನಾ ಸಮಿತಿ"**ಯನ್ನು ಕೆಳಕಂಡಂತೆ ಸೃಜಿಸಲಾಗಿದೆ.

ಕ್ರ ಸಂ	ಅಧಿಕಾರಿಗಳ ಹೆಸರು/ಪದನಾಮ	
1	ಸರ್ಕಾರದ ಕಾರ್ಯದರ್ಶಿಗಳು, ಲೋಕೋಪಯೋಗಿ, ಬಂದರು ಮತ್ತು ಒಳನಾಡು ಜಲಸಾರಿಗೆ, ಇಲಾಖೆ	ಅಧ್ಯಕ್ಷರು
2	ಶ್ರೀ.ಕೃಷ್ಣ ಎನ್. ಬುಗಟ್ಯಾಗೋಳ, ವಿಶೇಷಾಧಿಕಾರಿ ಮತ್ತು ಪದನಿಮಿತ್ತ ಸರ್ಕಾರದ ಜಂಟಿ ಕಾರ್ಯದರ್ಶಿ, ಆರ್ಥಿಕ ಇಲಾಖೆ, ಲೋಕೋಪಯೋಗಿ ಆರ್ಥಿಕ ಕೋಶ	ಸದಸ್ಯರು
3	ಡಿ.ಜಗನ್ನಾಥ ಸಾಗರ, ಅಪರ ವಾಣಿಜ್ಯ ಆಯುಕ್ತರು	ಸದಸ್ಯರು
4	ಕೆ.ಜಿ.ಮಹೇಶ್, ಅಧೀಕ್ಷಕ ಅಭಿಯಂತರರು, ಕೃಷ್ಣಾ ಭಾಗ್ಯ ಜಲ ನಿಗಮ	ಸದಸ್ಯರು
5	ಗ್ರಾಮೀಣಾಭಿವೃದ್ಧಿ ಮತ್ತು ಪಂಚಾಯತ್ ರಾಜ್ ಇಲಾಖೆಯ ಅಧೀಕ್ಷಕ ಅಭಿಯಂತರರು ವೃಂದದ ಪ್ರತಿನಿಧಿ.	ಸದಸ್ಯರು
6	ಇಂಧನ ಇಲಾಖೆಯ ಅಧೀಕ್ಷಕ ಅಭಿಯಂತರ ವೃಂದದ ಪ್ರತಿನಿಧಿ.	ಸದಸ್ಯರು
7	ವಸತಿ ಇಲಾಖೆಯ ಅಧೀಕ್ಷಕ ಅಭಿಯಂತರ ವೃಂದದ ಪ್ರತಿನಿಧಿ.	ಸದಸ್ಯರು
8	ಬೆಂಗಳೂರು ಜಲ ಮಂಡಳಿಯ ಅಧೀಕ್ಷಕ ಅಭಿಯಂತರ ವೃಂದದ ಪ್ರತಿನಿಧಿ	ಸದಸ್ಯರು
9	ಕೆ.ಯು.ಐ.ಡಿ.ಎಫ್.ಸಿ. ಸಂಸ್ಥೆಯ ಅಧೀಕ್ಷಕ ಅಭಿಯಂತರ ವೃಂದದ ಪ್ರತಿನಿಧಿ.	ಸದಸ್ಯರು

ಕ್ರ ಸಂ	ಅಧಿಕಾರಿಗಳ ಹೆಸರು/ಪದನಾಮ	
10	ಸಣ್ಣ ನೀರಾವರಿ ಇಲಾಖೆಯ ಅಧೀಕ್ಷಕ ಅಭಿಯಂತರ ವೃಂದದ ಪ್ರತಿನಿಧಿ.	ಸದಸ್ಯರು
11	ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆಯ ಅಧೀಕ್ಷಕ ಅಭಿಯಂತರ ವೃಂದದ ಪ್ರತಿನಿಧಿ.	ಸದಸ್ಯರು
12	ಅರಣ್ಯ ಸಂರಕ್ಷಣಾಧಿಕಾರಿ (ಅಭಿವೃದ್ಧಿ), ಅರಣ್ಯ ಇಲಾಖೆ.	ಸದಸ್ಯರು
13	ಶ್ರೀ.ಕೆ.ಮೋಹನ್, ಅಧೀಕ್ಷಕ ಅಭಿಯಂತರರು (ವಿನ್ಯಾಸ), ಮುಇಂರವರ ಕಛೇರಿ, ಸಂಕದ, ಬೆಂಗಳೂರು	ಸದಸ್ಯ ಕಾರ್ಯದರ್ಶಿ

(ಕ್ರಸಂ 5–11ರವರೆಗಿನ ಸದಸ್ಯರುಗಳನ್ನು ಸಂಬಂಧಪಟ್ಟ ಇಲಾಖೆ/ಮಂಡಳಿ/ಪಾಲಿಕೆ ಇವರು ಅಂತಿಮಗೊಳಿಸುವುದು.)

ಮೇಲಿನ ಸಮಿತಿಯು ಅನುಸೂಚಿ ದರಗಳ ತಯಾರಿಸುವ ಕಾರ್ಯವನ್ನು ದಿನಾಂಕ 01–06–2019ರ ಮುನ್ನು ಅಂತಿಮಗೊಳಿಸಿ **ಅನುಸೂಚಿ ದರಗಳ ಪರಿಶೀಲನಾ ಸಮಿತಿಯ** ಅನುಮೋದನೆ ಪಡೆದು ಜಾರಿಗೊಳಿಸಲು ಕ್ರಮ ವಹಿಸುವುದು. ಈ ಆದೇಶವನ್ನು ಆರ್ಥಿಕ ಇಲಾಖೆಯ ಟಿಪ್ಪಣಿ ಸಂಖ್ಯೆ ಆಇ 259 ಆಕೋ–2/2018 ದಿನಾಂಕ: 14–03–2019ರನ್ವಯ ಹೊರಡಿಸಲಾಗಿದೆ.

ಕರ್ನಾಟಕ ರಾಜ್ಯಪಾಲರ ಆದೇಶಾನುಸಾರ
ಮತ್ತು ಅವರ ಹೆಸರಿನಲ್ಲಿ

04/04/2019
(ಕೆ.ಎಸ್.ಹರೀಶ್)
ಸರ್ಕಾರದ ಅಧೀನ ಕಾರ್ಯದರ್ಶಿ,
ಲೋಕೋಪಯೋಗಿ, ಬಂದರು ಮತ್ತು ಒಜಸಾ
ಇಲಾಖೆ (ನಬಾರ್ಡ್)

ಇವರಿಗೆ:

1) ಸನ್ಮಾನ್ಯ ಲೋಕೋಪಯೋಗಿ ಸಚಿವರ ಸಂಸದಿಯ ಕಾರ್ಯದರ್ಶಿಗಳು, ವಿಧಾನ ಸೌಧ.
2) ಸರ್ಕಾರದ ಅಪರ ಮುಖ್ಯ ಕಾರ್ಯದರ್ಶಿ, ಆರ್ಥಿಕ ಇಲಾಖೆ, ವಿಧಾನ ಸೌಧ.
3) ಸರ್ಕಾರದ ಅಪರ ಮುಖ್ಯ ಕಾರ್ಯದರ್ಶಿ, ಇಂಧನ ಇಲಾಖೆ, ಕೊಠಡಿ ಸಂಖ್ಯೆ:236, 2ನೇ ಮಹಡಿ, ವಿಕಾಸ ಸೌಧ, ಡಾ॥ ಅಂಬೇಡ್ಕರ್ ಬೀದಿ, ಬೆಂಗಳೂರು.
4) ವಾಣಿಜ್ಯ ತೆರಿಗೆ ಇಲಾಖೆಯ ಆಯುಕ್ತರು, ಗಾಂಧಿ ನಗರ, ಬೆಂಗಳೂರು.
5) ಪ್ರಧಾನ ಮುಖ್ಯ ಅರಣ್ಯ ಸಂರಕ್ಷಣಾಧಿಕಾರಿ, ಅರಣ್ಯ ಭವನ, 18ನೇ ಅಡ್ಡ ರಸ್ತೆ, ಮಲ್ಲೇಶ್ವರಂ, ಬೆಂಗಳೂರು–560003

6) ವ್ಯವಸ್ಥಾಪಕ ನಿರ್ದೇಶಕರು, ಕರ್ನಾಟಕ ನಗರ ಮೂಲಸೌಕರ್ಯ ಅಭಿವೃದ್ಧಿ ಮತ್ತು ಹಣಕಾಸು ನಿಗಮ ನಿಯಮಿತ ನಗರಾಬಿವೃದ್ಧಿ ಭವನ,#22,17ನೇ 'ಎಫ್' ಕ್ರಾಸ್, ಓಲ್ಡ್ ಮದ್ರಾಸ ರಸ್ತೆ, ಇಂದಿರಾನಗರ 2ನೇ ಹಂತ, ಬಿಎಮ್‌ಟಿಸಿ ಬಸ್ ಡಿಪೋ ಹತ್ತಿರ, ಬೆಂಗಳೂರು–560038

7) ಮುಖ್ಯ ಇಂಜನಿಯರ್, ಕರ್ನಾಟಕ ಗೃಹ ಮಂಡಳಿ, ಕಾವೇರಿ ಭವನ, ಬೆಂಗಳೂರು.

8) ವ್ಯವಸ್ಥಾಪಕ ನಿರ್ದೇಶಕರು, ಕೃಷ್ಣಾ ಭಾಗ್ಯ ಜಲ ನಿಗಮ, ಬೆಂಗಳೂರು.

9) ಪ್ರಧಾನ ಅಭಿಯಂತರರು,ಬಿ.ಬಿ.ಎಂ,ಪಿ ಕೇಂದ್ರ ಕಛೇರಿ, ಅನೆಕ್ಸ್ ಕಟ್ಟಡ,1ನೇ ಮಹಡಿ ಎನ್.ಆರ್,ವೃತ್ತ, ಬೆಂಗಳೂರು.–560002

10) ಮುಖ್ಯ ಇಂಜನಿಯರ್, ಸಂಪರ್ಕ ಮತ್ತು ಕಟ್ಟಡಗಳು (ದಕ್ಷಿಣ),(ಉತ್ತರ) ಮತ್ತು (ಈಶಾನ್ಯ) ವಲಯಗಳು. ಲೋಕೋಪಯೋಗಿ, ಬಂದರು ಮತ್ತು ಒಜಸಾ ಇಲಾಖೆ.

11) ಮುಖ್ಯ ಇಂಜನಿಯರ್, ಎಂ ಅಂಡ್ ಇ, ಜಲಸಂಪನ್ಮೂಲ ಅಭಿವೃದ್ಧಿ ಇಲಾಖೆ, ಆನಂದರಾವ್ ವೃತ್ತ, ಬೆಂಗಳೂರು.

12) ಮು.ಇಂ. ಗ್ರಾಮ ಪಂಚಾಯತ್ ಮತ್ತು ಪಂಚಾಯತ್ ರಾಜ್ ಇಲಾಖೆ, ಆನಂದರಾವ್ ವೃತ್ತ, ಬೆಂಗಳೂರು.

13) ಮುಖ್ಯ ಇಂಜನಿಯರ್, ಬೆಂಗಳೂರು ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳಚರಂಡಿ ಮಂಡಳಿ, ಕಾವೇರಿ ಭವನ, ಕೆಂಪೇಗೌಡ ರಸ್ತೆ, ಬೆಂಗಳೂರು.

14) ಮುಖ್ಯ ಇಂಜನಿಯರ್, ಸಣ್ಣ ನೀರಾವರಿ ಇಲಾಖೆ, ಕೆ.ಆರ್.ವೃತ್ತ, ಬೆಂಗಳೂರು.

15) ಸಮಿತಿ ಸದ್ಯಸರುಗಳಿಗೆ.

ಪ್ರತಿ:–

1) ಸರ್ಕಾರದ ಅಪರ ಮುಖ್ಯ ಕಾರ್ಯದರ್ಶಿಗಳ ಆಪ್ತ ಕಾರ್ಯದರ್ಶಿ, ಲೊಕೋಪಯೋಗಿ, ಬಂದರು ಮತ್ತು ಒಜಸಾ ಇಲಾಖೆ, ವಿಕಾಸ ಸೌಧ,

2) ಸರ್ಕಾರದ ಕಾರ್ಯದರ್ಶಿಗಳ ಆಪ್ತ ಕಾರ್ಯದರ್ಶಿ, ಲೊಕೋಪಯೋಗಿ, ಬಂದರು ಮತ್ತು ಒಜಸಾ ಇಲಾಖೆ, ವಿಕಾಸ ಸೌಧ,

3) ಶಾಖಾ ರಕ್ಷಣಾ ಕಡತ / ಹೆಚ್ಚುವರಿ ಪ್ರತಿಗಳು.

ಕರ್ನಾಟಕ ಸರ್ಕಾರದ ನಡವಳಿಗಳು

ವಿಷಯಃ ಏಕರೂಪ ಅನುಸೂಚಿ ದರಗಳನ್ನು ತಯಾರಿಸಲು ತಾಂತ್ರಿಕ ಕಾರ್ಯನಿರತ ತಂಡವನ್ನು (Technical working group) ರಚಿಸುವ ಬಗ್ಗೆ.

ಉಲ್ಲೇಖಃ (1) ಸರ್ಕಾರದ ಆದೇಶ ಸಂಖ್ಯೆ : 65 ಆರ್.ಡಿ.ಎಫ್.2018 ದಿನಾಂಕ 04.04.2019

(2) ಸರ್ಕಾರದ ಆದೇಶ ಸಂಖ್ಯೆ : 65 ಆರ್.ಡಿ.ಎಫ್. 2018 ದಿನಾಂಕ 04.04.2019

(3) ಏಕರೂಪ ಅನುಸೂಚಿ ದರಗಳ ತಯಾರಿಕೆಗೆ ಸಂಬಂಧಿಸಿದಂತೆ ಸರ್ಕಾರದ ಕಾರ್ಯದರ್ಶಿಗಳು, (ವೆಚ್ಚ), ಅಧ್ಯಕ್ಷತೆಯಲ್ಲಿ ದಿನಾಂಕ 05.02.2020 ರಂದು ಜರುಗಿದ 2ನೇ ಪ್ರಗತಿ ಪರಿಶೀಲನಾ ಸಭೆಯ ನಡವಳಿಗಳು.

ಪ್ರಸ್ತಾವನೆ :

ಮೇಲೆ (1)ರಲ್ಲಿ ಓದಲಾದ ಸರ್ಕಾರದ ಆದೇಶದಲ್ಲಿ ಅನುಸೂಚಿ ದರಗಳನ್ನು ಪ್ರಕಟಿಸಲು ಅನುಸೂಚಿ ದರಗಳ ರಚನಾ ಸಮಿತಿಯನ್ನು ರಚಿಸಿ ಅನುಸೂಚಿ ದರಗಳ ತಯಾರಿಸುವ ಕಾರ್ಯವನ್ನು ದಿನಾಂಕಃ 01.06.2019ರ ಮುನ್ನ ಅಂತಿಮಗೊಳಿಸಿ ಅನುಸೂಚಿ ದರಗಳ ಪರಿಶೀಲನಾ ಸಮಿತಿಯ ಅನುಮೋದನೆ ಪಡೆದು ಜಾರಿಗೊಳಿಸಲು ಕ್ರಮವಹಿಸುವುದೆಂದು ಆದೇಶಿಸಲಾಗಿದೆ. ಮೇಲೆ (2)ರಲ್ಲಿ ಓದಲಾದ ಸರ್ಕಾರದ ಆದೇಶದಲ್ಲಿ ಅನುಸೂಚಿ ದರಗಳನ್ನು ಪ್ರಕಟಿಸಲು ಅನುಸೂಚಿ ದರಗಳ ಪರಿಶೀಲನಾ ಸಮಿತಿಯನ್ನು ರಚಿಸಿ ಸಮಿತಿಯು ಅನುಸೂಚಿ ದರಗಳ ರಚನಾ ಸಮಿತಿಯು ತಯಾರಿಸುವ ದರ ಪಟ್ಟಿಯನ್ನು ಪರಿಶೀಲಿಸಿ ದಿನಾಂಕಃ01.06.2019 ರಿಂದ ಕಡ್ಡಾಯವಾಗಿ ಜಾರಿಗೊಳಿಸಲು ಕ್ರಮವಹಿಸುವುದೆಂದು ಆದೇಶವನ್ನು ಹೊರಡಿಸಲಾಗಿದೆ.

ಮೇಲ್ಕಂಡ ಸರ್ಕಾರದ ಆದೇಶಗಳಲ್ಲಿ ಆದೇಶಿಸಿದಂತೆ ಏಕರೂಪ ಅನುಸೂಚಿ ದರಗಳನ್ನು ತಯಾರಿಸುವ ನಿಟ್ಟಿನಲ್ಲಿ ಕೂಡಲೇ ಕ್ರಮವಹಿಸಬೇಕಾಗಿರುವ ಹಿನ್ನೆಲೆಯಲ್ಲಿ ಮೇಲೆ ಓದಲಾದ ಸಭಾ ನಡವಳಿಗಳಲ್ಲಿ ತೀರ್ಮಾನಿಸಿದಂತೆ ಈ ಕೆಳಕಂಡ ಏಕರೂಪ ಅನುಸೂಚಿ ದರಗಳನ್ನು ತಯಾರಿಸಲು ತಾಂತ್ರಿಕ ಕಾರ್ಯನಿರತ ತಂಡವನ್ನು (Technical working group) ರಚಿಸಲು ಕೆಳಕಂಡಂತೆ ಆದೇಶ ಹೊರಡಿಸಲಾಗಿದೆ.

ಸರ್ಕಾರದ ಆದೇಶ ಸಂಖ್ಯೆ : ಆಇ 259 ಆಕೋ–2/2018 ದಿನಾಂಕ :17.02.2020

ಪ್ರಸ್ತಾವನೆಯಲ್ಲಿ ವಿವರಿಸಲಾದ ಅಂಶಗಳ ಹಿನ್ನೆಲೆಯಲ್ಲಿ, ಏಕರೂಪ ಅನುಸೂಚಿ ದರಗಳನ್ನು ಆದೇಶಿಸಿದೆ.

ತಾಂತ್ರಿಕ ಕಾರ್ಯನಿರತ ತಂಡ
(Technical working group)

ಕ್ರ.ಸಂ.	ಪರಿಣಿತರ ಹೆಸರು ಮತ್ತು ಪ್ರತಿನಿಧಿಸುವ ಇಲಾಖೆ	
1	ಶ್ರೀ ಆರ್. ಜೈಪ್ರಸಾದ್, ನಿವೃತ್ತ ಪ್ರಧಾನ ಇಂಜಿನಿಯರ್	ಅಧ್ಯಕ್ಷರು
2	ಶ್ರೀ ಸಿ. ಅನಂತರಾಮು, ನಿವೃತ್ತ ಮುಖ್ಯ ಇಂಜಿನಿಯರ್, ಜಲಸಂಪನ್ಮೂಲ ಇಲಾಖೆ	ಸದಸ್ಯರು
3	ಶ್ರೀ ಗೋಪಿನಾಥ್, ನಿವೃತ್ತ ಅಧೀಕ್ಷಕ ಇಂಜಿನಿಯರ್, ಲೋಕೋಪಯೋಗಿ ಇಲಾಖೆ	ಸದಸ್ಯರು
4	ಶ್ರೀ ರವಿಕುಮಾರ್, ನಿವೃತ್ತ ಕಾರ್ಯಪಾಲಕ ಇಂಜಿನಿಯರ್, ಲೋಕೋಪಯೋಗಿ ಇಲಾಖೆ	ಸದಸ್ಯರು
5	ಶ್ರೀ ರವಿಕುಮಾರ, ಅಧೀಕ್ಷಕ ಇಂಜಿನಿಯರ್ (ನಿವೃತ್ತ), ಗ್ರಾಮೀಣಾಭಿವೃದ್ಧಿ ಮತ್ತು ಪಂಚಾಯತ್ ರಾಜ್ ಇಲಾಖೆ	ಸದಸ್ಯರು
6	ಶ್ರೀಮತಿ ಮೈತ್ರಿ ಎಸ್.ಕೆ. ಡೆಪ್ಯೂಟಿ ಜನರಲ್ ಮ್ಯಾನೇಜರ್, BESCOM ಶ್ರೀ ಆನಂದ ಆರ್. ಕುಲಕರ್ಣಿ, ಅಸಿಸ್ಟೆಂಟ್ ಜನರಲ್ ಮ್ಯಾನೇಜರ್, BESCOM ಇಂಧನ ಇಲಾಖೆ	ಸದಸ್ಯರು
7	ಶ್ರೀ ಡಿ. ದೇವರಾಜ, ಉಪ ಅರಣ್ಯ ಸಂರಕ್ಷಣಾಧಿಕಾರಿ (ನಿವೃತ್ತ), ಅರಣ್ಯ ಇಲಾಖೆ	ಸದಸ್ಯರು
8	ಅಧೀಕ್ಷಕ ಅಭಿಯಂತರರು, ಲೋಕೋಪಯೋಗಿ ವೃತ್ತ, ಬೆಂಗಳೂರು	ಸದಸ್ಯ ಕಾರ್ಯದರ್ಶಿ/ಸಮನ್ವಯಾಧಿಕಾರಿ

i. ಈ ತಂಡವು ಕೂಡಲೇ ವಿವಿಧ ಇಲಾಖೆಗಳೊಂದಿಗೆ ಸಭೆಯನ್ನು ನಡೆಸಿ ಮಾರ್ಚ್–2020ರ ಮಾಹೆಯೊಳಗೆ ಏಕರೂಪ ದರಪಟ್ಟಿಯನ್ನು ತಯಾರಿಸಿ ಸರ್ಕಾರಕ್ಕೆ ಮುಂದಿನ ಕ್ರಮಕ್ಕಾಗಿ ಸಲ್ಲಿಸುವುದು.

ii. ಪ್ರಸಕ್ತ ಇರುವ ದರಪಟ್ಟಿಯಲ್ಲಿನ Rate Analysis ಮತ್ತು Specification ಗಳನ್ನು ಪರಿಶೀಲಿಸಿ ಸೂಕ್ತ ರೀತಿಯಲ್ಲಿ ವಿಶ್ಲೇಷಣೆ ಮಾಡಿ ಅದರಲ್ಲಿನ ಅಂಶಗಳನ್ನು/ಘಟಕಗಳನ್ನು (Components) ಪರಾಮರ್ಶಿಸಿ ಪುನರ್ ರಚಿಸಿ ಅದರ ಆಧಾರದ ಮೇಲೆ ಏಕರೂಪ ದರಪಟ್ಟಿಗಳನ್ನು ತಯಾರಿಸುವುದು ಹಾಗೂ ಡೇಟಾ ವಿಶ್ಲೇಷಣೆಯನ್ನು ಪರಿಶೀಲಿಸಿ duplication of common item in different SRs ಗಳನ್ನು ಒಗ್ಗೂಡಿಸುವುದು. ಈ ನಿಟ್ಟಿನಲ್ಲಿ ರಾಜ್ಯದಲ್ಲಿ ಪ್ರತ್ಯೇಕ ಎಸ್.ಆರ್. ಡೇಟಾವನ್ನು ತಂಡಕ್ಕೆ ಒದಗಿಸುವುದು ಹಾಗೂ ತಂಡವು ಬಯಸುವ ಮಾಹಿತಿಗಳನ್ನು ಒದಗಿಸಲು ಕ್ರಮವಹಿಸುವುದು. ಲೋಕೋಪಯೋಗಿ ಇಲಾಖೆಯಿಂದ ಈ ಕುರಿತು ಸೂಕ್ತ ಅಗತ್ಯ ಸೌಲಭ್ಯಗಳನ್ನು ಒದಗಿಸಿ ನಿಗದಿತ ಅವಧಿಯಲ್ಲಿ ಸದರಿ ದರಗಳನ್ನು ರಚನೆಯಾಗುವಂತೆ ನೋಡಿಕೊಳ್ಳುವುದು.

iii. ರಸ್ತೆ, ಸೇತುವೆ ಮತ್ತು ಕಟ್ಟಡ ಕಾಮಗಾರಿಗಳಿಗೆ ಸಂಬಂಧಿಸಿದಂತೆ ಇತರೆ ಇಲಾಖೆಗಳಲ್ಲಿ special items ಇದ್ದಲ್ಲಿ ಅಂತಹ ಐಟಂಗಳ ಪಟ್ಟಿಯನ್ನು ತಯಾರಿಸಿ, ಆರ್ಥಿಕ ಇಲಾಖೆಯು ರಚಿಸಿರುವ ಸಮಿತಿ ಮುಂದೆ ಮಂಡಿಸಲು ಕ್ರಮವಹಿಸುವುದು.

iv. ವಿವಿಧ ಇಲಾಖೆಗಳ ದರಪಟ್ಟಿಯ ತಯಾರಿಕೆ, ವಿಶಿಷ್ಟ ವಿವರಣೆ ಹಾಗೂ ಡೇಟಾ ವಿಶ್ಲೇಷಣೆ ಮುಂತಾದ ವಿವರಗಳನ್ನು ಏಕರೂಪ ದರಪಟ್ಟಿಯ ತಯಾರಿಕೆಗೆ ಸೃಜಿಸಿರುವ ತಾಂತ್ರಿಕ ತಂಡದೊಂದಿಗೆ ಹಂಚಿಕೊಳ್ಳುವುದು.

v. ಈ ಕುರಿತು ಕಾಲಕಾಲಕ್ಕೆ ಸರ್ಕಾರದಿಂದ ಮತ್ತು ಏಕರೂಪ ದರಗಳನ್ನು ರಚಿಸುವ ಸಂಬಂಧ ರಚಿಸಲಾಗಿರುವ ಸಮಿತಿ ನೀಡುವ ನಿರ್ದೇಶನದಂತೆ ಕಾರ್ಯನಿರ್ವಹಿಸುವುದು.

vi. ಮೇಲ್ಕಂಡ ತಂಡದ ಸದಸ್ಯರಿಗೆ ಸೇವಾ ಶುಲ್ಕವನ್ನು ನೀಡುವ ಕುರಿತಂತೆ ಸಮನ್ವಯಾಧಿಕಾರಿಯಾಗಿರುವ ಅಧೀಕ್ಷಕ ಇಂಜಿನಿಯರ್, ಲೋಕೋಪಯೋಗಿ ವೃತ್ತ, ಬೆಂಗಳೂರು ಇವರು ಕ್ರಮವಹಿಸುವುದು.

ಕರ್ನಾಟಕ ರಾಜ್ಯಪಾಲರ ಆಜ್ಞಾನುಸಾರ
ಮತ್ತು ಅವರ ಹೆಸರಿನಲ್ಲಿ
ಸಹಿ :-
(ಶ್ರೀಕೃಷ್ಣ ಎನ್. ಬುಗಟ್ಯಾಗೋಳ)
ವಿಶೇಷಾಧಿಕಾರಿ ಮತ್ತು ಪದನಿಮಿತ್ತ
ಸರ್ಕಾರದ ಜಂಟಿ ಕಾರ್ಯದರ್ಶಿ
ಆರ್ಥಿಕ ಇಲಾಖೆ
(ಲೋಕೋಪಯೋಗಿ ಆರ್ಥಿಕ ಕೋಶ)

ಇವರಿಗೆ :

1. ಸರ್ಕಾರದ ಕಾರ್ಯದರ್ಶಿ, ಲೋಕೋಪಯೋಗಿ, ಬಂದರು ಮತ್ತು ಒಳನಾಡು ಜಲಸಾರಿಗೆ ಇಲಾಖೆ,
2. ಪ್ರಧಾನ ಮುಖ್ಯ ಅಭಿಯಂತರರು ಮತ್ತು ಮುಖ್ಯ ಯೋಜನಾಧಿಕಾರಿ, ಕರ್ನಾಟಕ ರಾಜ್ಯ ಹೆದ್ದಾರಿ ಅಭಿವೃದ್ಧಿ ಯೋಜನೆ, ಕೆ.ಆರ್.ವೃತ್ತ, ಬೆಂಗಳೂರು
3. ಮುಖ್ಯ ಅಭಿಯಂತರರು, ಗ್ರಾಮೀಣ ನೀರು ಸರಬರಾಜು ಮತ್ತು ನೈರ್ಮಲ್ಯ, ಕಾವೇರಿ ಭವನ, ಬೆಂಗಳೂರು.
4. ನಿರ್ದೇಶಕರು, ತೋಟಗಾರಿಕೆ ಇಲಾಖೆ, ಲಾಲ್ ಬಾಗ್, ಬೆಂಗಳೂರು.

ಕರ್ನಾಟಕ ಸರ್ಕಾರದ ನಡವಳಿಗಳು

ವಿಷಯ: ಬೆಂಗಳೂರು ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳ ಚರಂಡಿ ಮಂಡಳಿ/ ಕರ್ನಾಟಕ ನಗರ ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳ ಚರಂಡಿ ಮಂಡಳಿ/ ಗ್ರಾಮೀಣ ನೀರು ಸರಬರಾಜು ಇಲಾಖೆಗೆ ಸಂಬಂಧಿಸಿದ ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳ ಚರಂಡಿ ಮಂಡಳಿಯ ಕಾಮಗಾರಿಗಳ ಏಕರೂಪ ದರಪಟ್ಟಿಯನ್ನು ತಯಾರಿಸಲು ಖಾಯಂ ನಿರತ ಸಮಿತಿಯನ್ನು ರಚಿಸುವ ಕುರಿತು.

ಓದಲಾಗಿದೆ: ಮುಖ್ಯ ಆಡಳಿತಾಧಿಕಾರಿ ಹಾಗೂ ಕಾರ್ಯದರ್ಶಿ, ಬೆಂಗಳೂರು ಜಲಮಂಡಳಿ ಇವರ ಪತ್ರ ಸಂಖ್ಯೆ:BWSSB/CEDTE/TA/47/ 3051/ 2020-21 ದಿನಾಂಕ: 14.12.2021 ಮತ್ತು 07.09.2021

****

ಪ್ರಸ್ತಾವನೆ:

ಮೇಲೆ ಓದಲಾದ ಪತ್ರಗಳಲ್ಲಿ ಮುಖ್ಯ ಆಡಳಿತಾಧಿಕಾರಿ ಹಾಗೂ ಕಾರ್ಯದರ್ಶಿ, ಬೆಂಗಳೂರು ಜಲಮಂಡಳಿ ಇವರು ಸರ್ಕಾರದ ಕಾರ್ಯದರ್ಶಿ, ಲೋಕೋಪಯೋಗಿ ಇಲಾಖೆ ಇವರ ಅಧ್ಯಕ್ಷತೆಯಲ್ಲಿ ದಿನಾಂಕ: 01.09.2020 ಮತ್ತು 18.06.2021ರಂದು ನಡೆದ ಸಭೆಗಳಲ್ಲಿ ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳಚರಂಡಿಗೆ ಸಂಬಂಧಿಸಿದ ಕಾಮಗಾರಿಗಳ ದರಗಳನ್ನು ನಿಗದಿಪಡಿಸಲು ಬೆಂಗಳೂರು ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳ ಚರಂಡಿ ಮಂಡಳಿ, ಕರ್ನಾಟಕ ನಗರ ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳ ಚರಂಡಿ ಮಂಡಳಿ ಹಾಗೂ ಗ್ರಾಮೀಣ ನೀರು ಸರಬರಾಜು ಇಲಾಖೆಗಳು ಸೇರಿ ದರಪಟ್ಟಿ ನಿಗದಿಪಡಿಸಿ ಪ್ರಕಟಿಸಲು ತಾಂತ್ರಿಕ ಕಾರ್ಯಪಡೆಯನ್ನು (Technical Working Group-T.W.G) ರಚಿಸಲು ಸೂಚಿಸಿರುತ್ತಾರೆ. ಸದರಿ ಸಭೆಗಳಲ್ಲಿನ ಶಿಫಾರಸ್ಸಿನಂತೆ ಬೆಂಗಳೂರು ಜಲಮಂಡಳಿಯು ನೋಡಲ್ ಸಂಸ್ಥೆಯಾಗಿರುತ್ತದೆ. ಕರ್ನಾಟಕ ನಗರ ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳ ಚರಂಡಿ ಮಂಡಳಿ ಹಾಗೂ ಗ್ರಾಮೀಣ ನೀರು ಸರಬರಾಜು ಇಲಾಖೆಗಳು ಸಹಕಾರದೊಂದಿಗೆ ಹೊಸದಾಗಿ ಏಕ ರೂಪ ದರಪಟ್ಟಿಯನ್ನು ತಯಾರಿಸಬೇಕಾಗಿರುತ್ತದೆ.

ಆದ್ದರಿಂದ ಬೆಂಗಳೂರು ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳ ಚರಂಡಿ ಮಂಡಳಿ, ಕರ್ನಾಟಕ ನಗರ ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳ ಚರಂಡಿ ಮಂಡಳಿ ಹಾಗೂ ಗ್ರಾಮೀಣ ನೀರು ಸರಬರಾಜು ಇಲಾಖೆಯ ಅಧಿಕಾರಿಗಳನ್ನೊಳಗೊಂಡ ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳ ಚರಂಡಿ ಮಂಡಳಿಯ ಕಾಮಗಾರಿಗಳ ಏಕರೂಪ ದರಪಟ್ಟಿಯನ್ನು ತಯಾರಿಸಲು ಖಾಯಂ ನಿರತ ಏಕರೂಪ ದರಪಟ್ಟಿಯ ತಾಂತ್ರಿಕ ಕಾರ್ಯಪಡೆಯನ್ನು (Technical Working Group-T.W.G) ಈ ಕೆಳಕಂಡಂತೆ ನೇಮಿಸಲು ಪ್ರಸ್ತಾವನೆ ಸಲ್ಲಿಸಿರುತ್ತಾರೆ.

ಕ್ರಮ ಸಂಖ್ಯೆ	ಕಾರ್ಯಗತ ಅಧಿಕಾರಿ	ಸಮನ್ವಯ ಮತ್ತು ಕಾರ್ಯನಿರತ ಅಧಿಕಾರಿಗಳು	ಕಾರ್ಯವ್ಯಾಪ್ತಿ
1.	ಮುಖ್ಯ ಅಭಿಯಂತರರು, (ವಿನ್ಯಾಸ), ಬೆಂಗಳೂರು ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳ ಚರಂಡಿ ಮಂಡಳಿ, ಬೆಂಗಳೂರು.	1.ಅಪರ ಮುಖ್ಯ ಅಭಿಯಂತರರು, (ವಿನ್ಯಾಸ), ಬೆಂಗಳೂರು ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳ ಚರಂಡಿ ಮಂಡಳಿ, ಬೆಂಗಳೂರು.	ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳಚರಂಡಿ ಮಂಡಳಿಯ ದರಪಟ್ಟಿಯ ಅಂಶಗಳ ಎಲ್ಲಾ ಪಠ್ಯಗಳು

		2. ಅಧೀಕ್ಷಕ ಅಭಿಯಂತರರು, (ವಿನ್ಯಾಸ ಮತ್ತು ಉಸ್ತುವಾರಿ), ಕರ್ನಾಟಕ ನಗರ ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳ ಚರಂಡಿ ಮಂಡಳಿ, ಬೆಂಗಳೂರು.	
		3. ಅಧೀಕ್ಷಕ ಅಭಿಯಂತರರು, ಬೆಂಗಳೂರು ಕರ್ನಾಟಕ ಗ್ರಾಮೀಣ ನೀರು ಸರಬರಾಜು ಇಲಾಖೆ , ಬೆಂಗಳೂರು.	ಬೋರ್‌ವೆಲ್, ನೀರು ಸಂಸ್ಕರಣ ಘಟಕಗಳು ಪಂಪ್‌ಸೆಟ್ ಮತ್ತು ಅದರ ಅನ್ವಯಗಳು. ವೆಲ್ ಸಿಂಗ್‌ಕ್ಕಿಂಗ್ (Well Singking)

ಮೇಲ್ಕಂಡ ಪ್ರಸ್ತಾವನೆಯನ್ನು ಸರ್ಕಾರವು ಕೂಲಂಕಷವಾಗಿ ಪರಿಶೀಲಿಸಿ ಈ ಕೆಳಕಂಡಂತೆ ಆದೇಶಿಸಿದೆ.

ಸರ್ಕಾರದ ಆದೇಶ ಸಂಖ್ಯೆ: ನಅಇ 08 ಎಂಎನ್‌ಐ 2021(ಇ-ಕಛೇರಿ), ಬೆಂಗಳೂರು, ದಿನಾಂಕ: 04.12.2021

ಪ್ರಸ್ತಾವನೆಯಲ್ಲಿ ವಿವರಿಸಲಾಗಿರುವ ಅಂಶಗಳ ಹಿನ್ನೆಲೆಯಲ್ಲಿ, ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳ ಚರಂಡಿ ಮಂಡಳಿಯ ಕಾಮಗಾರಿಗಳ ಏಕರೂಪ ದರಪಟ್ಟಿಯನ್ನು ತಯಾರಿಸಲು ಖಾಯಂ ನಿರತ ಏಕರೂಪ ದರಪಟ್ಟಿಯ ತಾಂತ್ರಿಕ ಕಾರ್ಯಪಡೆಯನ್ನು (Technical Working Group-T.W.G) ಬೆಂಗಳೂರು ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳ ಚರಂಡಿ ಮಂಡಳಿ, ಕರ್ನಾಟಕ ನಗರ ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳ ಚರಂಡಿ ಮಂಡಳಿ ಹಾಗೂ ಗ್ರಾಮೀಣ ನೀರು ಸರಬರಾಜು ಇಲಾಖೆಯ ಅಧಿಕಾರಿಗಳನ್ನೊಳಗೊಂಡ ಈ ಕೆಳಕಂಡ ಸಮಿತಿಯನ್ನು ರಚಿಸಿ ಆದೇಶಿಸಲಾಗಿದೆ.

ಕ್ರಮ ಸಂಖ್ಯೆ	ಕಾರ್ಯಗತ ಅಧಿಕಾರಿ	ಸಮನ್ವಯ ಮತ್ತು ಕಾರ್ಯನಿರತ ಅಧಿಕಾರಿಗಳು	ಕಾರ್ಯವ್ಯಾಪ್ತಿ
1.	ಮುಖ್ಯ ಅಭಿಯಂತರರು, (ವಿನ್ಯಾಸ), ಬೆಂಗಳೂರು ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳ ಚರಂಡಿ ಮಂಡಳಿ, ಬೆಂಗಳೂರು.	1. ಅಪರ ಮುಖ್ಯ ಅಭಿಯಂತರರು, (ವಿನ್ಯಾಸ), ಬೆಂಗಳೂರು ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳ ಚರಂಡಿ ಮಂಡಳಿ, ಬೆಂಗಳೂರು.	ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳಚರಂಡಿ ಮಂಡಳಿಯ ದರಪಟ್ಟಿಯ ಅಂಶಗಳ ಎಲ್ಲಾ ಪರ್ಯಗಳು

		2. ಅಧೀಕ್ಷಕ ಅಭಿಯಂತರರು, (ವಿನ್ಯಾಸ ಮತ್ತು ಉಸ್ತುವಾರಿ), ಕರ್ನಾಟಕ ನಗರ ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳ ಚರಂಡಿ ಮಂಡಳಿ, ಬೆಂಗಳೂರು.	
		3. ಅಧೀಕ್ಷಕ ಅಭಿಯಂತರರು, ಬೆಂಗಳೂರು ಕರ್ನಾಟಕ ಗ್ರಾಮೀಣ ನೀರು ಸರಬರಾಜು ಇಲಾಖೆ , ಬೆಂಗಳೂರು.	ಬೋರ್‌ವೆಲ್, ನೀರು ಸಂಸ್ಕರಣ ಘಟಕಗಳು ಪಂಪ್‌ಸೆಟ್ ಮತ್ತು ಅದರ ಅನ್ವಯಗಳು. ವೆಲ್ ಸಿಂಗ್‌ಕ್ಕಿಂಗ್ (Well Singking)

ಕರ್ನಾಟಕ ರಾಜ್ಯಪಾಲರ ಆದೇಶಾನುಸಾರ
ಮತ್ತು ಅವರ ಹೆಸರಿನಲ್ಲಿ

(ಎಸ್.ವೀಣಾ)
ಸರ್ಕಾರದ ಅಧೀನ ಕಾರ್ಯದರ್ಶಿ
ನಗರಾಭಿವೃದ್ಧಿ ಇಲಾಖೆ.

ಇವರಿಗೆ:

1. ಸರ್ಕಾರದ ಪ್ರಧಾನ ಕಾರ್ಯದರ್ಶಿ, ಗ್ರಾಮೀಣಾಭಿವೃದ್ಧಿ ಮತ್ತು ಪಂಚಾಯತ್ ರಾಜ್ ಇಲಾಖೆ, ಬಹುಮಹಡಿಗಳ ಕಟ್ಟಡ, ಬೆಂಗಳೂರು.
2. ಸರ್ಕಾರದ ಕಾರ್ಯದರ್ಶಿ, ನಗರಾಭಿವೃದ್ಧಿ ಇಲಾಖೆ, ವಿಕಾಸಸೌಧ, ಬೆಂಗಳೂರು.
3. ಸರ್ಕಾರದ ಕಾರ್ಯದರ್ಶಿ, ಲೋಕೋಪಯೋಗಿ ಇಲಾಖೆ, ವಿಕಾಸಸೌಧ, ಬೆಂಗಳೂರು.
4. ಅಧ್ಯಕ್ಷರು, ಬೆಂಗಳೂರು ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳಚರಂಡಿ ಮಂಡಳಿ, ಕಾವೇರಿ ಭವನ, ಬೆಂಗಳೂರು-560 009.
5. ವ್ಯವಸ್ಥಾಪಕ ನಿರ್ದೇಶಕರು, ಕರ್ನಾಟಕ ನಗರ ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳಚರಂಡಿ ಮಂಡಳಿ, ಬನ್ನೇರುಘಟ್ಟ ರಸ್ತೆ, ಬೆಂಗಳೂರು-560 029.
6. ವ್ಯವಸ್ಥಾಪಕ ನಿರ್ದೇಶಕರು, ಕರ್ನಾಟಕ ಗ್ರಾಮೀಣ ನೀರು ಸರಬರಾಜು ಇಲಾಖೆ , ಬೆಂಗಳೂರು.
7. ಅಪರ ಮುಖ್ಯ ಅಭಿಯಂತರರು (ವಿನ್ಯಾಸ),ಬೆಂಗಳೂರು ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳ ಚರಂಡಿ ಮಂಡಳಿ, ಕಾವೇರಿ ಭವನ, ಬೆಂಗಳೂರು-560 009.
8. ಅಧೀಕ್ಷಕ ಅಭಿಯಂತರರು, (ವಿನ್ಯಾಸ ಮತ್ತು ಉಸ್ತುವಾರಿ), ಕರ್ನಾಟಕ ನಗರ ನೀರು ಸರಬರಾಜು ಮತ್ತು ಒಳ ಚರಂಡಿ ಮಂಡಳಿ.
9. ಅಧೀಕ್ಷಕ ಅಭಿಯಂತರರು, ಬೆಂಗಳೂರು ಕರ್ನಾಟಕ ಗ್ರಾಮೀಣ ನೀರು ಸರಬರಾಜು ಇಲಾಖೆ , ಬೆಂಗಳೂರು.
10. ಶಾಖಾ ರಕ್ಷ ಕಡತ/ಹೆಚ್ಚುವರಿ ಪ್ರತಿಗಳು.

TABLE OF CONTENTS

ABBREVIATIONS

Sl. No.	Group	ABBREVITATIONS - FULL FORM
1	AGR	AGGREGATES
2	ALM	ALUMINIUM
3	BHT	BOUGHTOUT
4	BRK	BRICKS
5	BRS	BRASS FITTINGS
6	C&S	CEMENT & STEEL
7	D&H	DWC HDPE PIPES
8	D&M	DIRECT MATERIAL SUPPLY
9	D&R	DIRECT RATES
10	EQP	EQUIPMENTS
11	FTN	FITTINGS
12	L&C	LABOUR CHARGES
13	LAB	LABOUR RATES
14	LSA	LUMPSUM
15	MIS	MISCELLANEOUS
16	PNT	PAINTING
17	SAF	SANITARY FIXTURES
18	SAM	SANITARY MISCELLANEOUS
19	SAP	SANITARY PIPES
20	STL	STEEL
21	STN	STONE & BRICK
22	WAF	WATER SUPPLY FIXTURES
23	WAM	WATER SUPPLY MISCELLANEOUS
24	WAP	WATER SUPPLY PIPES
25	WOD	WOOD & GLASS

BASIC RATES MATERIAL AND USAGE CHARGES OF MACHINERY

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
1	2828	!Bailing out water	l.s	3.70
2	2361	!Carriage and Fixing Charges	l.s	3.70
3	2834	!Commissioning water pipes	l.s	3.70
4	3874	!HC for tools & plants	l.s	3.70
5	2833	!Hydraulic testing for water pipes	l.s	3.70
6	2320	!Provision for Carriage charges	l.s	3.70
7	4083	!Shoring & Strutting for MH works	l.s	3.70
8	3109	!soap water solution	l.s	3.70
9	3872	!Transportation charges	l.s	2.60
10	2356	!Usage of Soft water	l.s	3.70
11	3110	!Usage of soft soap	l.s	3.70
12	2829	!Water for compaction	l.s	3.70
13	5929	½ CPV FTA	each	17.00
14	5930	½ CPVE ELBOW BRASS	each	36.00
15	4994	100 ID BEND - DWC HDPE 100mm dia Pipes	each	100.00
16	4975	100 ID Coupler - DWC HDPE 100mm dia Pipes	each	55.00
17	4987	100 ID TEE - DWC HDPE 100mm dia Pipes	each	575.00
18	4986	1000 ID Coupler - DWC HDPE 1000mm dia Pipes	each	1335.00
19	4621	100mm Diameter 11.25* Bends	each	949.00
20	4622	100mm Diameter 22.50* Bends	each	1017.00
21	4623	100mm Diameter 45* Bends	each	1434.00
22	4624	100mm Diameter 90* Bends	each	1262.00
23	5181	100mm rock drill bit	each	318.00
24	5850	110 mm dia PVC BEND	each	135.00
25	4995	135 ID BEND - DWC HDPE 135mm dia Pipes	each	140.00
26	4976	135 ID Coupler - DWC HDPE 135mm dia Pipes	each	92.00
27	4988	135 ID TEE - DWC HDPE 135mm dia Pipes	each	621.00
28	4996	150 ID BEND - DWC HDPE 150mm dia Pipes	each	182.00
29	4977	150 ID Coupler - DWC HDPE 150mm dia Pipes	each	107.00
30	4989	150 ID TEE - DWC HDPE 150mm dia Pipes	each	667.00
31	4625	150mm Diameter 11.25* Bends	each	1492.00
32	4627	150mm Diameter 45* Bends	each	1723.00
33	4628	150mm Diameter 90* Bends	each	2185.00
34	4997	170 ID BEND - DWC HDPE 170mm dia Pipes	each	268.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
35	4978	170 ID Coupler - DWC HDPE 170mm dia Pipes	each	121.00
36	4990	170 ID TEE - DWC HDPE 170mm dia Pipes	each	734.00
37	5886	175mm Nominal bore MS casing Pipe	m	1650.00
38	4951	19mm dia. Thermoplastic sewer hose	m	1100.00
39	5875	20 W 40	l	165.00
40	4998	200 ID BEND - DWC HDPE 200mm dia Pipes	each	425.00
41	4979	200 ID Coupler - DWC HDPE 200mm dia Pipes	each	237.00
42	4991	200 ID TEE - DWC HDPE 200mm dia Pipes	each	1002.00
43	4629	200mm Diameter 11.25* Bends	each	2245.00
44	4630	200mm Diameter 22.50* Bends	each	2359.00
45	4631	200mm Diameter 45* Bends	each	2898.00
46	4632	200mm Diameter 90* Bends	each	3730.00
47	4999	250 ID BEND - DWC HDPE 250mm dia Pipes	each	707.00
48	4980	250 ID Coupler - DWC HDPE 250mm dia Pipes	each	335.00
49	4992	250 ID TEE - DWC HDPE 250mm dia Pipes	each	1388.00
50	4633	250mm Diameter 11.25* Bends	each	2942.00
51	4634	250mm Diameter 22.50* Bends	each	3211.00
52	4635	250mm Diameter 45* Bends	each	3964.00
53	4636	250mm Diameter 90* Bends	each	5186.00
54	4950	25mm dia. Thermoplastic sewer hose	m	1300.00
55	4834	25mm Normal gauge polythene bore pipes	m	46.00
56	5927	3'' M.S. FLANGE	each	171.00
57	5000	300 ID BEND - DWC HDPE 300mm dia Pipes	each	1000.00
58	4981	300 ID Coupler - DWC HDPE 300mm dia Pipes	each	390.00
59	4993	300 ID TEE - DWC HDPE 300mm dia Pipes	each	1500.00
60	4637	300mm Diameter 11.25* Bends	each	4121.00
61	4638	300mm Diameter 22.50* Bends	each	4916.00
62	4639	300mm Diameter 45* Bends	each	6025.00
63	4640	300mm Diameter 90* Bends	each	7792.00
64	4835	32mm Normal gauge polythene bore pipes	m	61.00
65	4641	350mm Diameter 11.25* Bends	each	5419.00
66	4643	350mm Diameter 22.50* Bends	each	6389.00
67	4642	350mm Diameter 45* Bends	each	8128.00
68	4644	350mm Diameter 90* Bends	each	11550.00
69	4982	400 ID Coupler - DWC HDPE 400mm dia Pipes	each	482.00
70	4645	400mm Diameter 11.25* Bends	each	7777.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
71	4646	400mm Diameter 22.50* Bends	each	8909.00
72	4647	400mm Diameter 45* Bends	each	11270.00
73	4648	400mm Diameter 90* Bends	each	15780.00
74	4836	40mm Normal gauge polythene bore pipes	m	75.00
75	4649	450mm Diameter 11.25* Bends	each	9724.00
76	4650	450mm Diameter 22.50* Bends	each	11092.00
77	4651	450mm Diameter 45* Bends	each	14571.00
78	4652	450mm Diameter 90* Bends	each	19998.00
79	4983	500 ID Coupler - DWC HDPE 500mm dia Pipes	each	575.00
80	4653	500mm Diameter 11.25* Bends	each	11767.00
81	4654	500mm Diameter 22.50* Bends	each	14288.00
82	4655	500mm Diameter 45* Bends	each	19565.00
83	4656	500mm Diameter 90* Bends	each	27180.00
84	4837	50mm Normal gauge polythene bore pipes	m	119.00
85	4984	600 ID Coupler - DWC HDPE 600mm dia Pipes	each	665.00
86	4657	600mm Diameter 11.25* Bends	each	17466.00
87	4658	600mm Diameter 22.50* Bends	each	22113.00
88	4659	600mm Diameter 45* Bends	each	28988.00
89	4660	600mm Diameter 90* Bends	each	42280.00
90	5914	63 MM ELECTRO FUSION COUPLER	each	120.00
91	5931	63 MM COMPRESSION MTA	each	171.00
92	5813	63 mm dia HDPE End Cap with Pipe of 0.2 m length	each	81.00
93	5920	63 MM ELECTRO FUSION ELBOW	each	211.00
94	5917	63 MM ELECTRO FUSION TEE	each	210.00
95	5915	75 MM ELECTRO FUSION COUPLER	each	153.00
96	5932	75 MM COMPRESSION MTA	each	308.00
97	5921	75 MM ELECTRO FUSION ELBOW	each	246.00
98	5918	75 MM ELECTRO FUSION TEE	each	306.00
99	5925	75 X63 MM ELECTRO FUSION REDUCER	each	240.00
100	5926	80 MM STAINER	each	1849.00
101	4985	800 ID Coupler - DWC HDPE 800mm dia Pipes	each	1000.00
102	5879	85 W 140	l	87.00
103	5916	90 MM ELECTRO FUSION COUPLER	each	197.00
104	5933	90 MM COMPRESSION MTA	each	342.00
105	5922	90 MM ELECTRO FUSION ELBOW	each	387.00
106	5919	90 MM ELECTRO FUSION TEE	each	451.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
107	5928	90 MN HDPE LNC	each	103.00
108	5924	90 X63 MM ELECTRO FUSION REDUCER	each	377.00
109	5923	90 X75 MM ELECTRO FUSION REDUCER	each	430.00
110	4772	All D.I. Flanged Socketed 100.00 mm	each	1072.00
111	4773	All D.I. Flanged Socketed 150.00 mm	each	1736.00
112	4774	All D.I. Flanged Socketed 200.00 mm	each	2344.00
113	4775	All D.I. Flanged Socketed 250.00 mm	each	3458.00
114	4776	All D.I. Flanged Socketed 300.00 mm	each	4292.00
115	4777	All D.I. Flanged Socketed 350.00 mm	each	6170.00
116	4778	All D.I. Flanged Socketed 400.00 mm	each	7487.00
117	4779	All D.I. Flanged Socketed 450.00 mm	each	9136.00
118	4780	All D.I. Flanged Socketed 500.00 mm	each	11627.00
119	4781	All D.I. Flanged Socketed 600.00 mm	each	16988.00
120	4782	All D.I. Flanged Spigot 100.00 mm	each	1208.00
121	4783	All D.I. Flanged Spigot 150.00 mm	each	2016.00
122	4784	All D.I. Flanged Spigot 200.00 mm	each	2900.00
123	4785	All D.I. Flanged Spigot 250.00 mm	each	4089.00
124	4786	All D.I. Flanged Spigot 300.00 mm	each	5235.00
125	4787	All D.I. Flanged Spigot 350.00 mm	each	7758.00
126	4788	All D.I. Flanged Spigot 400.00 mm	each	9498.00
127	4789	All D.I. Flanged Spigot 450.00 mm	each	11745.00
128	4790	All D.I. Flanged Spigot 500.00 mm	each	14863.00
129	4791	All D.I. Flanged Spigot 600.00 mm	each	20953.00
130	4661	All Socketed D.I. Equal Tees 100 X 100 X 100	each	1736.00
131	4662	All Socketed D.I. Equal Tees 150 X 150 X 150	each	2741.00
132	4663	All Socketed D.I. Equal Tees 200 X 200 X 200	each	4462.00
133	4664	All Socketed D.I. Equal Tees 250 X 250 X 250	each	4730.00
134	4665	All Socketed D.I. Equal Tees 300 X 300 X 300	each	9604.00
135	4668	All Socketed D.I. Equal Tees 450 X 450 X 450	each	21975.00
136	4669	All Socketed D.I. Equal Tees 500 X 500 X 500	each	28132.00
137	4670	All Socketed D.I. Equal Tees 600 X 600 X 600	each	40190.00
138	4730	All Socketed D.I. Reducers / Tapers 100 X 80	each	936.00
139	4732	All Socketed D.I. Reducers / Tapers 150 X 100	each	1645.00
140	4731	All Socketed D.I. Reducers / Tapers 150 X 80	each	1540.00
141	4733	All Socketed D.I. Reducers / Tapers 200 X 100	each	2373.00
142	4734	All Socketed D.I. Reducers / Tapers 200 X 150	each	2259.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
143	4735	All Socketed D.I. Reducers / Tapers 250 X 100	each	3254.00
144	4736	All Socketed D.I. Reducers / Tapers 250 X 150	each	3325.00
145	4737	All Socketed D.I. Reducers / Tapers 250 X 200	each	3026.00
146	4738	All Socketed D.I. Reducers / Tapers 300 X 100	each	4802.00
147	4739	All Socketed D.I. Reducers / Tapers 300 X 150	each	4802.00
148	4740	All Socketed D.I. Reducers / Tapers 300 X 200	each	4681.00
149	4741	All Socketed D.I. Reducers / Tapers 300 X 250	each	4409.00
150	4742	All Socketed D.I. Reducers / Tapers 350 X 150	each	6775.00
151	4743	All Socketed D.I. Reducers / Tapers 350 X 200	each	6304.00
152	4744	All Socketed D.I. Reducers / Tapers 350 X 250	each	5888.00
153	4745	All Socketed D.I. Reducers / Tapers 350 X 300	each	5573.00
154	4746	All Socketed D.I. Reducers / Tapers 400 X 150	each	6230.00
155	4747	All Socketed D.I. Reducers / Tapers 400 X 200	each	9233.00
156	4748	All Socketed D.I. Reducers / Tapers 400 X 250	each	8607.00
157	4749	All Socketed D.I. Reducers / Tapers 400 X 300	each	7627.00
158	4750	All Socketed D.I. Reducers / Tapers 400 X 350	each	7066.00
159	4751	All Socketed D.I. Reducers / Tapers 450 X 250	each	10344.00
160	4752	All Socketed D.I. Reducers / Tapers 450 X 300	each	10586.00
161	4753	All Socketed D.I. Reducers / Tapers 450 X 350	each	9740.00
162	4754	All Socketed D.I. Reducers / Tapers 450 X 400	each	8909.00
163	4755	All Socketed D.I. Reducers / Tapers 500 X 100	each	7425.00
164	4757	All Socketed D.I. Reducers / Tapers 500 X 150	each	7435.00
165	4758	All Socketed D.I. Reducers / Tapers 500 X 200	each	7910.00
166	4759	All Socketed D.I. Reducers / Tapers 500 X 250	each	14194.00
167	4760	All Socketed D.I. Reducers / Tapers 500 X 300	each	14194.00
168	4761	All Socketed D.I. Reducers / Tapers 500 X 350	each	13234.00
169	4762	All Socketed D.I. Reducers / Tapers 500 X 400	each	12729.00
170	4763	All Socketed D.I. Reducers / Tapers 500 X 450	each	11156.00
171	4764	All Socketed D.I. Reducers / Tapers 600 X 150	each	8630.00
172	4765	All Socketed D.I. Reducers / Tapers 600 X 200	each	9180.00
173	4766	All Socketed D.I. Reducers / Tapers 600 X 250	each	9765.00
174	4767	All Socketed D.I. Reducers / Tapers 600 X 300	each	10390.00
175	4768	All Socketed D.I. Reducers / Tapers 600 X 350	each	20838.00
176	4769	All Socketed D.I. Reducers / Tapers 600 X 400	each	20385.00
177	4770	All Socketed D.I. Reducers / Tapers 600 X 450	each	19316.00
178	4771	All Socketed D.I. Reducers / Tapers 600 X 500	each	17614.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
179	4680	All Socketed D.I. Un-Equal Tees 100 X 80	each	1676.00
180	4682	All Socketed D.I. Un-Equal Tees 150 X 100	each	2374.00
181	4681	All Socketed D.I. Un-Equal Tees 150 X 80	each	2446.00
182	4684	All Socketed D.I. Un-Equal Tees 200 X 100	each	3381.00
183	4729	All Socketed D.I. Un-Equal Tees 200 X 150	each	3880.00
184	4683	All Socketed D.I. Un-Equal Tees 200 X 80	each	3337.00
185	4686	All Socketed D.I. Un-Equal Tees 250 X 100	each	4347.00
186	4687	All Socketed D.I. Un-Equal Tees 250 X 150	each	5172.00
187	4688	All Socketed D.I. Un-Equal Tees 250 X 200	each	5542.00
188	4685	All Socketed D.I. Un-Equal Tees 250 X 80	each	4376.00
189	4689	All Socketed D.I. Un-Equal Tees 300 X 100	each	4775.00
190	4690	All Socketed D.I. Un-Equal Tees 300 X 150	each	7006.00
191	4691	All Socketed D.I. Un-Equal Tees 300 X 200	each	7573.00
192	4692	All Socketed D.I. Un-Equal Tees 300 X 250	each	8397.00
193	4693	All Socketed D.I. Un-Equal Tees 350 X 100	each	6944.00
194	4694	All Socketed D.I. Un-Equal Tees 350 X 150	each	8148.00
195	4695	All Socketed D.I. Un-Equal Tees 350 X 200	each	9528.00
196	4696	All Socketed D.I. Un-Equal Tees 350 X 250	each	11225.00
197	4697	All Socketed D.I. Un-Equal Tees 350 X 300	each	13666.00
198	4699	All Socketed D.I. Un-Equal Tees 400 X 100	each	9471.00
199	4700	All Socketed D.I. Un-Equal Tees 400 X 150	each	10364.00
200	4701	All Socketed D.I. Un-Equal Tees 400 X 200	each	11791.00
201	4702	All Socketed D.I. Un-Equal Tees 400 X 250	each	12653.00
202	4703	All Socketed D.I. Un-Equal Tees 400 X 300	each	14066.00
203	4704	All Socketed D.I. Un-Equal Tees 400 X 350	each	18586.00
204	4698	All Socketed D.I. Un-Equal Tees 400 X 80	each	9337.00
205	4705	All Socketed D.I. Un-Equal Tees 450 X 100	each	11241.00
206	4706	All Socketed D.I. Un-Equal Tees 450 X 150	each	12950.00
207	4707	All Socketed D.I. Un-Equal Tees 450 X 200	each	14229.00
208	4708	All Socketed D.I. Un-Equal Tees 450 X 250	each	16082.00
209	4709	All Socketed D.I. Un-Equal Tees 450 X 300	each	16801.00
210	4710	All Socketed D.I. Un-Equal Tees 450 X 350	each	20308.00
211	4711	All Socketed D.I. Un-Equal Tees 450 X 400	each	22273.00
212	4712	All Socketed D.I. Un-Equal Tees 500 X 100	each	13846.00
213	4713	All Socketed D.I. Un-Equal Tees 500 X 150	each	15220.00
214	4714	All Socketed D.I. Un-Equal Tees 500 X 200	each	17390.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
215	4715	All Socketed D.I. Un-Equal Tees 500 X 250	each	18995.00
216	4716	All Socketed D.I. Un-Equal Tees 500 X 300	each	21669.00
217	4717	All Socketed D.I. Un-Equal Tees 500 X 350	each	22158.00
218	4718	All Socketed D.I. Un-Equal Tees 500 X 400	each	23075.00
219	4720	All Socketed D.I. Un-Equal Tees 600 X 100	each	19713.00
220	4721	All Socketed D.I. Un-Equal Tees 600 X 150	each	21394.00
221	4722	All Socketed D.I. Un-Equal Tees 600 X 200	each	22386.00
222	4723	All Socketed D.I. Un-Equal Tees 600 X 250	each	23457.00
223	4724	All Socketed D.I. Un-Equal Tees 600 X 300	each	25703.00
224	4725	All Socketed D.I. Un-Equal Tees 600 X 350	each	27782.00
225	4726	All Socketed D.I. Un-Equal Tees 600 X 400	each	30869.00
226	4727	All Socketed D.I. Un-Equal Tees 600 X 450	each	32886.00
227	4728	All Socketed D.I. Un-Equal Tees 600 X 500	each	33848.00
228	5143	Base rate for repair of submergible pumps	each	9.00
229	5582	Battery (charging cost for terrameter)	day	41.00
230	5882	Battery charging cost for terrameter	day	41.00
231	4045	Butterfly 2 flange Valve+TP+B&N PN 10.0,1000mm	each	280850.00
232	4618	Butterfly 2 flange Valve+TP+B&N PN 10.0,1100mm	each	490600.00
233	4047	Butterfly 2 flange Valve+TP+B&N PN 10.0,1200mm	each	488670.00
234	4041	Butterfly 2 flange Valve+TP+B&N PN 10.0,700mm	each	126572.00
235	4617	Butterfly 2 flange Valve+TP+B&N PN 10.0,750mm	each	164660.00
236	4043	Butterfly 2 flange Valve+TP+B&N PN 10.0,800mm	each	182310.00
237	4044	Butterfly 2 flange Valve+TP+B&N PN 10.0,900mm	each	215675.00
238	4054	Butterfly 2 flange Valve+TP+B&N PN 16,1000mm	each	338390.00
239	4620	Butterfly 2 flange Valve+TP+B&N PN 16,1100mm	each	478310.00
240	4056	Butterfly 2 flange Valve+TP+B&N PN 16,1200mm	each	555730.00
241	4050	Butterfly 2 flange Valve+TP+B&N PN 16,700mm	each	138170.00
242	4619	Butterfly 2 flange Valve+TP+B&N PN 16,750mm	each	181220.00
243	4052	Butterfly 2 flange Valve+TP+B&N PN 16,800mm	each	200530.00
244	4053	Butterfly 2 flange Valve+TP+B&N PN 16,900mm	each	257070.00
245	4613	Butterfly Valve+TP+B&N - PN 1.0, 100mm	each	3900.00
246	4614	Butterfly Valve+TP+B&N - PN 1.0, 150mm	each	8450.00
247	3923	Butterfly Valve+TP+B&N - PN 1.0, 200mm	each	9300.00
248	3924	Butterfly Valve+TP+B&N - PN 1.0, 250mm	each	10230.00
249	3925	Butterfly Valve+TP+B&N - PN 1.0, 300mm	each	11250.00
250	4826	Butterfly Valve+TP+B&N - PN 1.0, 350mm	each	15440.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
251	3926	Butterfly Valve+TP+B&N - PN 1.0, 400mm	each	21871.00
252	3927	Butterfly Valve+TP+B&N - PN 1.0, 450mm	each	25930.00
253	3928	Butterfly Valve+TP+B&N - PN 1.0, 500mm	each	33476.00
254	3929	Butterfly Valve+TP+B&N - PN 1.0, 600mm	each	50870.00
255	4615	Butterfly Valve+TP+B&N - PN 1.6, 100mm	each	4030.00
256	4616	Butterfly Valve+TP+B&N - PN 1.6, 150mm	each	8450.00
257	3932	Butterfly Valve+TP+B&N - PN 1.6, 200mm	each	9720.00
258	3933	Butterfly Valve+TP+B&N - PN 1.6, 250mm	each	11180.00
259	3934	Butterfly Valve+TP+B&N - PN 1.6, 300mm	each	12857.00
260	4828	Butterfly Valve+TP+B&N - PN 1.6, 350mm	each	17100.00
261	3935	Butterfly Valve+TP+B&N - PN 1.6, 400mm	each	24355.00
262	3936	Butterfly Valve+TP+B&N - PN 1.6, 450mm	each	30896.00
263	3937	Butterfly Valve+TP+B&N - PN 1.6, 500mm	each	38445.00
264	3938	Butterfly Valve+TP+B&N - PN 1.6, 600mm	each	56200.00
265	5025	Calibration of flow meter sensors and testing	set	9000.00
266	5673	Cast steel DF Dual plate check valve;class 300- 300mm	each	26050.00
267	5669	Cast steel DF Dual plate check valve;class 300- 100mm	each	4100.00
268	5670	Cast steel DF Dual plate check valve;class 300- 150mm	each	7160.00
269	5671	Cast steel DF Dual plate check valve;class 300- 200mm	each	13710.00
270	5672	Cast steel DF Dual plate check valve;class 300- 250mm	each	19750.00
271	5675	Cast steel DF Dual plate check valve;class 300- 400mm	each	50320.00
272	5676	Cast steel DF Dual plate check valve;class 300- 450mm	each	60400.00
273	5677	Cast steel DF Dual plate check valve;class 300- 500mm	each	69750.00
274	5678	Cast steel DF Dual plate check valve;class 300- 600mm	each	79620.00
275	5679	Cast steel DF Dual plate check valve;class 300- 700mm	each	111700.00
276	5680	Cast steel DF Dual plate check valve;class 300- 750mm	each	123650.00
277	5681	Cast steel DF Dual plate check valve;class 300- 800mm	each	137280.00
278	5682	Cast steel DF Dual plate check valve;class 300- 900mm	each	190760.00
279	5683	Cast steel DF Dual plate check valve;class 300-1000mm	each	245060.00
280	5651	Cast steel DF Dual plate check valve;class150- 100mm	each	3735.00
281	5666	Cast steel DF Dual plate check valve;class150- 1100mm	each	667210.00
282	5667	Cast steel DF Dual plate check valve;class150- 1200mm	each	861850.00
283	5652	Cast steel DF Dual plate check valve;class150- 150mm	each	6505.00
284	5653	Cast steel DF Dual plate check valve;class150- 200mm	each	12465.00
285	5654	Cast steel DF Dual plate check valve;class150- 250mm	each	17950.00
286	5655	Cast steel DF Dual plate check valve;class150- 300mm	each	23671.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
287	5656	Cast steel DF Dual plate check valve;class150- 350mm	each	32320.00
288	5657	Cast steel DF Dual plate check valve;class150- 400mm	each	45750.00
289	5658	Cast steel DF Dual plate check valve;class150- 450mm	each	54910.00
290	5659	Cast steel DF Dual plate check valve;class150- 500mm	each	63400.00
291	5661	Cast steel DF Dual plate check valve;class150- 700mm	each	101550.00
292	5650	Cast steel DF Dual plate check valve;class150- 80mm	each	3230.00
293	5665	Cast steel DF Dual plate check valve;class150-1000mm	each	222780.00
294	5668	Cast steel DF Dual plate check valve;class300- 80mm	each	3550.00
295	5807	Caution/Warning Tape	m	6.50
296	4020	CI double flanged pipes 200mm dia	m	4554.00
297	4018	CI double flanged pipes 100mm dia.	m	2018.00
298	4019	CI double flanged pipes 150mm dia	m	3400.00
299	4021	CI double flanged pipes 250mm dia.	m	6161.00
300	4022	CI double flanged pipes 300mm dia.	m	7857.00
301	4023	CI double flanged pipes 350mm dia.	m	10625.00
302	4024	CI double flanged pipes 400mm dia.	m	12857.00
303	4025	CI double flanged pipes 450mm dia.	m	15536.00
304	4026	CI double flanged pipes 500mm dia.	m	18214.00
305	4027	CI double flanged pipes 600mm dia.	m	24375.00
306	4017	CI double flanged pipes 80mm dia.	m	1607.00
307	4601	Cleaning of Borewell HC for RIG	each	1750.00
308	5586	Compressor OilSS(68)	l	1032.00
309	3986	Cost of making MS specials	kg	30.00
310	5880	Cotton waste	kg	75.00
311	4832	Crystallline Mortor 4:5	m2	410.00
312	4831	Crystallline Slurry of Hydrophilic	m2	370.00
313	5122	Cut & Repair XLPE cable	job	9880.00
314	5847	Cutting asphalt road for pipe line (M 3799)	m^3	742.00
315	5848	Cutting CC road for pipe line (M 3870)	m^3	794.00
316	5846	Cutting macadam road for pipe line (M 3797)	m^3	678.00
317	6179	D.I Flanged Socket 1000mm dia	each	69158.00
318	6176	D.I Flanged Socket 700mm dia	each	27980.00
319	6177	D.I Flanged Socket 800mm dia	each	37335.00
320	6178	D.I Flanged Socket 900mm dia	each	46784.00
321	6183	D.I Flanged Spigot 1000mm dia	each	70470.00
322	6180	D.I Flanged Spigot 700mm dia	each	33640.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
323	6181	D.I Flanged Spigot 800mm dia	each	43645.00
324	6182	D.I Flanged Spigot 900mm dia	each	54898.00
325	6191	D.I MJ Collar 1000mm dia	each	107880.00
326	6188	D.I MJ Collar 700mm dia	each	31431.00
327	6189	D.I MJ Collar 800mm dia	each	39952.00
328	6190	D.I MJ Collar 900mm dia	each	66287.00
329	5170	DI Blank flange	each	15031.00
330	5184	DI collar flange PN-16	each	7355.00
331	5946	DI Dismantling Jt with ACC.DN080 PN16	each	2186.00
332	5947	DI Dismantling Jt with ACC.DN150 PN16	each	3865.00
333	5948	DI Dismantling Jt with ACC.DN200 PN16	each	5673.00
334	5949	DI Dismantling Jt with ACC.DN250 PN16	each	8172.00
335	5950	DI Dismantling Jt with ACC.DN300 PN16	each	10558.00
336	5951	DI Dismantling Jt with ACC.DN350 PN16	each	15059.00
337	5952	DI Dismantling Jt with ACC.DN400 PN16	each	17675.00
338	5953	DI Dismantling Jt with ACC.DN450 PN16	each	20469.00
339	5954	DI Dismantling Jt with ACC.DN500 PN16	each	28652.00
340	5955	DI Dismantling Jt with ACC.DN600 PN16	each	41812.00
341	5956	DI Dismantling Jt with ACC.DN700 PN16	each	54673.00
342	5957	DI Dismantling Jt with ACC.DN800 PN16	each	72583.00
343	5958	DI Dismantling Jt with ACC.DN900 PN16	each	100392.00
344	5703	DI Double Flanged Eccentric Butterfly Valve PN 10-1000mm	each	673188.00
345	5704	DI Double Flanged Eccentric Butterfly Valve PN 10-1200mm	each	1115521.00
346	5693	DI Double Flanged Eccentric Butterfly Valve PN 10-250mm	each	26875.00
347	5694	DI Double Flanged Eccentric Butterfly Valve PN 10-300mm	each	42415.00
348	5695	DI Double Flanged Eccentric Butterfly Valve PN 10-350mm	each	59538.00
349	5697	DI Double Flanged Eccentric Butterfly Valve PN 10-450mm	each	101512.00
350	5698	DI Double Flanged Eccentric Butterfly Valve PN 10-500mm	each	108975.00
351	5699	DI Double Flanged Eccentric Butterfly Valve PN 10-600mm	each	163305.00
352	5701	DI Double Flanged Eccentric Butterfly Valve PN 10-800mm	each	413295.00
353	5702	DI Double Flanged Eccentric Butterfly Valve PN 10-900mm	each	516022.00
354	5716	DI Double Flanged Eccentric Butterfly Valve PN 16-1000mm	each	673188.00
355	5717	DI Double Flanged Eccentric Butterfly Valve PN 16-1200mm	each	1115521.00
356	5706	DI Double Flanged Eccentric Butterfly Valve PN 16-250mm	each	26875.00
357	5707	DI Double Flanged Eccentric Butterfly Valve PN 16-300mm	each	42415.00
358	5708	DI Double Flanged Eccentric Butterfly Valve PN 16-350mm	each	59538.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
359	5710	DI Double Flanged Eccentric Butterfly Valve PN 16-450mm	each	101512.00
360	5711	DI Double Flanged Eccentric Butterfly Valve PN 16-500mm	each	108975.00
361	5712	DI Double Flanged Eccentric Butterfly Valve PN 16-600mm	each	163305.00
362	5714	DI Double Flanged Eccentric Butterfly Valve PN 16-800mm	each	413295.00
363	5715	DI Double Flanged Eccentric Butterfly Valve PN 16-900mm	each	516022.00
364	5725	DI Double Flanged Eccentric Butterfly Valve PN 25-1000mm	each	1641007.00
365	5726	DI Double Flanged Eccentric Butterfly Valve PN 25-1200mm	each	2067654.00
366	5718	DI Double Flanged Eccentric Butterfly Valve PN 25-400mm	each	207145.00
367	5720	DI Double Flanged Eccentric Butterfly Valve PN 25-500mm	each	350922.00
368	5721	DI Double Flanged Eccentric Butterfly Valve PN 25-600mm	each	407546.00
369	5722	DI Double Flanged Eccentric Butterfly Valve PN 25-700mm	each	775420.00
370	5723	DI Double Flanged Eccentric Butterfly Valve PN 25-800mm	each	800000.00
371	5724	DI Double Flanged Eccentric Butterfly Valve PN 25-900mm	each	1404174.00
372	5692	DI Double Flanged Eccentric Butterfly Valve PN10-200mm	each	22258.00
373	5696	DI Double Flanged Eccentric Butterfly Valve PN10-400mm	each	65467.00
374	5700	DI Double Flanged Eccentric Butterfly Valve PN10-700mm	each	284769.00
375	5705	DI Double Flanged Eccentric Butterfly Valve PN16-200mm	each	22258.00
376	5709	DI Double Flanged Eccentric Butterfly Valve PN16-400mm	each	65467.00
377	5713	DI Double Flanged Eccentric Butterfly Valve PN16-700mm	each	284769.00
378	5686	DI double flanged wafer type butterfly valves PN10-100mm	each	9270.00
379	5687	DI double flanged wafer type butterfly valves PN10-150mm	each	14459.00
380	5684	DI double flanged wafer type butterfly valves PN10-50mm	each	9208.00
381	5685	DI double flanged wafer type butterfly valves PN10-80mm	each	9554.00
382	5690	DI double flanged wafer type butterfly valves PN16-100mm	each	9270.00
383	5691	DI double flanged wafer type butterfly valves PN16-150mm	each	14639.00
384	5688	DI double flanged wafer type butterfly valves PN16-50mm	each	9208.00
385	5689	DI double flanged wafer type butterfly valves PN16-80mm	each	9554.00
386	5936	DI Double Socket Duck Foot Bend 100 X 90	each	2615.00
387	5937	DI Double Socket Duck Foot Bend 150 X 90	each	4406.00
388	5938	DI Double Socket Duck Foot Bend 200 X 90;	each	7469.00
389	5939	DI Double Socket Duck Foot Bend 250 X 90;	each	11754.00
390	5940	DI Double Socket Duck Foot Bend 300 X 90;	each	15638.00
391	5941	DI Double Socket Duck Foot Bend 350 X 90;	each	22059.00
392	5942	DI Double Socket Duck Foot Bend 400 X 90;	each	28002.00
393	5943	DI Double Socket Duck Foot Bend 450 X 90;	each	32669.00
394	5944	DI Double Socket Duck Foot Bend 500 X 90;	each	53850.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
395	5945	DI Double Socket Duck Foot Bend 700 X 90	each	138122.00
396	5935	DI Double Socket Duck Foot Bend 80 X 90	each	2019.00
397	5761	DI flanged pipes PN 10 -100mm	each	3670.00
398	5762	DI flanged pipes PN 10 -150mm	each	4960.00
399	5763	DI flanged pipes PN 10 -200mm	each	6590.00
400	5764	DI flanged pipes PN 10 -250mm	each	9340.00
401	5765	DI flanged pipes PN 10 -300mm	each	11730.00
402	5766	DI flanged pipes PN 10 -350mm	each	15600.00
403	5767	DI flanged pipes PN 10 -400mm	each	19600.00
404	5768	DI flanged pipes PN 10 -450mm	each	25320.00
405	5769	DI flanged pipes PN 16 -100mm	each	3780.00
406	5770	DI flanged pipes PN 16 -150mm	each	5100.00
407	5771	DI flanged pipes PN 16 -200mm	each	6790.00
408	5772	DI flanged pipes PN 16 -250mm	each	9620.00
409	5773	DI flanged pipes PN 16 -300mm	each	12080.00
410	5774	DI flanged pipes PN 16 -350mm	each	16070.00
411	5775	DI flanged pipes PN 16 -400mm	each	20190.00
412	5776	DI flanged pipes PN 16 -450mm	each	26080.00
413	3976	DI MJ specials - bend 100mm x 45 degree	each	800.00
414	3975	DI MJ specials - bend 100mm x 90 degree	each	825.00
415	3977	DI MJ specials - bend 150mm x 90 degree	each	1780.00
416	3972	DI MJ specials - branch 100 x 100mm	each	1250.00
417	3974	DI MJ specials - branch 150 x 100mm	each	1780.00
418	3973	DI MJ specials - branch 150 x 150mm	each	2080.00
419	3978	DI MJ specials - collar 100 mm dia.	each	1750.00
420	3979	DI MJ specials - collar 150 mm dia.	each	3300.00
421	3911	DI Sluice Valve+TP+B&N+R insert PN 1.6, 300mm	each	48934.00
422	5222	DI Sluice Valve+TP+B&N+R insert PN 10.0, 300mm	each	41905.00
423	5615	DI Sluice Valve+TP+B&N+R insert PN 25, 300mm	each	126197.00
424	3907	DI Sluice Valve+TP+B&N+R insert PN 1.6, 100mm	each	8385.00
425	3908	DI Sluice Valve+TP+B&N+R insert PN 1.6, 150mm	each	14389.00
426	3909	DI Sluice Valve+TP+B&N+R insert PN 1.6, 200mm	each	22506.00
427	3910	DI Sluice Valve+TP+B&N+R insert PN 1.6, 250mm	each	35068.00
428	3912	DI Sluice Valve+TP+B&N+R insert PN 1.6, 400mm	each	115989.00
429	3913	DI Sluice Valve+TP+B&N+R insert PN 1.6, 450mm	each	154799.00
430	4823	DI Sluice Valve+TP+B&N+R insert PN 1.6, 600mm	each	310794.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
431	5218	DI Sluice Valve+TP+B&N+R insert PN 10.0, 100mm	each	7293.00
432	5219	DI Sluice Valve+TP+B&N+R insert PN 10.0, 150mm	each	11847.00
433	5220	DI Sluice Valve+TP+B&N+R insert PN 10.0, 200mm	each	19500.00
434	5221	DI Sluice Valve+TP+B&N+R insert PN 10.0, 250mm	each	31431.00
435	5604	DI Sluice Valve+TP+B&N+R insert PN 10.0, 350mm	each	64765.00
436	5223	DI Sluice Valve+TP+B&N+R insert PN 10.0, 400mm	each	87087.00
437	5224	DI Sluice Valve+TP+B&N+R insert PN 10.0, 450mm	each	107579.00
438	5606	DI Sluice Valve+TP+B&N+R insert PN 10.0, 500mm	each	141556.00
439	5217	DI Sluice Valve+TP+B&N+R insert PN 10.0, 50mm	each	3647.00
440	5225	DI Sluice Valve+TP+B&N+R insert PN 10.0, 600mm	each	203861.00
441	5216	DI Sluice Valve+TP+B&N+R insert PN 10.0, 80mm	each	6619.00
442	5605	DI Sluice Valve+TP+B&N+R insert PN 16, 350mm	each	90920.00
443	5607	DI Sluice Valve+TP+B&N+R insert PN 16, 500mm	each	206369.00
444	5215	DI Sluice Valve+TP+B&N+R insert PN 16, 50mm	each	4615.00
445	5214	DI Sluice Valve+TP+B&N+R insert PN 16, 80mm	each	6619.00
446	5611	DI Sluice Valve+TP+B&N+R insert PN 25, 100mm	each	31014.00
447	5612	DI Sluice Valve+TP+B&N+R insert PN 25, 150mm	each	39941.00
448	5613	DI Sluice Valve+TP+B&N+R insert PN 25, 200mm	each	60449.00
449	5614	DI Sluice Valve+TP+B&N+R insert PN 25, 250mm	each	92583.00
450	5616	DI Sluice Valve+TP+B&N+R insert PN 25, 400mm	each	332777.00
451	5618	DI Sluice Valve+TP+B&N+R insert PN 25, 500mm	each	520000.00
452	5609	DI Sluice Valve+TP+B&N+R insert PN 25, 50mm	each	15898.00
453	5610	DI Sluice Valve+TP+B&N+R insert PN 25, 80mm	each	17343.00
454	5872	DI specials 100mm to 600mm dia	kg	145.00
455	4007	DI/CI Puddle Flange 100mm dia.	each	1257.00
456	4008	DI/CI Puddle Flange 150mm dia.	each	1690.00
457	4009	DI/CI Puddle Flange 200mm dia.	each	2238.00
458	4010	DI/CI Puddle Flange 250mm dia.	each	3293.00
459	4011	DI/CI Puddle Flange 300mm dia.	each	4198.00
460	4012	DI/CI Puddle Flange 350mm dia.	each	5632.00
461	4013	DI/CI Puddle Flange 400mm dia.	each	7245.00
462	4016	DI/CI Puddle Flange 450mm dia.	each	8782.00
463	4014	DI/CI Puddle Flange 500mm dia.	each	12302.00
464	4015	DI/CI Puddle Flange 600mm dia.	each	16963.00
465	4006	DI/CI Puddle Flange 80mm dia.	each	1017.00
466	4972	Diamond ROPE	each	2500.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
467	5808	Disc Type Active Electronic Marker	each	1720.00
468	5809	Disc Type Passive Electronic Marker	each	940.00
469	5008	Dismantle, transport, re-instal and commission the bulk flow meters	l.s	31500.00
470	5972	Double Chambered Restrained Joint DI Pipe K9 1000mm dia	each	28608.00
471	5973	Double Chambered Restrained Joint DI Pipe K9 1100mm dia	each	33191.00
472	5974	Double Chambered Restrained Joint DI Pipe K9 1200mm dia	each	38447.00
473	5975	Double Chambered Restrained Joint DI Pipe K9 150mm dia	each	2322.00
474	5960	Double Chambered Restrained Joint DI Pipe K9 200mm dia	each	2903.00
475	5961	Double Chambered Restrained Joint DI Pipe K9 250mm dia	each	3897.00
476	5962	Double Chambered Restrained Joint DI Pipe K9 300mm dia	each	4941.00
477	5963	Double Chambered Restrained Joint DI Pipe K9 350mm dia	each	6053.00
478	5964	Double Chambered Restrained Joint DI Pipe K9 400mm dia	each	7400.00
479	5965	Double Chambered Restrained Joint DI Pipe K9 450mm dia	each	8823.00
480	5966	Double Chambered Restrained Joint DI Pipe K9 500mm dia	each	10319.00
481	5967	Double Chambered Restrained Joint DI Pipe K9 600mm dia	each	13531.00
482	5968	Double Chambered Restrained Joint DI Pipe K9 700mm dia	each	15819.00
483	5969	Double Chambered Restrained Joint DI Pipe K9 750mm dia	each	17583.00
484	5970	Double Chambered Restrained Joint DI Pipe K9 800mm dia	each	19428.00
485	5971	Double Chambered Restrained Joint DI Pipe K9 900mm dia	each	23681.00
486	5959	Double Chambered Restrained Joint DI Pipe K9100mm dia	each	1683.00
487	5980	DOUBLE SOCKET BEND 100 X 11.25	each	2136.00
488	5981	DOUBLE SOCKET BEND 100 X 22.5	each	2288.00
489	5982	DOUBLE SOCKET BEND 100 X 90	each	2839.00
490	5983	DOUBLE SOCKET BEND 125 X 11.25	each	2624.00
491	5984	DOUBLE SOCKET BEND 125 X 22.5	each	2776.00
492	5985	DOUBLE SOCKET BEND 125 X 45	each	3051.00
493	5986	DOUBLE SOCKET BEND 125 X 90	each	3510.00
494	5987	DOUBLE SOCKET BEND 150 X 11.25	each	3356.00
495	5988	DOUBLE SOCKET BEND 150 X 22.5	each	3449.00
496	5989	DOUBLE SOCKET BEND 150 X 33	each	3968.00
497	5990	DOUBLE SOCKET BEND 150 X 45	each	3876.00
498	5991	DOUBLE SOCKET BEND 150 X 90	each	4916.00
499	5993	DOUBLE SOCKET BEND 200 X 22.5	each	5308.00
500	5994	DOUBLE SOCKET BEND 200 X 45	each	6521.00
501	5995	DOUBLE SOCKET BEND 200 X 90	each	9017.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
502	5996	DOUBLE SOCKET BEND 250 X 11.25	each	6619.00
503	5997	DOUBLE SOCKET BEND 250 X 22.5	each	7225.00
504	5998	DOUBLE SOCKET BEND 250 X 45	each	8920.00
505	5999	DOUBLE SOCKET BEND 250 X 90	each	11669.00
506	6000	DOUBLE SOCKET BEND 300 X 11.25	each	9273.00
507	6001	DOUBLE SOCKET BEND 300 X 22.5	each	11061.00
508	6002	DOUBLE SOCKET BEND 300 X 45	each	13555.00
509	6003	DOUBLE SOCKET BEND 300 X 90	each	19118.00
510	6004	DOUBLE SOCKET BEND 350 X 11.25	each	12192.00
511	6005	DOUBLE SOCKET BEND 350 X 22.5	each	14375.00
512	6006	DOUBLE SOCKET BEND 350 X 45	each	18288.00
513	6007	DOUBLE SOCKET BEND 350 X 90	each	25987.00
514	6008	DOUBLE SOCKET BEND 400 X 11.5	each	17531.00
515	6009	DOUBLE SOCKET BEND 400 X 22.5	each	20166.00
516	6011	DOUBLE SOCKET BEND 400 X 45	each	25358.00
517	6012	DOUBLE SOCKET BEND 400 X 90	each	36631.00
518	6013	DOUBLE SOCKET BEND 450 X 11.25	each	21879.00
519	6014	DOUBLE SOCKET BEND 450 X 22.5	each	24958.00
520	6015	DOUBLE SOCKET BEND 450 X 45	each	32786.00
521	6016	DOUBLE SOCKET BEND 450 X 90	each	44997.00
522	6017	DOUBLE SOCKET BEND 500 X 11.25	each	26475.00
523	6018	DOUBLE SOCKET BEND 500 X 22.5	each	32148.00
524	6019	DOUBLE SOCKET BEND 500 X 45	each	44697.00
525	6041	DOUBLE SOCKET BEND 500 X 90	each	66394.00
526	6020	DOUBLE SOCKET BEND 600 X 11.25	each	39299.00
527	6021	DOUBLE SOCKET BEND 600 X 22.5	each	49753.00
528	6022	DOUBLE SOCKET BEND 600 X 45	each	65224.00
529	6023	DOUBLE SOCKET BEND 600 X 90	each	98954.00
530	6024	DOUBLE SOCKET BEND 700 X 11.25	each	64184.00
531	6025	DOUBLE SOCKET BEND 700 X 22.5	each	79944.00
532	6026	DOUBLE SOCKET BEND 700 X 45	each	101851.00
533	6027	DOUBLE SOCKET BEND 700 X 90	each	157195.00
534	6028	DOUBLE SOCKET BEND 750 X 11.25	each	86665.00
535	6029	DOUBLE SOCKET BEND 750 X 22.5	each	105609.00
536	6030	DOUBLE SOCKET BEND 750 X 45	each	137050.00
537	6031	DOUBLE SOCKET BEND 750 X90	each	221055.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
538	5976	DOUBLE SOCKET BEND 80 X 11.25	each	1800.00
539	5977	DOUBLE SOCKET BEND 80 X 22.5	each	1678.00
540	5979	DOUBLE SOCKET BEND 80 X 90	each	2136.00
541	6032	DOUBLE SOCKET BEND 800 X 11.25	each	95130.00
542	6033	DOUBLE SOCKET BEND 800 X 22.5	each	114480.00
543	6034	DOUBLE SOCKET BEND 800 X 45	each	118913.00
544	6035	DOUBLE SOCKET BEND 800 X 90	each	221297.00
545	6036	DOUBLE SOCKET BEND 900 X 11.25	each	134826.00
546	6037	DOUBLE SOCKET BEND 900 X 22.5	each	152287.00
547	6038	DOUBLE SOCKET BEND 900 X 45	each	203497.00
548	6039	DOUBLE SOCKET BEND 900 X 90	each	316131.00
549	5992	DOUBLE SOCKET BEND200 X11.25	each	5051.00
550	6041	Double Socket Duck Foot Bend 600 X 90	each	120309.00
551	4671	Double Socketed with flanged Branch D.I. Un-Equal Tees 150 X 150 X 100	each	1895.00
552	4672	Double Socketed with flanged Branch D.I. Un-Equal Tees 200 X 200 X 100	each	2665.00
553	4673	Double Socketed with flanged Branch D.I. Un-Equal Tees 250 X 250 X 100	each	3480.00
554	4674	Double Socketed with flanged Branch D.I. Un-Equal Tees 300 X 300 X 100	each	4535.00
555	4676	Double Socketed with flanged Branch D.I. Un-Equal Tees 350 X 350 X 100	each	7480.00
556	4675	Double Socketed with flanged Branch D.I. Un-Equal Tees 400 X 400 X 100	each	6555.00
557	4677	Double Socketed with flanged Branch D.I. Un-Equal Tees 450 X 450 X 100	each	9615.00
558	4678	Double Socketed with flanged Branch D.I. Un-Equal Tees 500 X 500 X 100	each	12050.00
559	4679	Double Socketed with flanged Branch D.I. Un-Equal Tees 600 X 600 X 150	each	14810.00
560	5729	Ductile iron double flanged swing check vavles PN-10 100 mm	each	14338.00
561	5739	Ductile iron double flanged swing check vavles PN-10 1000 mm	each	2136004.00
562	5730	Ductile iron double flanged swing check vavles PN-10 150 mm	each	25799.00
563	5731	Ductile iron double flanged swing check vavles PN-10 200 mm	each	47437.00
564	5732	Ductile iron double flanged swing check vavles PN-10 250 mm	each	73318.00
565	5757	Ductile iron double flanged swing check vavles PN-10 300 mm	each	104426.00
566	5758	Ductile iron double flanged swing check vavles PN-10 350 mm	each	328477.00
567	5733	Ductile iron double flanged swing check vavles PN-10 400 mm	each	353167.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
568	5734	Ductile iron double flanged swing check vavles PN-10 450 mm	each	407805.00
569	5727	Ductile iron double flanged swing check vavles PN-10 50 mm	each	10131.00
570	5735	Ductile iron double flanged swing check vavles PN-10 500 mm	each	410169.00
571	5736	Ductile iron double flanged swing check vavles PN-10 600 mm	each	558393.00
572	5756	Ductile iron double flanged swing check vavles PN-10 700 mm	each	1307579.00
573	5728	Ductile iron double flanged swing check vavles PN-10 80 mm	each	12154.00
574	5737	Ductile iron double flanged swing check vavles PN-10 800 mm	each	1533130.00
575	5738	Ductile iron double flanged swing check vavles PN-10 900 mm	each	1745807.00
576	5743	Ductile iron double flanged swing check vavles PN-16 100 mm	each	14338.00
577	5755	Ductile iron double flanged swing check vavles PN-16 1000 mm	each	2163122.00
578	5744	Ductile iron double flanged swing check vavles PN-16 150 mm	each	25799.00
579	5745	Ductile iron double flanged swing check vavles PN-16 200 mm	each	47437.00
580	5746	Ductile iron double flanged swing check vavles PN-16 250 mm	each	73318.00
581	5759	Ductile iron double flanged swing check vavles PN-16 300 mm	each	104426.00
582	5760	Ductile iron double flanged swing check vavles PN-16 350 mm	each	328477.00
583	5747	Ductile iron double flanged swing check vavles PN-16 400 mm	each	353167.00
584	5748	Ductile iron double flanged swing check vavles PN-16 450 mm	each	521822.00
585	5741	Ductile iron double flanged swing check vavles PN-16 50 mm	each	10131.00
586	5749	Ductile iron double flanged swing check vavles PN-16 500 mm	each	452899.00
587	5750	Ductile iron double flanged swing check vavles PN-16 600 mm	each	567704.00
588	5751	Ductile iron double flanged swing check vavles PN-16 700 mm	each	1307597.00
589	5742	Ductile iron double flanged swing check vavles PN-16 80 mm	each	12154.00
590	5752	Ductile iron double flanged swing check vavles PN-16 800 mm	each	1591599.00
591	5754	Ductile iron double flanged swing check vavles PN-16 900 mm	each	1833100.00
592	4958	Ductile Iron Pipe Class K-7 1000mm dia.,	m	17855.00
593	2614	Ductile Iron Pipe Class K-7 100mm dia.	m	915.00
594	5063	Ductile Iron Pipe Class K-7 1100mm dia.,	m	26086.00
595	5154	Ductile Iron Pipe Class K-7 1200mm dia.	m	30217.00
596	2615	Ductile Iron Pipe Class K-7 150mm dia.,	m	1305.00
597	2616	Ductile Iron Pipe Class K-7 200mm dia.,	m	1595.00
598	2617	Ductile Iron Pipe Class K-7 250mm dia.,	m	2089.00
599	2618	Ductile Iron Pipe Class K-7 300mm dia.,	m	2633.00
600	2619	Ductile Iron Pipe Class K-7 350mm dia.,	m	3139.00
601	2620	Ductile Iron Pipe Class K-7 400mm dia.,	m	3852.00
602	2621	Ductile Iron Pipe Class K-7 450mm dia.,	m	4535.00
603	2622	Ductile Iron Pipe Class K-7 500mm dia.,	m	5399.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
604	2623	Ductile Iron Pipe Class K-7 600mm dia.,	m	7078.00
605	2624	Ductile Iron Pipe Class K-7 700mm dia.,	m	9499.00
606	5235	Ductile Iron Pipe Class K-7 750mm dia.,	m	10802.00
607	2625	Ductile Iron Pipe Class K-7 800mm dia.,	m	12179.00
608	2626	Ductile Iron Pipe Class K-7 900mm dia.,	m	14945.00
609	4961	Ductile Iron Pipe Class K-9 1000mm dia.,	m	19411.00
610	2543	Ductile Iron Pipe Class K-9 100mm dia.,	m	1061.00
611	4962	Ductile Iron Pipe Class K-9 1100mm dia.,	m	26086.00
612	5156	Ductile Iron Pipe Class K-9 1200mm dia	m	30217.00
613	2544	Ductile Iron Pipe Class K-9 150mm dia.,	m	1499.00
614	2545	Ductile Iron Pipe Class K-9 200mm dia.,	m	1910.00
615	2546	Ductile Iron Pipe Class K-9 250mm dia.,	m	2561.00
616	2547	Ductile Iron Pipe Class K-9 300mm dia.,	m	3218.00
617	2548	Ductile Iron Pipe Class K-9 350mm dia.,	m	3798.00
618	2549	Ductile Iron Pipe Class K-9 400mm dia.,	m	4642.00
619	2550	Ductile Iron Pipe Class K-9 450mm dia.	m	5535.00
620	2551	Ductile Iron Pipe Class K-9 500mm dia.,	m	6467.00
621	2552	Ductile Iron Pipe Class K-9 600mm dia.,	m	8480.00
622	2553	Ductile Iron Pipe Class K-9 700mm dia.,	m	10738.00
623	5237	Ductile Iron Pipe Class K-9 750mm dia.,	m	11935.00
624	2555	Ductile Iron Pipe Class K-9 800mm dia.,	m	13182.00
625	2556	Ductile Iron Pipe Class K-9 900mm dia.	m	16066.00
626	4301	DWC (Doub. Wall Corrug) pipe SN 8, 1000mm dia	m	6225.00
627	4283	DWC (Doub. Wall Corrug) pipe SN 8, 100mm dia	m	132.00
628	4284	DWC (Doub. Wall Corrug) pipe SN 8, 135mm dia	m	165.00
629	4285	DWC (Doub. Wall Corrug) pipe SN 8, 150mm dia	m	198.00
630	4286	DWC (Doub. Wall Corrug) pipe SN 8, 170mm dia	m	275.00
631	4287	DWC (Doub. Wall Corrug) pipe SN 8, 200mm dia	m	348.00
632	4295	DWC (Doub. Wall Corrug) pipe SN 8, 250mm dia	m	533.00
633	4296	DWC (Doub. Wall Corrug) pipe SN 8, 300mm dia	m	777.00
634	4297	DWC (Doub. Wall Corrug) pipe SN 8, 400mm dia	m	921.00
635	4298	DWC (Doub. Wall Corrug) pipe SN 8, 500mm dia	m	1580.00
636	4299	DWC (Doub. Wall Corrug) pipe SN 8, 600mm dia	m	2427.00
637	4300	DWC (Doub. Wall Corrug) pipe SN 8, 800mm dia	m	4140.00
638	5198	Electromagnetic Induction Bulk Flow Meters for 100mm dia	each	135000.00
639	5199	Electromagnetic Induction Bulk Flow Meters for 150mm dia	each	159000.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
640	5201	Electromagnetic Induction Bulk Flow Meters for 250mm dia	each	211000.00
641	5202	Electromagnetic Induction Bulk Flow Meters for 300 mm dia	each	237000.00
642	5203	Electromagnetic Induction Bulk Flow Meters for 400 mm dia	each	325000.00
643	5204	Electromagnetic Induction Bulk Flow Meters for 450 mm dia	each	375000.00
644	5206	Electromagnetic Induction Bulk Flow Meters for 600 mm dia	each	453000.00
645	5207	Electromagnetic Induction Bulk Flow Meters for 700 mm dia	each	775000.00
646	5208	Electromagnetic Induction Bulk Flow Meters for 800 mm dia	each	950000.00
647	4005	Enamelled Guage plate 0.23M wide	m	510.00
648	5564	Engine Oil @ 0.024/KM	l	342.00
649	4606	Erection of Hand Pump	each	328.00
650	5649	Extension spindle + fittings for gate valve for 200 mm to 450mm	m	5100.00
651	4551	Extension spindle + fittings for gate valve for 50 mm to 150mm	m	3660.00
652	3981	Fabricated MS MJ end for CI/DI pipe 100mm	set	850.00
653	3982	Fabricated MS MJ end for CI/DI pipe 150mm	set	1200.00
654	3983	Fabricated MS MJ end for CI/DI pipe 200mm	set	1696.00
655	3984	Fabricated MS MJ end for CI/DI pipe 250mm	set	2500.00
656	3985	Fabricated MS MJ end for CI/DI pipe 300mm	set	2625.00
657	3988	Fabricated MS MJ end for CI/DI pipe 400mm	set	3887.00
658	3989	Fabricated MS MJ end for CI/DI pipe 450mm	set	4238.00
659	3990	Fabricated MS MJ end for CI/DI pipe 600mm	set	6000.00
660	3992	Fabricated MS MJ end for CI/DI pipe 700mm	set	7200.00
661	5907	Fabricated MS MJ end caps for CI/DI pipe 900mm	set	10000.00
662	5554	Fabrication charges (from item I130A)	t	7829.00
663	5878	G X 90	l	157.00
664	5001	GPRS + GSM based EMI flow meters on the Bulk waters - 100 mm dia	each	94500.00
665	5002	GPRS + GSM based EMI flow meters on the Bulk waters - 150 mm dia	each	119500.00
666	5003	GPRS + GSM based EMI flow meters on the Bulk waters - 200 mm dia	each	159500.00
667	5004	GPRS + GSM based EMI flow meters on the Bulk waters - 250 mm dia	each	219500.00
668	5005	GPRS + GSM based EMI flow meters on the Bulk waters - 300 mm dia	each	250000.00
669	5018	GPRS + GSM based Multi Track Ultrasonic Bulk Flow Meters - 1000/1100mm	each	446500.00
670	5019	GPRS + GSM based Multi Track Ultrasonic Bulk Flow Meters - 1200mm	each	462212.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
671	5020	GPRS + GSM based Multi Track Ultrasonic Bulk Flow Meters - 1800mm	each	533350.00
672	5013	GPRS + GSM based Multi Track Ultrasonic Bulk Flow Meters - 450mm	each	328000.00
673	5014	GPRS + GSM based Multi Track Ultrasonic Bulk Flow Meters - 600mm	each	367400.00
674	5015	GPRS + GSM based Multi Track Ultrasonic Bulk Flow Meters - 700mm	each	395100.00
675	5016	GPRS + GSM based Multi Track Ultrasonic Bulk Flow Meters - 800mm	each	438500.00
676	5017	GPRS + GSM based Multi Track Ultrasonic Bulk Flow Meters - 900mm	each	442000.00
677	3382	Grinding wheel for welding	each	85.00
678	5190	Grouting charges for PVC liners	m	600.00
679	5196	Guided Augur boring upto 300mm dia	m	8195.00
680	5197	Guided Augur boring upto 300mm to 450mm dia	m	11954.00
681	5240	Guided Augur boring upto 450mm to 600mm dia	m	21035.00
682	5877	Gx140	l	155.00
683	5912	H&RC BOREWELL RIG capacity 250 PSIG	day	31296.00
684	4037	H&RC BOREWELL RIG capacity 300PSIG	day	41296.00
685	4605	HC for Yield Testing assembly	each	9200.00
686	4603	HC for Logging/Scanning	each	1300.00
687	3385	HC Gas cutter,torches,hose pipes.	day	90.00
688	5874	HC Borewell mounting Truck	day	20000.00
689	4035	HC DIESEL TRUCK - 10 T CAPACITY	day	17328.00
690	5182	HC for drilling machines (tractor mounted)	day	1627.00
691	4604	HC for Hydrofacturing equipments	each	10500.00
692	5211	HC for jetting and suction machine	day	13000.00
693	5186	HC for PVC liner and mechanical cleaning equipments	day	6364.00
694	3379	HC Gas cutter	day	339.00
695	4599	HC Rig Borewell	each	1835.00
696	2277	HC SPINNING M/C FOR MS PIPE LINING	day	807.00
697	3605	HC Tool & Equip. for HMHDPE film coating	day	753.00
698	6125	HDPE Grade PE100-PN 3.0 ,400mm	m	1732.00
699	6111	HDPE Grade PE100-PN 3.0, 63 mm	m	55.00
700	6112	HDPE Grade PE100-PN 3.0, 75mm	m	65.00
701	6113	HDPE Grade PE100-PN 3.0, 90mm	m	85.00
702	6162	HDPE Grade PE100-PN 3.0,1000mm	m	11030.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
703	6114	HDPE Grade PE100-PN 3.0,110mm	m	128.00
704	6163	HDPE Grade PE100-PN 3.0,1200mm	m	15900.00
705	6115	HDPE Grade PE100-PN 3.0,125mm	m	173.00
706	6116	HDPE Grade PE100-PN 3.0,140mm	m	220.00
707	6117	HDPE Grade PE100-PN 3.0,160mm	m	278.00
708	6118	HDPE Grade PE100-PN 3.0,180mm	m	350.00
709	6119	HDPE Grade PE100-PN 3.0,200mm	m	435.00
710	6120	HDPE Grade PE100-PN 3.0,225mm	m	551.00
711	6121	HDPE Grade PE100-PN 3.0,250mm	m	675.00
712	6122	HDPE Grade PE100-PN 3.0,280mm	m	855.00
713	6123	HDPE Grade PE100-PN 3.0,315mm	m	1074.00
714	6124	HDPE Grade PE100-PN 3.0,355mm	m	1367.00
715	6126	HDPE Grade PE100-PN 3.0,450mm	m	2177.00
716	6127	HDPE Grade PE100-PN 3.0,500mm	m	2762.00
717	6128	HDPE Grade PE100-PN 3.0,560mm	m	3480.00
718	6129	HDPE Grade PE100-PN 3.0,630mm	m	4388.00
719	6130	HDPE Grade PE100-PN 3.0,710mm	m	5555.00
720	6160	HDPE Grade PE100-PN 3.0,800mm	m	7068.00
721	6161	HDPE Grade PE100-PN 3.0,900mm	m	8960.00
722	6145	HDPE Grade PE100-PN 4.0 ,400mm	m	2138.00
723	6131	HDPE Grade PE100-PN 4.0, 63 mm	m	58.00
724	6132	HDPE Grade PE100-PN 4.0, 75mm	m	73.00
725	6133	HDPE Grade PE100-PN 4.0, 90mm	m	107.00
726	6166	HDPE Grade PE100-PN 4.0,1000mm	m	13605.00
727	6134	HDPE Grade PE100-PN 4.0,110mm	m	158.00
728	6167	HDPE Grade PE100-PN 4.0,1200mm	m	19608.00
729	6135	HDPE Grade PE100-PN 4.0,125mm	m	210.00
730	6136	HDPE Grade PE100-PN 4.0,140mm	m	265.00
731	6137	HDPE Grade PE100-PN 4.0,160mm	m	300.00
732	6138	HDPE Grade PE100-PN 4.0,180mm	m	438.00
733	6139	HDPE Grade PE100-PN 4.0,200mm	m	536.00
734	6140	HDPE Grade PE100-PN 4.0,225mm	m	683.00
735	6141	HDPE Grade PE100-PN 4.0,250mm	m	837.00
736	6142	HDPE Grade PE100-PN 4.0,280mm	m	1048.00
737	6143	HDPE Grade PE100-PN 4.0,315mm	m	1330.00
738	6144	HDPE Grade PE100-PN 4.0,355mm	m	1683.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
739	6146	HDPE Grade PE100-PN 4.0,450mm	m	2695.00
740	6147	HDPE Grade PE100-PN 4.0,500mm	m	3417.00
741	6148	HDPE Grade PE100-PN 4.0,560mm	m	4281.00
742	6149	HDPE Grade PE100-PN 4.0,630mm	m	5410.00
743	6150	HDPE Grade PE100-PN 4.0,710mm	m	6900.00
744	6164	HDPE Grade PE100-PN 4.0,800mm	m	8730.00
745	6165	HDPE Grade PE100-PN 4.0,900mm	m	11034.00
746	6068	HDPE Grade PE80-PN 3.0 ,400mm	m	2111.00
747	6054	HDPE Grade PE80-PN 3.0, 63 mm	m	62.00
748	6055	HDPE Grade PE80-PN 3.0, 75mm	m	72.00
749	6056	HDPE Grade PE80-PN 3.0, 90mm	m	106.00
750	6153	HDPE Grade PE80-PN 3.0,1000mm	m	13509.00
751	6057	HDPE Grade PE80-PN 3.0,110mm	m	156.00
752	6154	HDPE Grade PE80-PN 3.0,1200mm	m	19467.00
753	6058	HDPE Grade PE80-PN 3.0,125mm	m	208.00
754	6059	HDPE Grade PE80-PN 3.0,140mm	m	262.00
755	6060	HDPE Grade PE80-PN 3.0,160mm	m	342.00
756	6061	HDPE Grade PE80-PN 3.0,180mm	m	432.00
757	6062	HDPE Grade PE80-PN 3.0,200mm	m	530.00
758	6063	HDPE Grade PE80-PN 3.0,225mm	m	675.00
759	6064	HDPE Grade PE80-PN 3.0,250mm	m	827.00
760	6065	HDPE Grade PE80-PN 3.0,280mm	m	1035.00
761	6066	HDPE Grade PE80-PN 3.0,315mm	m	1313.00
762	6067	HDPE Grade PE80-PN 3.0,355mm	m	1663.00
763	6069	HDPE Grade PE80-PN 3.0,450mm	m	2671.00
764	6070	HDPE Grade PE80-PN 3.0,500mm	m	3387.00
765	6088	HDPE Grade PE80-PN 3.0,560mm	m	4244.00
766	6089	HDPE Grade PE80-PN 3.0,630mm	m	5363.00
767	6090	HDPE Grade PE80-PN 3.0,710mm	m	6850.00
768	6151	HDPE Grade PE80-PN 3.0,800mm	m	8669.00
769	6152	HDPE Grade PE80-PN 3.0,900mm	m	10955.00
770	6105	HDPE Grade PE80-PN 4.0 ,400mm	m	2638.00
771	6091	HDPE Grade PE80-PN 4.0, 63 mm	m	66.00
772	6092	HDPE Grade PE80-PN 4.0, 75mm	m	91.00
773	6093	HDPE Grade PE80-PN 4.0, 90mm	m	131.00
774	6158	HDPE Grade PE80-PN 4.0,1000mm	m	17024.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
775	6094	HDPE Grade PE80-PN 4.0,110mm	m	195.00
776	6159	HDPE Grade PE80-PN 4.0,1200mm	m	24491.00
777	6095	HDPE Grade PE80-PN 4.0,125mm	m	260.00
778	6096	HDPE Grade PE80-PN 4.0,140mm	m	325.00
779	6097	HDPE Grade PE80-PN 4.0,160mm	m	427.00
780	6098	HDPE Grade PE80-PN 4.0,180mm	m	542.00
781	6099	HDPE Grade PE80-PN 4.0,200mm	m	664.00
782	6100	HDPE Grade PE80-PN 4.0,225mm	m	843.00
783	6101	HDPE Grade PE80-PN 4.0,250mm	m	1043.00
784	6102	HDPE Grade PE80-PN 4.0,280mm	m	1300.00
785	6103	HDPE Grade PE80-PN 4.0,315mm	m	1648.00
786	6104	HDPE Grade PE80-PN 4.0,355mm	m	2089.00
787	6106	HDPE Grade PE80-PN 4.0,450mm	m	3335.00
788	6107	HDPE Grade PE80-PN 4.0,500mm	m	4260.00
789	6108	HDPE Grade PE80-PN 4.0,560mm	m	5347.00
790	6109	HDPE Grade PE80-PN 4.0,630mm	m	6756.00
791	6110	HDPE Grade PE80-PN 4.0,710mm	m	8566.00
792	6156	HDPE Grade PE80-PN 4.0,800mm	m	10896.00
793	6157	HDPE Grade PE80-PN 4.0,900mm	m	13808.00
794	4088	HDPE Manhole 1.2 M dia 1m depth	each	8300.00
795	4302	HDPE Manhole 1.2 M dia 2m depth	each	15400.00
796	4304	HDPE Manhole 1.2 M dia 4m depth	each	48000.00
797	4305	HDPE Manhole 1.2 M dia 5m depth	each	58000.00
798	4306	HDPE Manhole 1.2 M dia 6m depth	each	66000.00
799	4303	HDPE Manhole 1.2M dia 3m depth	each	29000.00
800	5131	HDPE Pipe Drop Arrangement 1200 to 1400 mm	m	89500.00
801	4847	HDPE Pipe Drop Arrangement 150 to 200 mm	m	3370.00
802	5125	HDPE Pipe Drop Arrangement 250 mm	m	5270.00
803	5126	HDPE Pipe Drop Arrangement 300 mm	m	8100.00
804	5127	HDPE Pipe Drop Arrangement 350 to 500 mm	m	12600.00
805	5128	HDPE Pipe Drop Arrangement 600 to 750 mm	m	25300.00
806	5129	HDPE Pipe Drop Arrangement 800 to 900 mm	m	39000.00
807	5130	HDPE Pipe Drop Arrangement1000 to 1100 mm	m	58000.00
808	5132	HDPE Pipe Drop Arrangement1500 to 1800 mm	m	133500.00
809	5793	HDPE pipe grade PE 100-PN 10, 63mm	m	97.00
810	5794	HDPE pipe grade PE 100-PN 10, 75mm	m	136.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
811	5795	HDPE pipe grade PE 100-PN 12.5, 63mm	m	110.00
812	5796	HDPE pipe grade PE 100-PN 12.5, 75mm	m	156.00
813	5798	HDPE pipe grade PE 100-PN 16.0, 75mm	m	187.00
814	5790	HDPE pipe grade PE 100-PN6.0, 75mm	m	87.00
815	5791	HDPE pipe grade PE 100-PN8.0, 63mm	m	75.00
816	5792	HDPE pipe grade PE 100-PN8.0, 75mm	m	108.00
817	3543	HDPE pipe grade PE100-PN10.0, 110 mm	m	288.00
818	3544	HDPE pipe grade PE100-PN10.0, 125 mm	m	371.00
819	3545	HDPE pipe grade PE100-PN10.0, 140 mm	m	465.00
820	3546	HDPE pipe grade PE100-PN10.0, 160 mm	m	610.00
821	3547	HDPE pipe grade PE100-PN10.0, 180 mm	m	772.00
822	3548	HDPE pipe grade PE100-PN10.0, 200 mm	m	949.00
823	3549	HDPE pipe grade PE100-PN10.0, 225 mm	m	1253.00
824	3550	HDPE pipe grade PE100-PN10.0, 250 mm	m	1536.00
825	3551	HDPE pipe grade PE100-PN10.0, 280 mm	m	1933.00
826	3552	HDPE pipe grade PE100-PN10.0, 315 mm	m	2445.00
827	3553	HDPE pipe grade PE100-PN10.0, 355 mm	m	3216.00
828	3554	HDPE pipe grade PE100-PN10.0, 400 mm	m	4097.00
829	3555	HDPE pipe grade PE100-PN10.0, 450 mm	m	5167.00
830	3556	HDPE pipe grade PE100-PN10.0, 500 mm	m	6385.00
831	3557	HDPE pipe grade PE100-PN10.0, 560 mm	m	8287.00
832	3558	HDPE pipe grade PE100-PN10.0, 630 mm	m	10496.00
833	3587	HDPE pipe grade PE100-PN10.0, 710 mm	m	13332.00
834	3542	HDPE pipe grade PE100-PN10.0, 90 mm	m	196.00
835	3560	HDPE pipe grade PE100-PN12.5, 110 mm	m	329.00
836	3561	HDPE pipe grade PE100-PN12.5, 125 mm	m	424.00
837	3562	HDPE pipe grade PE100-PN12.5, 140 mm	m	531.00
838	3563	HDPE pipe grade PE100-PN12.5, 160 mm	m	697.00
839	3564	HDPE pipe grade PE100-PN12.5, 180 mm	m	881.00
840	3565	HDPE pipe grade PE100-PN12.5, 200 mm	m	1084.00
841	3566	HDPE pipe grade PE100-PN12.5, 225 mm	m	1436.00
842	3567	HDPE pipe grade PE100-PN12.5, 250 mm	m	1774.00
843	3568	HDPE pipe grade PE100-PN12.5, 280 mm	m	2223.00
844	3569	HDPE pipe grade PE100-PN12.5, 315 mm	m	2813.00
845	3570	HDPE pipe grade PE100-PN12.5, 355 mm	m	3676.00
846	3571	HDPE pipe grade PE100-PN12.5, 400 mm	m	4666.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
847	3572	HDPE pipe grade PE100-PN12.5, 450 mm	m	5902.00
848	3573	HDPE pipe grade PE100-PN12.5, 500 mm	m	7296.00
849	3559	HDPE pipe grade PE100-PN12.5, 90 mm	m	224.00
850	3575	HDPE pipe grade PE100-PN16.0, 110 mm	m	402.00
851	3576	HDPE pipe grade PE100-PN16.0, 125 mm	m	516.00
852	3577	HDPE pipe grade PE100-PN16.0, 140 mm	m	649.00
853	3578	HDPE pipe grade PE100-PN16.0, 160 mm	m	846.00
854	3579	HDPE pipe grade PE100-PN16.0, 180 mm	m	1069.00
855	3580	HDPE pipe grade PE100-PN16.0, 200 mm	m	1322.00
856	3581	HDPE pipe grade PE100-PN16.0, 225 mm	m	1708.00
857	3582	HDPE pipe grade PE100-PN16.0, 250 mm	m	2112.00
858	3583	HDPE pipe grade PE100-PN16.0, 280 mm	m	2652.00
859	3584	HDPE pipe grade PE100-PN16.0, 315 mm	m	3348.00
860	3585	HDPE pipe grade PE100-PN16.0, 355 mm	m	4392.00
861	3586	HDPE pipe grade PE100-PN16.0, 400 mm	m	5575.00
862	3590	HDPE pipe grade PE100-PN16.0, 450 mm	m	7044.00
863	3591	HDPE pipe grade PE100-PN16.0, 500 mm	m	8703.00
864	3574	HDPE pipe grade PE100-PN16.0, 90 mm	m	268.00
865	3507	HDPE pipe grade PE100-PN6.0, 110 mm	m	188.00
866	3508	HDPE pipe grade PE100-PN6.0, 125 mm	m	241.00
867	3509	HDPE pipe grade PE100-PN6.0, 140 mm	m	302.00
868	3510	HDPE pipe grade PE100-PN6.0, 160 mm	m	395.00
869	3511	HDPE pipe grade PE100-PN6.0, 180 mm	m	497.00
870	3512	HDPE pipe grade PE100-PN6.0, 200 mm	m	615.00
871	3513	HDPE pipe grade PE100-PN6.0, 225 mm	m	797.00
872	3514	HDPE pipe grade PE100-PN6.0, 250 mm	m	981.00
873	3515	HDPE pipe grade PE100-PN6.0, 280 mm	m	1226.00
874	3516	HDPE pipe grade PE100-PN6.0, 315 mm	m	1546.00
875	3517	HDPE pipe grade PE100-PN6.0, 355 mm	m	2024.00
876	3518	HDPE pipe grade PE100-PN6.0, 400 mm	m	2575.00
877	3519	HDPE pipe grade PE100-PN6.0, 450 mm	m	3264.00
878	3520	HDPE pipe grade PE100-PN6.0, 500 mm	m	4026.00
879	3521	HDPE pipe grade PE100-PN6.0, 560 mm	m	5231.00
880	3522	HDPE pipe grade PE100-PN6.0, 630 mm	m	6608.00
881	5789	HDPE pipe grade PE100-PN6.0, 63mm	m	61.00
882	3523	HDPE pipe grade PE100-PN6.0, 710 mm	m	8426.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
883	3506	HDPE pipe grade PE100-PN6.0, 90 mm	m	124.00
884	3525	HDPE pipe grade PE100-PN8.0, 110 mm	m	227.00
885	3526	HDPE pipe grade PE100-PN8.0, 125 mm	m	292.00
886	3527	HDPE pipe grade PE100-PN8.0, 140 mm	m	367.00
887	3528	HDPE pipe grade PE100-PN8.0, 160 mm	m	481.00
888	3529	HDPE pipe grade PE100-PN8.0, 180 mm	m	603.00
889	3530	HDPE pipe grade PE100-PN8.0, 200 mm	m	746.00
890	3531	HDPE pipe grade PE100-PN8.0, 225 mm	m	966.00
891	3532	HDPE pipe grade PE100-PN8.0, 250 mm	m	1188.00
892	3533	HDPE pipe grade PE100-PN8.0, 280 mm	m	1494.00
893	3534	HDPE pipe grade PE100-PN8.0, 315 mm	m	1893.00
894	3535	HDPE pipe grade PE100-PN8.0, 355 mm	m	2470.00
895	3536	HDPE pipe grade PE100-PN8.0, 400 mm	m	3143.00
896	3537	HDPE pipe grade PE100-PN8.0, 450 mm	m	3970.00
897	3538	HDPE pipe grade PE100-PN8.0, 500 mm	m	4909.00
898	3539	HDPE pipe grade PE100-PN8.0, 560 mm	m	6379.00
899	3540	HDPE pipe grade PE100-PN8.0, 630 mm	m	8066.00
900	3541	HDPE pipe grade PE100-PN8.0, 710 mm	m	10260.00
901	3524	HDPE pipe grade PE100-PN8.0, 90 mm	m	151.00
902	5781	HDPE pipe grade PE80-PN 10, 63mm	m	116.00
903	5782	HDPE pipe grade PE80-PN 10, 75mm	m	164.00
904	5783	HDPE pipe grade PE80-PN 12.5, 63mm	m	131.00
905	5784	HDPE pipe grade PE80-PN 12.5, 75mm	m	186.00
906	3462	HDPE pipe grade PE80-PN10.0, 110mm	m	348.00
907	3463	HDPE pipe grade PE80-PN10.0, 125mm	m	452.00
908	3464	HDPE pipe grade PE80-PN10.0, 140mm	m	567.00
909	3465	HDPE pipe grade PE80-PN10.0, 160mm	m	739.00
910	3466	HDPE pipe grade PE80-PN10.0, 180mm	m	932.00
911	3467	HDPE pipe grade PE80-PN10.0, 200mm	m	1150.00
912	3468	HDPE pipe grade PE80-PN10.0, 225mm	m	1515.00
913	3469	HDPE pipe grade PE80-PN10.0, 250mm	m	1870.00
914	3470	HDPE pipe grade PE80-PN10.0, 280mm	m	2344.00
915	3471	HDPE pipe grade PE80-PN10.0, 315mm	m	2966.00
916	3472	HDPE pipe grade PE80-PN10.0, 355mm	m	3898.00
917	3473	HDPE pipe grade PE80-PN10.0, 400mm	m	4948.00
918	3474	HDPE pipe grade PE80-PN10.0, 450mm	m	6259.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
919	3475	HDPE pipe grade PE80-PN10.0, 500mm	m	7738.00
920	3476	HDPE pipe grade PE80-PN10.0, 560mm	m	10038.00
921	3477	HDPE pipe grade PE80-PN10.0, 630mm	m	12707.00
922	3444	HDPE pipe grade PE80-PN10.0, 90mm	m	234.00
923	3479	HDPE pipe grade PE80-PN12.5, 110 mm	m	394.00
924	3480	HDPE pipe grade PE80-PN12.5, 125 mm	m	512.00
925	3481	HDPE pipe grade PE80-PN12.5, 140 mm	m	641.00
926	3482	HDPE pipe grade PE80-PN12.5, 160 mm	m	836.00
927	3483	HDPE pipe grade PE80-PN12.5, 180 mm	m	1054.00
928	3484	HDPE pipe grade PE80-PN12.5, 200 mm	m	1300.00
929	3485	HDPE pipe grade PE80-PN12.5, 225mm	m	1708.00
930	3486	HDPE pipe grade PE80-PN12.5, 250 mm	m	2112.00
931	3487	HDPE pipe grade PE80-PN12.5, 280 mm	m	2652.00
932	3488	HDPE pipe grade PE80-PN12.5, 315 mm	m	3348.00
933	3489	HDPE pipe grade PE80-PN12.5, 355 mm	m	4392.00
934	3490	HDPE pipe grade PE80-PN12.5, 400 mm	m	5575.00
935	3491	HDPE pipe grade PE80-PN12.5, 450 mm	m	7044.00
936	3492	HDPE pipe grade PE80-PN12.5, 500 mm	m	8703.00
937	3478	HDPE pipe grade PE80-PN12.5, 90 mm	m	264.00
938	3494	HDPE pipe grade PE80-PN16.0, 110 mm	m	473.00
939	3495	HDPE pipe grade PE80-PN16.0, 125 mm	m	609.00
940	3496	HDPE pipe grade PE80-PN16.0, 140 mm	m	766.00
941	3497	HDPE pipe grade PE80-PN16.0, 160 mm	m	1001.00
942	3498	HDPE pipe grade PE80-PN16.0, 180 mm	m	1264.00
943	3499	HDPE pipe grade PE80-PN16.0, 200 mm	m	1561.00
944	3500	HDPE pipe grade PE80-PN16.0, 225 mm	m	2025.00
945	3501	HDPE pipe grade PE80-PN16.0, 250 mm	m	2493.00
946	3502	HDPE pipe grade PE80-PN16.0, 280 mm	m	3130.00
947	3503	HDPE pipe grade PE80-PN16.0, 315 mm	m	3958.00
948	3504	HDPE pipe grade PE80-PN16.0, 355 mm	m	5183.00
949	3505	HDPE pipe grade PE80-PN16.0, 400 mm	m	6580.00
950	3493	HDPE pipe grade PE80-PN16.0, 90 mm	m	317.00
951	3409	HDPE pipe grade PE80-PN6.0, 110mm	m	227.00
952	3410	HDPE pipe grade PE80-PN6.0, 125mm	m	292.00
953	3411	HDPE pipe grade PE80-PN6.0, 140mm	m	367.00
954	3412	HDPE pipe grade PE80-PN6.0, 160mm	m	481.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
955	3413	HDPE pipe grade PE80-PN6.0, 180mm	m	603.00
956	3414	HDPE pipe grade PE80-PN6.0, 200mm	m	746.00
957	3415	HDPE pipe grade PE80-PN6.0, 225mm	m	966.00
958	3416	HDPE pipe grade PE80-PN6.0, 250mm	m	1188.00
959	3417	HDPE pipe grade PE80-PN6.0, 280mm	m	1494.00
960	3418	HDPE pipe grade PE80-PN6.0, 315mm	m	1893.00
961	3419	HDPE pipe grade PE80-PN6.0, 355mm	m	2470.00
962	3420	HDPE pipe grade PE80-PN6.0, 400mm	m	3143.00
963	3421	HDPE pipe grade PE80-PN6.0, 450mm	m	3970.00
964	3422	HDPE pipe grade PE80-PN6.0, 500mm	m	4909.00
965	3424	HDPE pipe grade PE80-PN6.0, 630mm	m	8066.00
966	5777	HDPE pipe grade PE80-PN6.0, 63mm	m	75.00
967	3425	HDPE pipe grade PE80-PN6.0, 710mm	m	10859.00
968	5778	HDPE pipe grade PE80-PN6.0, 75mm	m	108.00
969	3408	HDPE pipe grade PE80-PN6.0, 90mm	m	151.00
970	3423	HDPE pipe grade PE80-PN6.0,560mm	m	6379.00
971	3427	HDPE pipe grade PE80-PN8.0, 110mm	m	277.00
972	3428	HDPE pipe grade PE80-PN8.0, 125mm	m	357.00
973	3429	HDPE pipe grade PE80-PN8.0, 140mm	m	447.00
974	3430	HDPE pipe grade PE80-PN8.0, 160mm	m	586.00
975	3431	HDPE pipe grade PE80-PN8.0, 180mm	m	742.00
976	3432	HDPE pipe grade PE80-PN8.0, 200mm	m	913.00
977	3433	HDPE pipe grade PE80-PN8.0, 225mm	m	1187.00
978	3434	HDPE pipe grade PE80-PN8.0, 250mm	m	1459.00
979	3435	HDPE pipe grade PE80-PN8.0, 280mm	m	1833.00
980	3436	HDPE pipe grade PE80-PN8.0, 315mm	m	2319.00
981	3437	HDPE pipe grade PE80-PN8.0, 355mm	m	3032.00
982	3438	HDPE pipe grade PE80-PN8.0, 400mm	m	3863.00
983	3439	HDPE pipe grade PE80-PN8.0, 450mm	m	4872.00
984	3440	HDPE pipe grade PE80-PN8.0, 500mm	m	6247.00
985	3441	HDPE pipe grade PE80-PN8.0, 560mm	m	7831.00
986	3442	HDPE pipe grade PE80-PN8.0, 630mm	m	9917.00
987	5779	HDPE pipe grade PE80-PN8.0, 63mm	m	92.00
988	3443	HDPE pipe grade PE80-PN8.0, 710mm	m	13332.00
989	5780	HDPE pipe grade PE80-PN8.0, 75mm	m	131.00
990	3426	HDPE pipe grade PE80-PN8.0, 90mm	m	188.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
991	5811	HDPE Sleeve Pipe 50mm dia	each	45.00
992	5812	HDPE water meter box	each	275.00
993	5110	Heating of rewounded and insulated motor in the oven to get required insulation resistance before assembly	job	90.00
994	4966	Hire Charges for Drilling 200mm dia	m	2325.00
995	4967	Hire Charges for Drilling 300mm dia	m	3250.00
996	4968	Hire Charges for Drilling 400mm dia	m	4150.00
997	4969	Hire Charges for Drilling 450mm dia	m	5050.00
998	5177	Hire charges for hydraulic rock splitting machine with power pack	day	3000.00
999	5174	Hire charges for scrapper	hr	1042.00
1000	5876	HLP 68	l	137.00
1001	5799	HOM of Wleding & Grinding M/c	day	339.00
1002	5150	Indoor Distr Panel	each	58470.00
1003	4540	Installation charges for HDPE Machineholes	each	2700.00
1004	5010	Insulated cable on messenger wire using 2 single core wire	m	90.00
1005	5176	Investigation of sewers with CCTV	m	372.00
1006	5141	Isolator & capacitor panel fuses	job	29220.00
1007	4059	K Air Valve PN 1.6 + accessories -100mm	each	18913.00
1008	4060	K Air Valve PN 1.6 + accessories -150mm	each	26940.00
1009	4061	K Air Valve PN 1.6 + accessories -200mm	each	34637.00
1010	5934	K Air Valve PN 16.0 + accessories -80mm	each	18083.00
1011	3948	Lab - fix 1 flange Butterfly vale & access -100mm	each	163.00
1012	3949	Lab - fix 1 flange Butterfly vale & access -150mm	each	270.00
1013	3950	Lab - fix 1 flange Butterfly vale & access -200mm	each	405.00
1014	3951	Lab - fix 1 flange Butterfly vale & access -250mm	each	450.00
1015	3952	Lab - fix 1 flange Butterfly vale & access -300mm	each	800.00
1016	4827	Lab - fix 1 flange Butterfly vale & access -350mm	each	869.00
1017	3953	Lab - fix 1 flange Butterfly vale & access -400mm	each	1117.00
1018	3954	Lab - fix 1 flange Butterfly vale & access -450mm	each	1313.00
1019	3955	Lab - fix 1 flange Butterfly vale & access -500mm	each	1359.00
1020	3956	Lab - fix 1 flange Butterfly vale & access -600mm	each	1555.00
1021	4258	Lab - fix 2 flange Butterfly vale & access -1000mm	each	2501.00
1022	4259	Lab - fix 2 flange Butterfly vale & access -1100mm	each	2730.00
1023	4260	Lab - fix 2 flange Butterfly vale & access -1200mm	each	2956.00
1024	4254	Lab - fix 2 flange Butterfly vale & access -700mm	each	1760.00
1025	4255	Lab - fix 2 flange Butterfly vale & access -750mm	each	1902.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
1026	4256	Lab - fix 2 flange Butterfly vale & access -800mm	each	2044.00
1027	4257	Lab - fix 2 flange Butterfly vale & access -900mm	each	2326.00
1028	67	Lab Fix Air Valve PN 1.6 & accessories -100mm (B084C)	each	248.00
1029	70	Lab Fix Air Valve PN 1.6 & accessories -150mm (B084D)	each	268.00
1030	71	Lab Fix Air Valve PN 1.6 & accessories -200mm (B084E)	each	393.00
1031	68	Lab Fix Air Valve PN 1.6 & accessories -50mm (B084A)	each	184.00
1032	69	Lab Fix Air Valve PN 1.6 & accessories -80mm (B084B)	each	198.00
1033	4263	Lab Fix Air Valve PN 16 & accessories -200mm (B084E)	each	393.00
1034	56	Lab for fixing DI sluice vale & access. - 100mm (B082C)	each	268.00
1035	57	Lab for fixing DI sluice vale & access. - 150mm (B082D)	each	303.00
1036	58	Lab for fixing DI sluice vale & access. - 200mm (B082E)	each	443.00
1037	55	Lab for fixing DI sluice vale & access. - 300mm (B082G)	each	801.00
1038	3918	Lab for fixing DI sluice vale & access. - 300mm (B082G)	each	801.00
1039	63	Lab for fixing DI sluice vale & access. - 350mm (B082H)	each	828.00
1040	3919	Lab for fixing DI sluice vale & access. - 400mm (B082H)	each	909.00
1041	61	Lab for fixing DI sluice vale & access. - 450mm (B082J)	each	2407.00
1042	64	Lab for fixing DI sluice vale & access. - 500mm (B082K)	each	2677.00
1043	65	Lab for fixing DI sluice vale & access. - 50mm (B082A)	each	198.00
1044	62	Lab for fixing DI sluice vale & access. - 600mm (B082L)	each	3196.00
1045	66	Lab for fixing DI sluice vale & access. - 80mm (B082B)	each	221.00
1046	3916	Lab for fixing DI sluice vale & access.- 200mm (B082E)	each	443.00
1047	59	Lab for fixing DI sluice vale & access.- 250mm (B082F)	each	718.00
1048	3917	Lab for fixing DI sluice vale & access.- 250mm (B082F)	each	718.00
1049	60	Lab for fixing DI sluice vale & access.- 400mm (B082I)	each	909.00
1050	3965	Lab.,Eqp.,T&P., for leak works in CI/DI 100mm	each	616.00
1051	3966	Lab.,Eqp.,T&P., for leak works in CI/DI 150mm	each	695.00
1052	3967	Lab.,Eqp.,T&P., for leak works in CI/DI 200mm	each	700.00
1053	3968	Lab.,Eqp.,T&P., for leak works in CI/DI 250mm	each	814.00
1054	3969	Lab.,Eqp.,T&P., for leak works in CI/DI 300mm	each	1070.00
1055	3970	Lab.,Eqp.,T&P., for leak works in CI/DI 400mm	each	1100.00
1056	3971	Lab.,Eqp.,T&P., for leak works in CI/DI 450mm	each	1200.00
1057	5066	Labour charges for recondiotioning of bronze or SS impeller with all materials etc complete	job	90.00
1058	5102	Labour charges for refixing, aligning with reference to pump & commissioning with all tools & materials et complete	job	90.00
1059	5070	Labour charges for refixing, alligning with reference to pump and commissioning with all tools and materials etc complete	job	90.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
1060	5076	Labour charges for removing and refixing of bearing using Hydraulic puller	job	90.00
1061	5107	Labour charges for removing and refixing of bearings (Ball / Roller) using Hydralic puller	job	90.00
1062	5096	Labour charges for removing the motor with all tools and materials etc complete	job	90.00
1063	5065	Labour charges for removing the pump with all tools & materials etc complete	job	90.00
1064	5067	Labour charges for repairing of Carbon steel / SS shaft EN-8 with all materials etc complete	job	90.00
1065	5098	Labour charges for rewinding after removing the existing burnt out copper coils etc complete	job	90.00
1066	5169	Laterite bricks	100s	1500.00
1067	3958	Leak repair MJ clamp+ access for CI/DI 100mm	each	1570.00
1068	3959	Leak repair MJ clamp+ access for CI/DI 150mm	each	2600.00
1069	3960	Leak repair MJ clamp+ access for CI/DI 200mm	each	3000.00
1070	3961	Leak repair MJ clamp+ access for CI/DI 250mm	each	4000.00
1071	3962	Leak repair MJ clamp+ access for CI/DI 300mm	each	5000.00
1072	3963	Leak repair MJ clamp+ access for CI/DI 400mm	each	7200.00
1073	3964	Leak repair MJ clamp+ access for CI/DI 450mm	each	9000.00
1074	5011	LG UT cable having aluminium conductor PVC	m	68.00
1075	4792	M.S End Plates 100.00 mm	each	535.00
1076	4793	M.S End Plates 150.00 mm	each	960.00
1077	4794	M.S End Plates 200.00 mm	each	1600.00
1078	4795	M.S End Plates 250.00 mm	each	2350.00
1079	4796	M.S End Plates 300.00 mm	each	3580.00
1080	5602	M.S.Sheet 600x600x6mm dia for Lightining arrestor	l.s	314.00
1081	5209	MDPE compression fittings and specials	each	500.00
1082	3594	MDPE pipe grade PE80 10kg/cm2,6.7mm thick	m	142.00
1083	3592	MDPE pipe grade PE80 6kg/cm2,4.3mm thick	m	95.00
1084	3595	MDPE pipe grade PE80 6kg/cm2,5.3mm thick	m	142.00
1085	3593	MDPE pipe grade PE80 8kg/cm2,5.4mm thick	m	94.00
1086	3596	MDPE pipe grade PE80 8kg/cm2,6.6mm thick	m	194.00
1087	5867	Mechanical woltman meter for 100mm dia with GSM/GPRS system	each	58500.00
1088	5868	Mechanical woltman meter for 150mm dia with GSM/GPRS system	each	70500.00
1089	5869	Mechanical woltman meter for 200mm dia with GSM/GPRS system	each	87000.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
1090	5870	Mechanical woltman meter for 250mm dia with GSM/GPRS system	each	115000.00
1091	5871	Mechanical woltman meter for 300mm dia with GSM/GPRS system	each	245000.00
1092	5865	Mechanical woltman meter for 50mm dia with GSM/GPRS system	each	50000.00
1093	5866	Mechanical woltman meter for 80mm dia with GSM/GPRS system	each	54000.00
1094	4798	MJ Collar 100.00 mm	each	855.00
1095	4799	MJ Collar 150.00 mm	each	1220.00
1096	4800	MJ Collar 200.00 mm	each	2203.00
1097	4801	MJ Collar 250.00 mm	each	4021.00
1098	4802	MJ Collar 300.00 mm	each	5869.00
1099	4803	MJ Collar 350.00 mm	each	4907.00
1100	4804	MJ Collar 400.00 mm	each	5903.00
1101	4805	MJ Collar 450.00 mm	each	9575.00
1102	4806	MJ Collar 500.00 mm	each	12347.00
1103	4807	MJ Collar 600.00 mm	each	17299.00
1104	5885	MP Grease	l	186.00
1105	5888	MS casing caps	each	140.00
1106	5903	MS Flange 1000mm dia & 30mm thk	each	10200.00
1107	5902	MS Flange 1000mm dia & 32mm thk	each	11000.00
1108	4154	MS Flange 100mm dia & 8mm thk	each	283.00
1109	3993	MS Flange 100mm dia &10mm thk	each	354.00
1110	5905	MS Flange 1100mm dia & 30mm thk	each	12000.00
1111	5904	MS Flange 1100mm dia & 32mm thk	each	14000.00
1112	5906	MS Flange 1200mm dia & 32mm thk	each	15000.00
1113	4155	MS Flange 150mm dia &12mm thk	each	638.00
1114	3994	MS Flange 150mm dia &16mm thk	each	850.00
1115	4156	MS Flange 200mm dia &16mm thk	each	1140.00
1116	3995	MS Flange 200mm dia &20mm thk	each	1421.00
1117	4157	MS Flange 250mm dia &16mm thk	each	1504.00
1118	3996	MS Flange 250mm dia &20mm thk	each	1880.00
1119	4158	MS Flange 300mm dia &16mm thk	each	1740.00
1120	3997	MS Flange 300mm dia &20mm thk	each	2165.00
1121	4159	MS Flange 400mm dia &20mm thk	each	2802.00
1122	3998	MS Flange 400mm dia &25mm thk	each	3504.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
1123	4160	MS Flange 450mm dia &20mm thk	each	3252.00
1124	4001	MS Flange 450mm dia &25mm thk	each	4062.00
1125	4161	MS Flange 600mm dia &20mm thk	each	4310.00
1126	3999	MS Flange 600mm dia &25mm thk	each	5008.00
1127	4162	MS Flange 700mm dia &25mm thk	each	7004.00
1128	4000	MS Flange 700mm dia &30mm thk	each	5843.00
1129	4164	MS Flange 900mm dia &28mm thk	each	8029.00
1130	4163	MS Flange 900mm dia &30mm thk	each	9632.00
1131	5006	MS saddle (16mm x 160mm x 360mm) for 4 sensors	each	10800.00
1132	5007	MS saddle (16mm x 160mm x 360mm) for 8 sensors	each	18000.00
1133	4957	MS Sheet 10-25mm fabrication charge for MS pipe	t	8000.00
1134	4402	MS Sheet 2.5 -25mm Cutting charges for MS pipe	t	700.00
1135	4401	MS Sheet 2.5 -25mm for MS pipes	t	68200.00
1136	4403	MS Sheet 2.5-25mm fabrication charge for MS pipe	t	8000.00
1137	5009	Multi-core sensor cable from the sensor probes to the transmitter panel	m	270.00
1138	5852	Multijet water meter 15 mm dia	each	1200.00
1139	5853	Multijet water meter 20 mm dia	each	2050.00
1140	5854	Multijet water meter 25 mm dia	each	4500.00
1141	5583	Oil filters	each	14.00
1142	5883	Oil filters	each	14.00
1143	4525	OPVC pipes of Class 500- PN-16 110mm dia.	m	1084.00
1144	4526	OPVC pipes of Class 500- PN-16 160mm dia.	m	1577.00
1145	4527	OPVC pipes of Class 500- PN-16 200mm dia.	m	2141.00
1146	4528	OPVC pipes of Class 500- PN-16 250mm dia.	m	2841.00
1147	4529	OPVC pipes of Class 500- PN-16 315mm dia.	m	3710.00
1148	4532	OPVC pipes of Class 500- PN-16 400mm dia.	m	5467.00
1149	4533	OPVC pipes of Class 500- PN-25 110mm dia.	m	1564.00
1150	4534	OPVC pipes of Class 500- PN-25 160mm dia.	m	1940.00
1151	4535	OPVC pipes of Class 500- PN-25 200mm dia.	m	3169.00
1152	4536	OPVC pipes of Class 500- PN-25 250mm dia.	m	4092.00
1153	4537	OPVC pipes of Class 500- PN-25 315mm dia.	m	5300.00
1154	4538	OPVC pipes of Class 500- PN-25 400mm dia.	m	7844.00
1155	5133	Painting of transformers	job	24120.00
1156	5810	Passive electronic marker locater	each	144650.00
1157	5895	Poly Propylene Random Co-ploymer (PPR) pipe with fitting SDR 7.4 -20 mm Outer dia	m	62.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
1158	5896	Poly Propylene Random Co-ploymer (PPR) pipe with fitting SDR 7.4 -25 mm Outer dia	m	94.00
1159	5897	Poly Propylene Random Co-ploymer (PPR) pipe with fitting SDR 7.4 -32 mm Outer dia	m	151.00
1160	5898	Poly Propylene Random Co-ploymer (PPR) pipe with fitting SDR 7.4 -40 mm Outer dia	m	243.00
1161	5899	Poly Propylene Random Co-ploymer (PPR) pipe with fitting SDR 7.4 -50 mm Outer dia	m	381.00
1162	5900	Poly Propylene Random Co-ploymer (PPR) pipe with fitting SDR 7.4 -63 mm Outer dia	m	616.00
1163	5894	Poly Propylene Random Co-ploymer (PPR) pipe with fittings SDR 7.4 -16 mm Outer dia	m	59.00
1164	5195	Providing and applying Polyurethane coating to external surface for MS pipes	m^2	488.50
1165	5194	Providing and applying Polyurethane coating to internal surface for MS pipes	m^2	347.00
1166	5436	Providing Coffer Dams charges at 10% of Excavation	m^3	2761.00
1167	5806	PV LIQUID	l	50.00
1168	5185	PVC liner material(including import duty ,freight charges)	m	932.00
1169	5191	PVC liner storage and handling charges	m	448.00
1170	5192	PVC liner testing charges	m	448.00
1171	3713	PVC pipe - OD 110mm and 6 Kg/sqcm	m	255.00
1172	3714	PVC pipe - OD 140mm and 6 Kg/sqcm	m	398.00
1173	3715	PVC pipe - OD 160mm and 6 Kg/sqcm	m	420.00
1174	3716	PVC pipe - OD 200mm and 6 Kg/sqcm	m	831.00
1175	3717	PVC pipe - OD 250mm and 6 Kg/sqcm	m	1100.00
1176	3707	PVC pipe - OD 25mm and 10 Kg/sqcm	m	23.00
1177	3718	PVC pipe - OD 315mm and 6 Kg/sqcm	m	1550.00
1178	3708	PVC pipe - OD 32mm and 10 Kg/sqcm	m	33.00
1179	3709	PVC pipe - OD 50mm and 6 Kg/sqcm	m	52.00
1180	3710	PVC pipe - OD 63mm and 6 Kg/sqcm	m	88.00
1181	3711	PVC pipe - OD 75mm and 6 Kg/sqcm	m	123.00
1182	3712	PVC pipe - OD 90mm and 6 Kg/sqcm	m	174.00
1183	5825	PVC pipes of 6 Kg/cm2 for 140mm(3.097)	m	398.00
1184	5831	PVC pipes of 8 Kg/cm2 for 140mm(3.097)	m	541.00
1185	5838	PVC pipes of 10 Kg/cm2 for 140mm	m	652.00
1186	5834	PVC pipes of 10 Kg/cm2 for 63mm	m	135.00
1187	5839	PVC pipes of 10 Kg/cm2 for 160mm	m	851.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
1188	5840	PVC pipes of 10 Kg/cm2 for 200mm	m	1329.00
1189	5835	PVC pipes of 10 Kg/cm2 for 75mm	m	192.00
1190	5836	PVC pipes of 10 Kg/cm2 for 90mm	m	274.00
1191	5817	PVC pipes of 4 Kg/cm2 for 110mm(1.315))	m	174.00
1192	5842	PVC pipes of 4 Kg/cm2 for 140mm(2.131)	m	256.00
1193	5818	PVC pipes of 4 Kg/cm2 for 160mm(2.753)	m	375.00
1194	5814	PVC pipes of 4 Kg/cm2 for 63mm(0.465)	m	61.00
1195	5816	PVC pipes of 4 Kg/cm2 for 90mm(0.917)	m	121.00
1196	5819	PVC pipes of 4 Kg/cm2 for 200mm(4.256)	m	581.00
1197	5815	PVC pipes of 4 Kg/cm2 for 75mm(0.651)	m	87.00
1198	5821	PVC pipes of 6 Kg/cm2 for 75mm(0.917)	m	123.00
1199	5820	PVC pipes of 6 Kg/cm2 for 63mm(0.662)	m	88.00
1200	5822	PVC pipes of 6 Kg/cm2 for 90mm(1.313)	m	174.00
1201	5823	PVC pipes of 6 Kg/cm2 for 110mm(1.894)	m	255.00
1202	5824	PVC pipes of 6 Kg/cm2 for 160mm(3.923)	m	420.00
1203	5826	PVC pipes of 6 Kg/cm2 for 200mm(6.233)	m	831.00
1204	5828	PVC pipes of 8 Kg/cm2 for 75mm(0.917)	m	159.00
1205	5827	PVC pipes of 8 Kg/cm2 for 63mm(0.662)	m	110.00
1206	5829	PVC pipes of 8 Kg/cm2 for 90mm(1.313)	m	223.00
1207	5830	PVC pipes of 8 Kg/cm2 for 110mm(1.894)	m	332.00
1208	5832	PVC pipes of 8 Kg/cm2 for 160mm(3.923)	m	706.00
1209	5833	PVC pipes of 8 Kg/cm2 for 200mm(6.233)	m	1091.00
1210	5837	PVC pipes of10 Kg/cm2 for 110mm	m	407.00
1211	4553	Radar Survey along road for 6M wide	m	30.00
1212	4556	Radar Survey at road cross & dividers 60m wide	m	70725.00
1213	4555	Radar Survey at road cross & dividers upto 50m wide	m	55600.00
1214	4557	Radar Survey at road cross for every 1 M above 60m wide	m	1875.00
1215	4554	Radar Survey at road cross upto 30m wide	m	27300.00
1216	5843	RCC hume pipe Cir pump house	each	14000.00
1217	5892	RCC Perforated rings - 1200 mmx1250 mm	each	7000.00
1218	5891	RCC Perforated rings - 900 mmx1100 mm	each	4500.00
1219	3818	RCC pipe NP3 1000 mm dia & 2.5 M long	m	4200.00
1220	4102	RCC pipe NP3 1100 mm dia & 2.5 M long	m	4720.00
1221	3808	RCC pipe NP3 1200 mm dia & 2.5 M long	m	5200.00
1222	4105	RCC pipe NP3 1400 mm dia & 2.5 M long	m	8600.00
1223	4106	RCC pipe NP3 1600 mm dia & 2.5 M long	m	11600.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
1224	4108	RCC pipe NP3 1800 mm dia & 2.5 M long	m	15200.00
1225	4107	RCC pipe NP3 2000 mm dia & 2.5 M long	m	24800.00
1226	4109	RCC pipe NP3 2200 mm dia & 2.5 M long	m	31200.00
1227	4110	RCC pipe NP3 2400 mm dia & 2.5 M long	m	38000.00
1228	4099	RCC pipe NP3 250 mm dia & 2.0 M long	m	750.00
1229	3803	RCC pipe NP3 300 mm dia & 2.5 M long	m	700.00
1230	4100	RCC pipe NP3 350 mm dia & 2.5 M long	m	1280.00
1231	3815	RCC pipe NP3 400 mm dia & 2.5 M long	m	1360.00
1232	3804	RCC pipe NP3 450 mm dia & 2.5 M long	m	1520.00
1233	3816	RCC pipe NP3 500 mm dia & 2.5 M long	m	1760.00
1234	3805	RCC pipe NP3 600 mm dia & 2.5 M long	m	1920.00
1235	3806	RCC pipe NP3 700 mm dia & 2.5 M long	m	2840.00
1236	3817	RCC pipe NP3 800 mm dia & 2.5 M long	m	3400.00
1237	3807	RCC pipe NP3 900 mm dia & 2.5 M long	m	3800.00
1238	5078	Reconditioning of bearing housing with all materials etc complete	job	90.00
1239	5081	Reconditioning of bronze or SS impeller with all materials etc complete	job	90.00
1240	5084	Reconditioning of GM neck ring with all materials etc complete	job	90.00
1241	5079	Reconditioning of sleeve (Leaded Bronze / Gun metal / SS) with all materials etc complete	job	90.00
1242	5077	Reconditioning of stuffing box with all materials etc complete	job	90.00
1243	4608	Remove of Hand Pump	each	89.00
1244	5022	Repair or replacement of existing panel for painting, welding,etc	each	5400.00
1245	5137	Repair capacitor bank breakers	job	28790.00
1246	5142	Repair diverter switch	job	64150.00
1247	5140	Repair filter house breakers <800amps	job	57925.00
1248	5139	Repair LT breaker <400 amps	job	57925.00
1249	4607	Repair of Hand Pump	each	45.00
1250	5138	Repair OLTC of transf.	job	40100.00
1251	5136	Repair reactor of Isolator	job	58550.00
1252	5153	Repair soft starter panel	job	58925.00
1253	5082	Repairing of Carbon steel / SS shaft EN-8 with all materials etc complete	job	90.00
1254	5101	Repairing of end shield and moto shaft with all material etc complete	job	90.00
1255	5099	Repairing of rotor with all materials etc complete	job	90.00
1256	5023	Repairing the totalizer unit	each	4500.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
1257	5080	Replacement of bush / type coupling with all materials etc complete	job	90.00
1258	5069	Replacement of gland packing with all materials etc complete	job	90.00
1259	5024	Re-placement of GSM modem by GPRS.	each	13500.00
1260	5068	Replacement of new mechanical water seal with material etc complete	job	90.00
1261	5152	Rewind HV side transf. <100KVA	job	64172.00
1262	5135	Rewind LV side transf. <100KVA	job	60300.00
1263	2573	Rubber Gasket SBR Quality 1000mm dia.	each	990.00
1264	2558	Rubber Gasket SBR Quality 100mm dia.	each	25.00
1265	3779	Rubber Gasket SBR Quality 1100mm dia.	each	1116.00
1266	2560	Rubber Gasket SBR Quality 150mm dia.	each	31.00
1267	2561	Rubber Gasket SBR Quality 200mm dia.	each	55.00
1268	4128	Rubber Gasket SBR Quality 2200mm dia.	each	3719.00
1269	4134	Rubber Gasket SBR Quality 2400mm dia.	each	4835.00
1270	2562	Rubber Gasket SBR Quality 250mm dia.	each	65.00
1271	2563	Rubber Gasket SBR Quality 300mm dia.	each	95.00
1272	2564	Rubber Gasket SBR Quality 350mm dia.	each	110.00
1273	2565	Rubber Gasket SBR Quality 400mm dia.	each	198.00
1274	2566	Rubber Gasket SBR Quality 450mm dia.	each	231.00
1275	2567	Rubber Gasket SBR Quality 500mm dia.	each	251.00
1276	2568	Rubber Gasket SBR Quality 600mm dia.	each	313.00
1277	2569	Rubber Gasket SBR Quality 700mm dia.	each	474.00
1278	2571	Rubber Gasket SBR Quality 800mm dia.	each	626.00
1279	2572	Rubber Gasket SBR Quality 900mm dia.	each	824.00
1280	4964	Rubber insertion 3mm thk for 1000mm dia. pipes	each	159.00
1281	3070	Rubber insertion 3mm thk for 100mm dia. pipes	each	12.00
1282	4965	Rubber insertion 3mm thk for 1100mm dia. pipes	each	203.00
1283	5238	Rubber insertion 3mm thk for 1200mm dia. pipes	each	213.00
1284	3071	Rubber insertion 3mm thk for 125mm dia. pipes	each	12.00
1285	3072	Rubber insertion 3mm thk for 150mm dia. pipes	each	17.00
1286	3073	Rubber insertion 3mm thk for 200mm dia. pipes	each	20.00
1287	3074	Rubber insertion 3mm thk for 250mm dia. pipes	each	32.00
1288	3075	Rubber insertion 3mm thk for 300mm dia. pipes	each	37.00
1289	3076	Rubber insertion 3mm thk for 350mm dia. pipes	each	41.00
1290	3077	Rubber insertion 3mm thk for 400mm dia. pipes	each	60.00
1291	3078	Rubber insertion 3mm thk for 450mm dia. pipes	each	76.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
1292	3079	Rubber insertion 3mm thk for 500mm dia. pipes	each	91.00
1293	3068	Rubber insertion 3mm thk for 50mm dia. pipes	each	6.00
1294	3080	Rubber insertion 3mm thk for 600mm dia. pipes	each	103.00
1295	3115	Rubber insertion 3mm thk for 700mm dia. pipes	each	114.00
1296	3116	Rubber insertion 3mm thk for 800mm dia. pipes	each	125.00
1297	3069	Rubber insertion 3mm thk for 80mm dia. pipes	each	8.00
1298	4963	Rubber insertion 3mm thk for 900mm dia. pipes	each	144.00
1299	5146	S&F 40 amps panel board	job	28790.00
1300	5147	S&F 85W LED fittings	each	15843.00
1301	5148	S&F KV indicator for RTCC	each	14840.00
1302	5149	S&F TP indicator for RTCC	each	17215.00
1303	4558	Seismic Refraction Survey for pipes	m	345.00
1304	5021	Sensor cable from flow sensor to transmitter panel.	m	270.00
1305	5124	Service Motors upto 1250KW, 6.6KV	job	58050.00
1306	5123	Servicing breakers of motors	job	64125.00
1307	5151	Servicing LOCB breakers	job	15642.00
1308	5144	Servicing transf. <400KVA	job	59360.00
1309	4072	SFRC MH Circ. 560 Frame+Cover HD	each	1400.00
1310	4073	SFRC MH Circ. 560 Frame+Cover MD	each	845.00
1311	5026	Shifting of transmitter panel with all points accessories	set	9000.00
1312	4829	Sodium Hypochlorite Solution with tank	each	80000.00
1313	3878	SS saddle strap fittings for 15mm	each	500.00
1314	3879	SS saddle strap fittings for 20mm	each	580.00
1315	3880	SS saddle strap fittings for 25mm	each	700.00
1316	5193	Steel for PVC liner	kg	228.00
1317	5145	Supply & braze motor cable	job	28790.00
1318	5134	Supply & replace insulator	job	14150.00
1319	5071	Supply of new Ball bearing (make SKF / FAG/NBC or equivalent with ISI /ISO specification) after removing the old bearing	job	90.00
1320	5100	Supply of New Ball bearing (make SKF/FAG/NBC or equivalent with ISI / ISO specification) after removing the Old Bearing.	job	90.00
1321	5108	Supply of new roller/ thrust bearing (make SKF / FAG/NBC or equivalent with ISI /ISO specification) after removing the old bearing	job	90.00
1322	5097	Supply of suitable super enamelled copper wires with F class insulation etc.Complete	job	90.00
1323	4552	Surface box & synthetic lid for gate valve	each	2500.00
1324	5851	Surface Box H4057 MD-KU	each	2250.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
1325	4952	SW junction pipes of 150 x 100mm dia.	each	350.00
1326	4953	SW junction pipes of 200 x 100mm dia.	each	450.00
1327	4954	SW junction pipes of 225 x 100mm dia.	each	525.00
1328	1452	SW pipe G-A 60cm L 100 mm dia	each	114.00
1329	1453	SW pipe G-A 60cm L 150 mm dia	each	185.00
1330	1454	SW pipe G-A 60cm L 200 mm dia	each	270.00
1331	1455	SW pipe G-A 60cm L 230 mm dia	each	330.00
1332	1456	SW pipe G-A 60cm L 250 mm dia	each	372.00
1333	1457	SW pipe G-A 60cm L 300 mm dia	each	660.00
1334	1458	SW pipe G-A 60cm L 380 mm dia	each	840.00
1335	5581	Terrameter (cost including Depriciation and Intrest)	each	5415.00
1336	5881	Terrameter cost including Depriciation and Intrest	each	5415.00
1337	5641	TP Air Valve PN 10 + accessories -200mm	each	34637.00
1338	5646	TP Air Valve PN 10 + accessories 80mm	each	19932.00
1339	5643	TP Air Valve PN 10+ accessories -150mm	each	33455.00
1340	5645	TP Air Valve PN 10+ accessories 50mm	each	19381.00
1341	5620	TP Air Valve PN 16 + accessories -100mm	each	25491.00
1342	5621	TP Air Valve PN 16 + accessories -150mm	each	33455.00
1343	5622	TP Air Valve PN 16 + accessories -200mm	each	34637.00
1344	5648	TP Air Valve PN 16 + accessories 80mm	each	19932.00
1345	5647	TP Air Valve PN 16+ accessories 50mm	each	19381.00
1346	5628	TP Air Valve PN 25 + accessories -200mm	each	43875.00
1347	5630	TP Air Valve PN 25 + accessories 80mm	each	33812.00
1348	5627	TP Air Valve PN 25+ accessories -150mm	each	37605.00
1349	5629	TP Air Valve PN 25+ accessories 50mm	each	23026.00
1350	5642	TPAir Valve PN 10 + accessories -100mm	each	25491.00
1351	5626	TPAir Valve PN 25 + accessories -100mm	each	31180.00
1352	4367	UPVC foam core pipe SN4 ring fit IS 16098 160mm dia.	m	335.00
1353	4356	UPVC foam core pipe SN4 self fit IS 16098 160mm dia.	m	340.00
1354	4357	UPVC foam core pipe SN4 self fit IS 16098 200mm dia.	m	550.00
1355	4358	UPVC foam core pipe SN4 self fit IS 16098 250mm dia.	m	900.00
1356	4359	UPVC foam core pipe SN4 self fit IS 16098 315mm dia.	m	1400.00
1357	4368	UPVC foam core pipe SN8 ring fit IS 16098 160mm dia.	m	395.00
1358	4361	UPVC foam core pipe SN8 self fit IS 16098 160mm dia.	m	425.00
1359	4362	UPVC foam core pipe SN8 self fit IS 16098 200mm dia.	m	650.00
1360	4363	UPVC foam core pipe SN8 self fit IS 16098 250mm dia.	m	1050.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
1361	4364	UPVC foam core pipe SN8 self fit IS 16098 315mm dia.	m	1700.00
1362	3388	UPVC pipe IS 16098 SN 4 - 110mm dia	m	160.00
1363	4268	UPVC pipe IS 16098 SN 4 - 125mm dia	m	235.00
1364	3389	UPVC pipe IS 16098 SN 4 - 160mm dia	m	390.00
1365	4269	UPVC pipe IS 16098 SN 4 - 200mm dia	m	600.00
1366	4270	UPVC pipe IS 16098 SN 4 - 250mm dia	m	970.00
1367	4271	UPVC pipe IS 16098 SN 4 - 315mm dia	m	1575.00
1368	3316	UPVC pipe IS 16098 SN 4 - 75mm dia	m	120.00
1369	4272	UPVC pipe IS 16098 SN 8 - 110mm dia	m	210.00
1370	4273	UPVC pipe IS 16098 SN 8 - 125mm dia	m	285.00
1371	4274	UPVC pipe IS 16098 SN 8 - 160mm dia	m	493.00
1372	4275	UPVC pipe IS 16098 SN 8 - 200mm dia	m	773.00
1373	4276	UPVC pipe IS 16098 SN 8 - 250mm dia	m	1198.00
1374	4277	UPVC pipe IS 16098 SN 8 - 315mm dia	m	1860.00
1375	5178	Vertical line draw machine	day	2000.00
1376	3047	Water for Concrete & Mortar making	100l	6.00
1377	3048	Water for curing works	l	1.00
1378	3375	Welding rod 10 SWG 1st run	each	4.50
1379	3376	Welding rod 8/6 SWG 2nd run	each	8.20
1380	5171	Y -type foundation bolts M33X300mm length of SS304 with nut & washer	kg	254.00
1381	D&R	Potassium Permanaganate	kg	1650.00
1382	D&R	Bleacing Powder	kg	464.00
1383	D&R	Glassware Cleaner	l	350.00
1384	D&R	Hand wash Cleaner	l	400.00
1385	D&R	Hand Gloves	pair	100.00
1386	D&R	Mask	pair	35.00
1387	D&R	Aprons	each	300.00
1388	D&R	Supply of Chlorine Gas in 100 KG Cylnder	each	17000.00
1389	D&R	Supply of Chlorine Gas in 900 KG Cylnder	each	49000.00
1390	D&R	conical flask 1000ml borosil	each	333.00
1391	D&R	conical flask 500ml borosil	each	196.00
1392	D&R	conical flask 250ml borosil	each	137.00
1393	D&R	conical flask 100ml borosil	each	93.00
1394	D&R	Beaker 1000ml Borosil	each	284.00
1395	D&R	Beaker 500ml Borosil	each	137.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
1396	D&R	Beaker 250ml Borosil	each	88.00
1397	D&R	Beaker 100ml Borosil	each	78.00
1398	D&R	Beaker 50ml Borosil	each	78.00
1399	D&R	Pipette Graduated 25ml Borosil A Grade with NABL Certificate	each	676.00
1400	D&R	Pipette Graduated 10ml Borosil A Grade with NABL Certificate	each	573.00
1401	D&R	Pipette Graduated 5ml Borosil A Grade with NABL Certificate	each	534.00
1402	D&R	Pipette Graduated 2ml Borosil A Grade with NABL Certificate	each	461.00
1403	D&R	Pipette Graduated 1ml Borosil A Grade with NABL Certificate	each	568.00
1404	D&R	Volumetric Pipette 10ml A Class with NABL Certificate	each	446.00
1405	D&R	Volumetric Pipette 5ml A Class with NABL Certificate	each	372.00
1406	D&R	Volumetric Pipette 2ml A Class with NABL Certificate	each	328.00
1407	D&R	Volumetric Pipette 1ml A Class with NABL Certificate	each	323.00
1408	D&R	Volumetric Pipette 25ml A Class with NABL Certificate	each	617.00
1409	D&R	Measuring Cylinder 1000ml Borosil A Class	each	2038.00
1410	D&R	Measuring Cylinder 500ml Borosil A Class	each	1671.00
1411	D&R	Measuring Cylinder 100ml Borosil A Class	each	813.00
1412	D&R	Measuring Cylidner 50ml Borosil A Class	each	715.00
1413	D&R	Measuring Cylinder 25ml Borosil A Class	each	593.00
1414	D&R	Measuring Cylinder 10ml Borosil A Class	each	515.00
1415	D&R	Measuring Cylinder 5ml Borosil A Class	each	451.00
1416	D&R	Glass Rod 20cm	each	25.00
1417	D&R	Volumetric Flask 2000ml Borosil A Grade with NABL Certificate	each	2651.00
1418	D&R	Volumetric Flask 1000ml Borosil A Grade with NABL Certificate	each	1632.00
1419	D&R	Volumetric Flask 500ml Borosil A Grade with NABL Certificate	each	1117.00
1420	D&R	Volumetric Flask 250ml Borosil A Grade with NABL Certified	each	853.00
1421	D&R	Volumetric Flask 100ml Borosil A Grade with NABL Certificate	each	603.00
1422	D&R	Volumetric Flask 50ml Borosil A Grade with NABL Certificate	each	617.00
1423	D&R	Volumetric Flask 25ml Borosil A Grade with NABL Certificate	each	1464.00
1424	D&R	Volumetric Flask 10ml Borosil A Grade with NABL Certificate	each	706.00
1425	D&R	Volumetric Flask 5ml Borosil A Grade with NABL Certificate	each	813.00
1426	D&R	Nessler's Tube 50ml Borosil	each	181.00
1427	D&R	Reagent Bottle Narrow 2000ml Borosilicate 3.3 Glass	each	1171.00
1428	D&R	Reagent Bottle Narrow 1000ml Borosilicate 3.3 Glass	each	637.00
1429	D&R	Reagent Bottle Narrow 500ml Borosilicate 3.3 Glass	each	397.00
1430	D&R	Reagent Bottle Narrow 250ml Borosilicate 3.3 Glass	each	370.00
1431	D&R	Reagent Bottle Narrow 100ml Borosilicate 3.3 Glass	each	397.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
1432	D&R	Reagent Bottle Narrow 60ml Borosilicate 3.3 Glass	each	397.00
1433	D&R	Reagent Bottle Amber 1000ml Borosilicate 3.3 Glass	each	990.00
1434	D&R	Spactula 6” SS	each	20.00
1435	D&R	Burette 50ml Borosil A Grade with NABL	each	2141.00
1436	D&R	Foreceps 6”	each	50.00
1437	D&R	Motor and Pestle 6”	each	410.00
1438	D&R	Motor and Pestle 4”	each	150.00
1439	D&R	Plastic Pipette Stand Round	each	280.00
1440	D&R	Plastic Burette Stand with clamps	each	550.00
1441	D&R	BOD Bottle 300ml	each	617.00
1442	D&R	Plastic Test Tube Stand 3 Tier 25mmx36	each	689.00
1443	D&R	Test Tube Holders	each	25.00
1444	D&R	Glass Droppers	each	25.00
1445	D&R	Funnel 6” Glass	each	417.00
1446	D&R	Funnel 2” Glass	each	123.00
1447	D&R	Analytical Weight Box 1mg to 200gm with NABL Class F2	each	16000.00
1448	D&R	Test Tube Cleaning Brush	each	18.00
1449	D&R	Non Absorbent Cotton Roll	each	210.00
1450	D&R	Petri Plates	each	93.00
1451	D&R	Evaporating Dish 55x23	each	486.00
1452	D&R	Watch Glass 4”	each	30.00
1453	D&R	Cuvette for UV Quartz	each	2700.00
1454	D&R	Cuvette for UV Glass	each	1800.00
1455	D&R	Cuvette for Turbiditymeter	each	35.00
1456	D&R	Tongs 12”	each	60.00
1457	D&R	Micropipette finn Thermo 5- 500	each	2695.00
1458	D&R	Micropipette Finn Thermo 1-100	each	2695.00
1459	D&R	Micropipette tips 5ml	each	550.00
1460	D&R	Micropipette tips 1ml	each	550.00
1461	D&R	Dessicator 300mm Glass with Borosilicate 3.3 Glass Complies with IS6128	each	20115.00
1462	D&R	Whatman Filter Paper No.41	each	3360.00
1463	D&R	Thermometer 110C	each	90.00
1464	D&R	Thermometer 360C	each	140.00
1465	D&R	Digital Hygrometer with NABL Certificate	each	1225.00
1466	D&R	First Aid Box metal with All Accessories	each	1798.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
1467	D&R	Beaker Plastic 100ml	each	50.00
1468	D&R	Chemical/ Reagents-Phenolpthlien %,Reagent-SR11	100gm	554.00
1469	D&R	Chemical/ Reagents-Sulphuric Acid 0.02N std,Reagent-SR13	500ml	202.00
1470	D&R	Chemical/ Reagents-Methyl Orenge 0.040%, Reagent-SR12	100gm	212.00
1471	D&R	Chemical/ Reagents-Silver Nitrate 0.02N std, Reagent-SR6	500ml	671.00
1472	D&R	Chemical/ Reagents-Silver Nitrate 0.02N std, Reagent-SR5	500ml	671.00
1473	D&R	Chemical/ Reagents-Reagent-7 (Zirconium Oxychloride, O-Xylanol), Reagent-SR7	500gm	1968.00
1474	D&R	Chemical/ Reagents- STD Fluoride Solution 100 ppm, Reagent-RD7 ,NIST trasable standard	500ml	6588.00
1475	D&R	Chemical/ Reagents-Tisab 3 buffer solution, Reagent-SR51, ,NIST trasable standard	500ml	13158.00
1476	D&R	Chemical/ Reagents-Edta 0.02 N std, O-Xylanol), Reagent-SR4	500ml	169.00
1477	D&R	Chemical/ Reagents-EBT 1%, Reagent-SR3	100gm	1233.00
1478	D&R	Chemical/ Reagents-Buffer Solution (ammonia/Amm.chloride), Reagent-SR2	500ml	264.00
1479	D&R	Chemical/ Reagents-STD Iron Solution 100 PPM, Reagent-RS8, NIST trasable standard	500ml	3140.00
1480	D&R	Chemical/ Reagents-Reagent-8(1:10phenonetrolie base, Hydroxyl amine hydrochloride, ammonium accetate), Reagent-SR8	10gm	340.00
1481	D&R	Chemical/ Reagents-HYDROCHLORIC ACID, Reagent-AR	500ml	291.00
1482	D&R	Chemical/ Reagents-SDT. Nitrate Solution 1000gm/l, Reagent-RS14,NIST trasable standard	500ml	5340.00
1483	D&R	Chemical/ Reagents-NFEDA Reagent/Sulphanalmide/Zin, Reagent-SR14	100gm	780.00
1484	D&R	Chemical/ Reagents-Reductant Reagent/Acetic Acid/Citric, Reagent-SR15	500gm	314.00
1485	D&R	Chemical/ Reagents-POTASSIUM CHLORIDE, Reagent-AR	500gm	312.00
1486	D&R	Chemical/ Reagents-BUFFER SOLUTION 4, 7, 10, Reagent-RS2	set	1440.00
1487	D&R	Chemical/ Reagents-SODIM CHLORIED SOL.STD 1000 PPM, Reagent-RS1	500ml	150.00
1488	D&R	Chemical/ Reagents-Mercury Papers/(Mercuric Lodide), Reagent-SR31	pkt	1108.00
1489	D&R	Chemical/ Reagents-Sulphamic Acid, Reagent-SR32	500gm	342.00
1490	D&R	Chemical/ Reagents-Zinc Granules, Reagent-SR33	500gm	1150.00
1491	D&R	Chemical/ Reagents-Sdt. 40 Ntu Sol. (Hydrazime Sulphate, Hexamethylene Tetramide), Reagent-RST,NIST trasable standard	100ml	5930.00
1492	D&R	Chemical/ Reagents-BARIUM CHLORIDE, Reagent-AR	500gm	428.00
1493	D&R	Chemical/ Reagents- STD. SULPHATE SOLUTION 1000 PPM, Reagent-SRS,NIST trasable standard	100ml	4950.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
1494	D&R	Chemical/ Reagents- REAGENT-Free Chlorine/DPD	100ml	650.00
1495	D&R	Chemical/ Reagents- SODIUM HYDROXIDE, Reagent-LR	500gm	264.00
1496	D&R	Chemical/ Reagents- SULPHURIC ACID CONC 99%, Reagent-LR	500ml	342.00
1497	D&R	Chemical/ Reagents- MURAXIDE INDICATOR, Reagent-LR	5gm	276.00
1498	D&R	Chemical/ Reagents- HYDROCHORIC ACIDE, Reagent-LR	500ml	280.00
1499	D&R	Chemical/ Reagents- BACTARIOLOGICAL VIALS, Reagent-LR	1 voil	50.00
1500	D&R	pH Buffer solution 4(Himedia/Merckfor normal pH meter) 4-100 Capsules/500ml	500ml	274.00
1501	D&R	pH Buffer solution (Himedia/Merckfor normal pH meter)7-100 Capsules/500ml	500ml	274.00
1502	D&R	PH Buffer solution (Himedia/Merckfor normal pH meter)10-100 Capsules/500ml	500ml	274.00
1503	D&R	Specific Conductance - Potassium chloride AR	500gm	312.00
1504	D&R	Total Dissolved Solid - Potassium chloride AR	500gm	312.00
1505	D&R	Turbidity - Hydrazine sulphate AR	100gm	447.00
1506	D&R	Turbidity - Hexamethylene Tetramine AR	500gm	504.00
1507	D&R	Total Alkanity - Phenolphthalein indicator	125ml	165.00
1508	D&R	Total Alkanity - Methyl Orange Indicator	125ml	175.00
1509	D&R	Total Alkanity - Sodium carbonate AR	500gm	360.00
1510	D&R	Total Alkanity - Sulphuric Acid AR	500ml	342.00
1511	D&R	Total Hardness - Eriochrome Black T AR	25gm	312.00
1512	D&R	Total Hardness - EDTA AR	500gm	1116.00
1513	D&R	Total Hardness - Ammonium Chloride AR	500gm	372.00
1514	D&R	Total Hardness - Triethenolamime AR	500ml	660.00
1515	D&R	Total Hardness - Calcium carbonate AR	500gm	360.00
1516	D&R	Total Hardness - Ammonia A	500ml	216.00
1517	D&R	Calcium Hardness - EDTA AR	500gm	1116.00
1518	D&R	Calcium Hardness - Calconcarboxylic acid AR	25gm	270.00
1519	D&R	Calcium Hardness - Sodium Sulphate AR	500gm	288.00
1520	D&R	Calcium Hardness - Triethenolamine AR	500ml	660.00
1521	D&R	Calcium Hardness - Calcium carbonate AR	500gm	360.00
1522	D&R	Calcium Hardness - Sodium Hydroxide AR	500gm	264.00
1523	D&R	Chloride - Pottassium Chromate AR	500gm	1200.00
1524	D&R	Chloride - Silver Nitrate AR	25gm	5640.00
1525	D&R	Chloride - Sodium Chloride AR	500gm	180.00
1526	D&R	Iron Method (1) 1-10 Phenanthroline Method - Ammonium Acetate AR	500gm	432.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
1527	D&R	Iron Method (1) 1-10 Phenanthroline Method - Glacial Acetic Acid AR	500ml	312.00
1528	D&R	Iron Method (1) 1-10 Phenanthroline Method - 1,10,Phenanthroline monohydrate AR	5gm	729.00
1529	D&R	Iron Method (1) 1-10 Phenanthroline Method - Hydroxylamine Hydrochloride AR	500gm	1920.00
1530	D&R	Iron Method (1) 1-10 Phenanthroline Method - Conc.Hydrochloric Acid AR	500ml	290.00
1531	D&R	Iron Method (1) 1-10 Phenanthroline Method - Sodium Acetate AR	500gm	480.00
1532	D&R	Iron Method (1) 1-10 Phenanthroline Method - Ferrous ammonium sulphate AR	500gm	360.00
1533	D&R	Iron Method (1) 1-10 Phenanthroline Method - Pottassium permanganate AR	500gm	564.00
1534	D&R	Fluoride Method (1) Zirconium oxychloride method - Sodium Fluoride AR	500gm	1020.00
1535	D&R	Fluoride Method (1) Zirconium oxychloride method - Alazarin S AR	25gm	774.00
1536	D&R	Fluoride Method (1) Zirconium oxychloride method - Zirconium Oxychloride AR	100gm	459.00
1537	D&R	Fluoride Method (1) Zirconium oxychloride method - Conc.Hydrochloric Acid AR	500ml	290.00
1538	D&R	Fluoride Method (1) Zirconium oxychloride method - Conc.Sulphuric Acid AR	500ml	342.00
1539	D&R	Fluoride Method (1) Zirconium oxychloride method - Sodium Hydroxide AR	500gm	360.00
1540	D&R	Fluoride Method (1) Zirconium oxychloride method - Sodium Thiosulphate AR	500gm	252.00
1541	D&R	Fluoride Method (2) Ion Selective Electrode Method - Fluoride Standard Solution 1000mg/L NIST	500ml	6588.00
1542	D&R	Fluoride Method (2) Ion Selective Electrode Method - TISAB III Concetrated NIST	500ml	15140.00
1543	D&R	Fluoride Method (3) SPADNS Photometric method - conc. Sulphuric acid AR	500ml	390.00
1544	D&R	Fluoride Method (3) SPADNS Photometric method - Silver Sulphate AR	25gm	6000.00
1545	D&R	Fluoride Method (3) SPADNS Photometric method - Sodium fluride AR	500gm	1020.00
1546	D&R	Fluoride Method (3) SPADNS Photometric method - SPADNS Reagent AR	25gm	4440.00
1547	D&R	Fluoride Method (3) SPADNS Photometric method - Zirconium oxy chloride octahydrate AR	100gm	2700.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
1548	D&R	Fluoride Method (3) SPADNS Photometric method - Sodium Arsenite AR	100gm	2160.00
1549	D&R	Fluoride Method (3) SPADNS Photometric method - Conc. Hydrochloric acid AR	500ml	290.00
1550	D&R	Nitrate Method (1) UV Spectrophotometer Screening Method - Phottassium Nitrate A	500gm	444.00
1551	D&R	Nitrate Method (1) UV Spectrophotometer Screening Method - Conc.Hydrochloric Acid AR	500ml	290.00
1552	D&R	Nitrate Method (2) Chromototropic acid Method - Potassium Nitrate AR	500gm	444.00
1553	D&R	Nitrate Method (2) Chromototropic acid Method - Anhydrous Sodium Sulphate AR	500gm	288.00
1554	D&R	Nitrate Method (2) Chromototropic acid Method - Urea AR	500gm	348.00
1555	D&R	Nitrate Method (2) Chromototropic acid Method - Antimony Metal	500gm	4080.00
1556	D&R	Nitrate Method (2) Chromototropic acid Method - Conc Sulphuric Acid AR	500ml	390.00
1557	D&R	Nitrate Method (2) Chromototropic acid Method - Conc Hydrochloric Acid AR	500ml	290.00
1558	D&R	Nitrate Method (2) Chromototropic acid Method - Chromotropic Acid Crystals AR	25gm	936.00
1559	D&R	Nitrate Method (3) Ion Selective Electrode Method - Aluminium Sulphate AR	500gm	336.00
1560	D&R	Nitrate Method (3) Ion Selective Electrode Method - Silver Sulphate AR	25gm	6000.00
1561	D&R	Nitrate Method (3) Ion Selective Electrode Method - Boric Acid AR	500gm	504.00
1562	D&R	Nitrate Method (3) Ion Selective Electrode Method - Sulphamic Acid AR	500gm	1140.00
1563	D&R	Nitrate Method (3) Ion Selective Electrode Method - Sodium Hydroxie Flakes AR	500gm	360.00
1564	D&R	Sulphate Method (1) Nephelo Turbidity meter - Sodium Sulphate AR	500gm	288.00
1565	D&R	Sulphate Method (1) Nephelo Turbidity meter - Iso-propyl alcohal AR	500ml	432.00
1566	D&R	Sulphate Method (1) Nephelo Turbidity meter - Glycerol AR	500ml	456.00
1567	D&R	Sulphate Method (1) Nephelo Turbidity meter - Conc.Hydrochloric Acid AR	500ml	290.00
1568	D&R	Sulphate Method (1) Nephelo Turbidity meter - Sodium Chloride AR	500gm	180.00
1569	D&R	Sulphate Method (2) Spectrophotometer Method - Sodium Sulphate AR	500gm	288.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
1570	D&R	Sulphate Method (2) Spectrophotometer Method - Magnesium Chloride AR	500gm	336.00
1571	D&R	Sulphate Method (2) Spectrophotometer Method - Sodium Acetate AR	500gm	480.00
1572	D&R	Sulphate Method (2) Spectrophotometer Method - Potassium Nitrate AR	500gm	444.00
1573	D&R	Sulphate Method (2) Spectrophotometer Method - Glacial Acetic Acid AR	500ml	312.00
1574	D&R	Sulphate Method (2) Spectrophotometer Method - Conc Hydrochloric Acid AR	500ml	290.00
1575	D&R	Sulphate Method (2) Spectrophotometer Method - Barium Chloride AR	500ml	396.00
1576	D&R	Total Coliforms - H2S vials-1 box contain 10 bottles	1box	390.00
1577	D&R	E-coli - H2S vials-1 box contain 10 bottles	1box	390.00
1578	D&R	Providing and fixing PVC water stopper	m	310.00
1579	D&R	Providing, fixing, applying of contraction joint with suitable type PVC water stopper	m	600.00
1580	D&R	Erection and positioning of RCC Hume pipe	each	1882.00
1581	D&R	25mm dia PVC couplers	each	13.00
1582	D&R	32mm dia PVC couplers	each	17.00
1583	D&R	40mm dia PVC couplers	each	24.00
1584	D&R	50mm dia PVC couplers	each	29.00
1585	D&R	63mm dia PVC couplers	each	45.00
1586	D&R	75mm dia PVC couplers	each	70.00
1587	D&R	90mm dia PVC couplers	each	130.00
1588	D&R	110mm dia PVC couplers	each	178.00
1589	D&R	140mm dia PVC couplers	each	228.00
1590	D&R	160mm dia PVC couplers	each	349.00
1591	D&R	180mm dia PVC couplers	each	410.00
1592	D&R	200mm dia PVC couplers	each	493.00
1593	D&R	225mm dia PVC couplers	each	565.00
1594	D&R	250mm dia PVC couplers	each	687.00
1595	D&R	280mm dia PVC couplers	each	877.00
1596	D&R	315mm dia PVC couplers	each	1238.00
1597	D&R	25 mm dia PVC Elbows	each	17.00
1598	D&R	32 mm dia PVC Elbows	each	22.00
1599	D&R	40 mm dia PVC Elbows	each	43.00
1600	D&R	50 mm dia PVC Elbows	each	69.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
1601	D&R	63 mm dia PVC Elbows	each	105.00
1602	D&R	75 mm dia PVC Elbows	each	200.00
1603	D&R	90 mm dia PVC Elbows	each	288.00
1604	D&R	110 mm dia PVC Elbows	each	315.00
1605	D&R	140 mm dia PVC Elbows	each	372.00
1606	D&R	160 mm dia PVC Elbows	each	491.00
1607	D&R	180 mm dia PVC Elbows	each	527.00
1608	D&R	200 mm dia PVC Elbows	each	615.00
1609	D&R	225 mm dia PVC Elbows	each	769.00
1610	D&R	250 mm dia PVC Elbows	each	922.00
1611	D&R	280 mm dia PVC Elbows	each	1188.00
1612	D&R	315 mm dia PVC Elbows	each	1522.00
1613	D&R	25 mm dia PVC Tee	each	22.00
1614	D&R	32 mm dia PVC Tee	each	33.00
1615	D&R	40 mm dia PVC Tee	each	41.00
1616	D&R	50 mm dia PVC Tee	each	64.00
1617	D&R	63 mm dia PVC Tee	each	80.00
1618	D&R	75 mm dia PVC Tee	each	122.00
1619	D&R	90 mm dia PVC Tee	each	178.00
1620	D&R	110 mm dia PVC Tee	each	262.00
1621	D&R	140 mm dia PVC Tee	each	373.00
1622	D&R	160 mm dia PVC Tee	each	486.00
1623	D&R	180 mm dia PVC Tee	each	613.00
1624	D&R	200 mm dia PVC Tee	each	722.00
1625	D&R	225 mm dia PVC Tee	each	889.00
1626	D&R	250 mm dia PVC Tee	each	1289.00
1627	D&R	280 mm dia PVC Tee	each	1872.00
1628	D&R	315 mm dia PVC Tee	each	2534.00
1629	D&R	25 mm dia PVC BEND	each	25.00
1630	D&R	32 mm dia PVC BEND	each	38.00
1631	D&R	40 mm dia PVC BEND	each	59.00
1632	D&R	50 mm dia PVC BEND	each	93.00
1633	D&R	63 mm dia PVC BEND	each	174.00
1634	D&R	75 mm dia PVC BEND	each	255.00
1635	D&R	90 mm dia PVC BEND	each	407.00
1636	D&R	110 mm dia PVC BEND	each	513.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
1637	D&R	140 mm dia PVC BEND	each	622.00
1638	D&R	160 mm dia PVC BEND	each	703.00
1639	D&R	180 mm dia PVC BEND	each	814.00
1640	D&R	200 mm dia PVC BEND	each	978.00
1641	D&R	225 mm dia PVC BEND	each	1151.00
1642	D&R	250 mm dia PVC BEND	each	1522.00
1643	D&R	280 mm dia PVC BEND	each	1933.00
1644	D&R	315 mm dia PVC BEND	each	2672.00
1645	D&R	25 mm dia PVC SERVICE SADDLES	each	40.00
1646	D&R	32 mm dia PVC SERVICE SADDLES	each	69.00
1647	D&R	40 mm dia PVC SERVICE SADDLES	each	91.00
1648	D&R	50 mm dia PVC SERVICE SADDLES	each	107.00
1649	D&R	63 mm dia PVC SERVICE SADDLES	each	142.00
1650	D&R	75 mm dia PVC SERVICE SADDLES	each	183.00
1651	D&R	90 mm dia PVC SERVICE SADDLES	each	220.00
1652	D&R	110 mm dia PVC SERVICE SADDLES	each	271.00
1653	D&R	140 mm dia PVC SERVICE SADDLES	each	324.00
1654	D&R	160 mm dia PVC SERVICE SADDLES	each	403.00
1655	D&R	180 mm dia PVC SERVICE SADDLES	each	493.00
1656	D&R	200 mm dia PVC SERVICE SADDLES	each	571.00
1657	D&R	225 mm dia PVC SERVICE SADDLES	each	694.00
1658	D&R	250 mm dia PVC SERVICE SADDLES	each	815.00
1659	D&R	280 mm dia PVC SERVICE SADDLES	each	969.00
1660	D&R	315 mm dia PVC SERVICE SADDLES	each	1251.00
1661	D&R	25 mm dia PVC REDUCER	each	35.00
1662	D&R	32 mm dia PVC REDUCER	each	42.00
1663	D&R	40 mm dia PVC REDUCER	each	50.00
1664	D&R	50 mm dia PVC REDUCER	each	62.00
1665	D&R	63 mm dia PVC REDUCER	each	93.00
1666	D&R	75 mm dia PVC REDUCER	each	108.00
1667	D&R	90 mm dia PVC REDUCER	each	154.00
1668	D&R	110 mm dia PVC REDUCER	each	272.00
1669	D&R	140 mm dia PVC REDUCER	each	334.00
1670	D&R	160 mm dia PVC REDUCER	each	526.00
1671	D&R	180 mm dia PVC REDUCER	each	687.00
1672	D&R	200 mm dia PVC REDUCER	each	825.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
1673	D&R	225 mm dia PVC REDUCER	each	993.00
1674	D&R	250 mm dia PVC REDUCER	each	1255.00
1675	D&R	280 mm dia PVC REDUCER	each	1432.00
1676	D&R	315 mm dia PVC REDUCER	each	1684.00
1677	D&R	15 mm dia GI collar	kg	38.00
1678	D&R	20 mm dia GI collar	kg	65.00
1679	D&R	25 mm dia GI collar	kg	93.00
1680	D&R	32 mm dia GI collar	kg	115.00
1681	D&R	40 mm dia GI collar	kg	135.00
1682	D&R	50 mm dia GI collar	kg	175.00
1683	D&R	65 mm dia GI collar	kg	205.00
1684	D&R	80 mm dia GI collar	kg	275.00
1685	D&R	100 mm dia GI collar	kg	345.00
1686	D&R	125 mm dia GI collar	kg	435.00
1687	D&R	150 mm dia GI collar	kg	475.00
1688	D&R	15 mm dia GI elbow	each	38.00
1689	D&R	20 mm dia GI elbow	each	65.00
1690	D&R	25 mm dia GI elbow	each	79.00
1691	D&R	32 mm dia GI elbow	each	105.00
1692	D&R	40 mm dia GI elbow	each	135.00
1693	D&R	50 mm dia GI elbow	each	175.00
1694	D&R	65 mm dia GI elbow	each	195.00
1695	D&R	80 mm dia GI elbow	each	285.00
1696	D&R	100 mm dia GI elbow	each	335.00
1697	D&R	125 mm dia GI elbow	each	395.00
1698	D&R	150 mm dia GI elbow	each	445.00
1699	D&R	15 mm dia GI BEND	each	65.00
1700	D&R	20 mm dia GI BEND	each	80.00
1701	D&R	25 mm dia GI BEND	each	95.00
1702	D&R	32 mm dia GI BEND	each	135.00
1703	D&R	40 mm dia GI BEND	each	175.00
1704	D&R	50 mm dia GI BEND	each	235.00
1705	D&R	65 mm dia GI BEND	each	265.00
1706	D&R	80 mm dia GI BEND	each	335.00
1707	D&R	100 mm dia GI BEND	each	410.00
1708	D&R	125 mm dia GI BEND	each	465.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
1709	D&R	150 mm dia GI BEND	each	495.00
1710	D&R	15 mm dia GI TEE	each	40.00
1711	D&R	20 mm dia GI TEE	each	70.00
1712	D&R	25 mm dia GI TEE	each	90.00
1713	D&R	32 mm dia GI TEE	each	115.00
1714	D&R	40 mm dia GI TEE	each	125.00
1715	D&R	50 mm dia GI TEE	each	195.00
1716	D&R	65 mm dia GI TEE	each	245.00
1717	D&R	80 mm dia GI TEE	each	297.00
1718	D&R	100 mm dia GI TEE	each	415.00
1719	D&R	125 mm dia GI TEE	each	530.00
1720	D&R	150 mm dia GI TEE	each	625.00
1721	D&R	15 mm dia GI socket	each	35.00
1722	D&R	20 mm dia GI socket	each	55.00
1723	D&R	25 mm dia GI socket	each	75.00
1724	D&R	32 mm dia GI socket	each	95.00
1725	D&R	40 mm dia GI socket	each	145.00
1726	D&R	50 mm dia GI socket	each	195.00
1727	D&R	65 mm dia GI socket	each	245.00
1728	D&R	80 mm dia GI socket	each	310.00
1729	D&R	100 mm dia GI socket	each	385.00
1730	D&R	125 mm dia GI socket	each	420.00
1731	D&R	150 mm dia GI socket	each	500.00
1732	D&R	15 mm dia GI Plugs	each	35.00
1733	D&R	20 mm dia GI Plugs	each	45.00
1734	D&R	25 mm dia GI Plugs	each	65.00
1735	D&R	32 mm dia GI Plugs	each	85.00
1736	D&R	40 mm dia GI Plugs	each	115.00
1737	D&R	50 mm dia GI Plugs	each	130.00
1738	D&R	65 mm dia GI Plugs	each	155.00
1739	D&R	80 mm dia GI Plugs	each	175.00
1740	D&R	100 mm dia GI Plugs	each	245.00
1741	D&R	125 mm dia GI Plugs	each	295.00
1742	D&R	150 mm dia GI Plugs	each	335.00
1743	D&R	15 mm dia GI Union	each	55.00
1744	D&R	20 mm dia GI Union	each	85.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
1745	D&R	25 mm dia GI Union	each	105.00
1746	D&R	32 mm dia GI Union	each	125.00
1747	D&R	40 mm dia GI Union	each	155.00
1748	D&R	50 mm dia GI Union	each	175.00
1749	D&R	65 mm dia GI Union	each	230.00
1750	D&R	80 mm dia GI Union	each	395.00
1751	D&R	100 mm dia GI Union	each	425.00
1752	D&R	125 mm dia GI Union	each	455.00
1753	D&R	150 mm dia GI Union	each	535.00
1754	D&R	15 mm dia GI Back nut/ check nut	each	45.00
1755	D&R	20 mm dia GI Back nut/ check nut	each	65.00
1756	D&R	25 mm dia GI Back nut/ check nut	each	95.00
1757	D&R	32 mm dia GI Back nut/ check nut	each	115.00
1758	D&R	40 mm dia GI Back nut/ check nut	each	135.00
1759	D&R	50 mm dia GI Back nut/ check nut	each	175.00
1760	D&R	65 mm dia GI Back nut/ check nut	each	195.00
1761	D&R	80 mm dia GI Back nut/ check nut	each	290.00
1762	D&R	100 mm dia GI Back nut/ check nut	each	540.00
1763	D&R	125 mm dia GI Back nut/ check nut	each	540.00
1764	D&R	150 mm dia GI Back nut/ check nut	each	590.00
1765	D&R	15 mm dia GI hexagonal nipple	each	55.00
1766	D&R	20 mm dia GI hexagonal nipple	each	65.00
1767	D&R	25 mm dia GI hexagonal nipple	each	85.00
1768	D&R	32 mm dia GI hexagonal nipple	each	105.00
1769	D&R	40 mm dia GI hexagonal nipple	each	120.00
1770	D&R	50 mm dia GI hexagonal nipple	each	140.00
1771	D&R	65 mm dia GI hexagonal nipple	each	165.00
1772	D&R	80 mm dia GI hexagonal nipple	each	185.00
1773	D&R	100 mm dia GI hexagonal nipple	each	235.00
1774	D&R	125 mm dia GI hexagonal nipple	each	260.00
1775	D&R	150 mm dia GI hexagonal nipple	each	295.00
1776	D&R	15 mm dia GM (Copper alloy) Gate valves	each	516.00
1777	D&R	20 mm dia GM (Copper alloy) Gate valves	each	710.00
1778	D&R	25 mm dia GM (Copper alloy) Gate valves	each	935.00
1779	D&R	32 mm dia GM (Copper alloy) Gate valves	each	1070.00
1780	D&R	40 mm dia GM (Copper alloy) Gate valves	each	1200.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
1781	D&R	50 mm dia GM (Copper alloy) Gate valves	each	1350.00
1782	D&R	65 mm dia GM (Copper alloy) Gate valves	each	1495.00
1783	D&R	80 mm dia GM (Copper alloy) Gate valves	each	1585.00
1784	D&R	100 mm dia GM (Copper alloy) Gate valves	each	1635.00
1785	D&R	125 mm dia GM (Copper alloy) Gate valves	each	1775.00
1786	D&R	150 mm dia GM (Copper alloy) Gate valves	each	2185.00
1787	D&R	15 mm dia GM (Copper alloy) Globe valves	each	325.00
1788	D&R	20 mm dia GM (Copper alloy) Globe valves	each	385.00
1789	D&R	25 mm dia GM (Copper alloy) Globe valves	each	430.00
1790	D&R	32 mm dia GM (Copper alloy) Globe valves	each	485.00
1791	D&R	40 mm dia GM (Copper alloy) Globe valves	each	575.00
1792	D&R	50 mm dia GM (Copper alloy) Globe valves	each	635.00
1793	D&R	65 mm dia GM (Copper alloy) Globe valves	each	685.00
1794	D&R	80 mm dia GM (Copper alloy) Globe valves	each	745.00
1795	D&R	100 mm dia GM (Copper alloy) Gate valves	each	865.00
1796	D&R	125 mm dia GM (Copper alloy) Globe valves	each	935.00
1797	D&R	150 mm dia GM (Copper alloy) Gate valves	each	1075.00
1798	D&R	15 mm dia GM (Copper alloy) wheel valves/ check valve	each	455.00
1799	D&R	20 mm dia GM (Copper alloy) wheel valves/ check valve	each	550.00
1800	D&R	25 mm dia GM (Copper alloy) wheel valves/ check valve	each	725.00
1801	D&R	32 mm dia GM (Copper alloy) wheel valves/ check valve	each	830.00
1802	D&R	40 mm dia GM (Copper alloy) wheel valves/ check valve	each	910.00
1803	D&R	50 mm dia GM (Copper alloy) wheel valves/ check valve	each	1025.00
1804	D&R	65 mm dia GM (Copper alloy) wheel valves/ check valve	each	1150.00
1805	D&R	80 mm dia GM (Copper alloy) wheel valves/ check valve	each	1285.00
1806	D&R	100 mm dia GM (Copper alloy) wheel valves/ check valve	each	1415.00
1807	D&R	125 mm dia GM (Copper alloy) wheel valves/ check valve	each	1545.00
1808	D&R	150 mm dia GM (Copper alloy) wheel valves/ check valve	each	1680.00
1809	D&R	15 mm dia GM ferrules	each	240.00
1810	D&R	20 mm dia GM ferrules	each	345.00
1811	D&R	25 mm dia GM ferrules	each	390.00
1812	D&R	15 mm dia GM gland cocks	each	235.00
1813	D&R	20 mm dia GM gland cocks	each	335.00
1814	D&R	25 mm dia GM gland cocks	each	410.00
1815	D&R	32 mm dia GM gland cocks	each	475.00
1816	D&R	40 mm dia GM gland cocks	each	575.00

SL. No	MAT. Code	Description	BASIC UNIT	BASIC RATE
1817	D&R	50 mm dia GM gland cocks	each	630.00
1818	D&R	Providing and fixing MS casing collars	each	150.00
1819	D&R	Providing and laying at site of work MS casing caps	each	100.00
1820	D&R	Indion 1496	kg	412.50
1821	D&R	Hydro chloric acid	kg	20.00
1822	D&R	Polydamac Indfloc 238 Coagulant for WTP	kg	354.00
1823	D&R	Polycryamide Indfloc 27 Floculant for WTP	kg	606.00

CHAPTER - 1
WATER SUPPLY - DUCTILE IRON (DI) SPECIALS

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
1	A010	Suppling Ductile Iron Push on special confirming to IS 9523:2000 . All Socketed Bends		
1.1	A010A	100mm diameter 11.25^0	each	1112
1.2	A010B	100mm diameter 22.50^0	each	1191
1.3	A010C	100mm diameter 45^0	each	1680
1.4	A010D	100mm diameter 90^0	each	1478
1.5	A010E	150mm diameter 11.25^0	each	1748
1.6	A010F	150mm diameter 22.50^0	each	1796
1.7	A010G	150mm diameter 45^0	each	2018
1.8	A010H	150mm diameter 90^0	each	2560
1.9	A010I	200mm diameter 11.25^0	each	2630
1.10	A010J	200mm diameter 22.50^0	each	2764
1.11	A010K	200mm diameter 45^0	each	3395
1.12	A010L	200mm diameter 90^0	each	4370
1.13	A010M	250mm diameter 11.25^0	each	3447
1.14	A010N	250mm diameter 22.50^0	each	3762
1.15	A010O	250mm diameter 45^0	each	4644
1.16	A010P	250mm diameter 90^0	each	6075
1.17	A010Q	300mm diameter 11.25^0	each	4828
1.18	A010R	300mm diameter 22.50^0	each	5759
1.19	A010S	300mm diameter 45^0	each	7058
1.20	A010T	300mm diameter 90^0	each	9128
1.21	A010U	350mm diameter 11.25^0	each	6348
1.22	A010V	350mm diameter 22.50^0	each	7485
1.23	A010W	350mm diameter 45^0	each	9522
1.24	A010X	350mm diameter 90^0	each	13531
1.25	A010Y	400mm diameter 11.25^0	each	9111
1.26	A010Z	400mm diameter 22.50^0	each	10437
2	A011	Suppling Ductile Iron Push on special confirming to IS 9523:2000 . **All Socketed Bends**		
2.1	A011A	400mm diameter 45^0	each	13203
2.2	A011B	400mm diameter 90^0	each	18486
2.3	A011C	450mm diameter 11.25^0	each	11392
2.4	A011D	450mm diameter 22.50^0	each	12994
2.5	A011E	450mm diameter 45^0	each	17070

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
2.6	A011F	450mm diameter 90^0	each	23428
2.7	A011G	500mm diameter 11.25^0	each	13785
2.8	A011H	500mm diameter 22.50^0	each	16738
2.9	A011I	500mm diameter 45^0	each	22920
2.10	A011J	500mm diameter 90^0	each	31841
2.11	A011K	600mm diameter 11.25^0	each	20461
2.12	A011L	600mm diameter 22.50^0	each	25905
2.13	A011M	600mm diameter 45^0	each	33959
2.14	A011N	600mm diameter 90^0	each	49531
3	A014	Suppling Ductile Iron Push on special confirming to IS 9523:2000 - **All Socketed D.I. Equal Tees**		
3.1	A014A	100mm X 100mm X 100mm	each	2034
3.2	A014B	150mm X 150mm X 150mm	each	3211
3.3	A014C	200mm X 200mm X 200mm	each	5227
3.4	A014D	250mm X 250mm X 250mm	each	5541
3.5	A014E	300mm X 300mm X 300mm	each	11251
3.6	A014F	450mm X 450mm X 450mm	each	25744
3.7	A014G	500mm X 500mm X 500mm	each	32957
3.8	A014H	600mm X 600mm X 600mm	each	47083
4	A015	Suppling Ductile Iron Push on special confirming to IS 9523:2000 - **Double Socketed with flanged Branch D.I. Un-Equal Tees**		
4.1	A015A	150mm X 150mm X 100mm	each	2220
4.2	A015B	200mm X 200mm X 100mm	each	3122
4.3	A015C	250mm X 250mm X 100mm	each	4077
4.4	A015D	300mm X 300mm X 100mm	each	5313
4.5	A015E	350mm X 350mm X 100mm	each	8763
4.6	A015F	400mm X 400mm X 100mm	each	7679
4.7	A015G	450mm X 450mm X 100mm	each	11264
4.8	A015H	500mm X 500mm X 100mm	each	14117
4.9	A015I	600mm X 600mm X 150mm	each	17350
5	A016	Suppling Ductile Iron Push on special confirming to IS 9523:2000 - **All Socketed D.I. Un-Equal Tees**		
5.1	A016A	100mm X 80mm	each	1963
5.2	A016B	150mm X 80mm	each	2865
5.3	A016C	150mm X 100mm	each	2781
5.4	A016D	200mm X 80mm	each	3909
5.5	A016E	200mm X 100mm	each	3961
5.6	A016F	200mm X 150mm	each	4545

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
5.7	A016G	250mm X 80mm	each	5126
5.8	A016H	250mm X 100mm	each	5093
5.9	A016I	250mm X 150mm	each	6059
5.10	A016J	250mm X 200mm	each	6492
5.11	A016K	300mm X 100mm	each	5594
5.12	A016L	300mm X 150mm	each	8208
5.13	A016M	300mm X 200mm	each	8872
5.14	A016N	300mm X 250mm	each	9837
5.15	A016O	350mm X 100mm	each	8135
5.16	A016P	350mm X 150mm	each	9545
5.17	A016Q	350mm X 200mm	each	11162
5.18	A016R	350mm X 250mm	each	13150
5.19	A016S	350mm X 300mm	each	16010
5.20	A016T	400mm X 80mm	each	10938
5.21	A016U	400mm X 100mm	each	11095
5.22	A016V	400mm X 150mm	each	12141
5.23	A016W	400mm X 200mm	each	13813
5.24	A016X	400mm X 250mm	each	14823
5.25	A016Y	400mm X 300mm	each	16478
5.26	A016Z	400mm X 350mm	each	21774
6	A017	Suppling Ductile Iron Push on special confirming to IS 9523:2000 - **All Socketed D.I. Un-Equal Tees**		
6.1	A017A	450mm X 100mm	each	13169
6.2	A017B	450mm X 150mm	each	15171
6.3	A017C	450mm X 200mm	each	16669
6.4	A017D	450mm X 250mm	each	18840
6.5	A017E	450mm X 300mm	each	19682
6.6	A017F	450mm X 350mm	each	23791
6.7	A017G	450mm X 400mm	each	26093
6.8	A017I	500mm X 100mm	each	16221
6.9	A017J	500mm X 150mm	each	17830
6.10	A017K	500mm X 200mm	each	20372
6.11	A017L	500mm X 250mm	each	22253
6.12	A017M	500mm X 300mm	each	25385
6.13	A017N	500mm X 350mm	each	25958
6.14	A017O	500mm X 400mm	each	27032
6.15	A017P	500mm X 450mm	each	16221

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
6.16	A017Q	600mm X 100mm	each	23094
6.17	A017R	600mm X 150mm	each	25063
6.18	A017S	600mm X 200mm	each	26225
6.19	A017T	600mm X 250mm	each	27480
6.20	A017U	600mm X 300mm	each	30111
6.21	A017V	600mm X 350mm	each	32547
6.22	A017W	600mm X 400mm	each	36163
6.23	A017X	600mm X 450mm	each	38526
6.24	A017Y	600mm X 500mm	each	39653
7	A020	Suppling Ductile Iron Push on special confirming to IS 9523:2000 - **All Socketed D.I. Reducers / Tapers**		
7.1	A020A	100 X 80 mm	each	1097
7.2	A020B	150 X 80 mm	each	1804
7.3	A020C	150 X 100 mm	each	1927
7.4	A020D	200 X 100 mm	each	2780
7.5	A020E	200 X 150 mm	each	2646
7.6	A020F	250 X 100 mm	each	3812
7.7	A020G	250 X 150 mm	each	3895
7.8	A020H	250 X 200 mm	each	3545
7.9	A020I	300 X 100 mm	each	5626
7.10	A020J	300 X 150 mm	each	5626
7.11	A020K	300 X 200 mm	each	5484
7.12	A020L	300 X 250 mm	each	5165
7.13	A020M	350 X 150 mm	each	7937
7.14	A020N	350 X 200 mm	each	7385
7.15	A020O	350 X 250 mm	each	6898
7.16	A020P	350 X 300 mm	each	6529
7.17	A020Q	400 X 150 mm	each	7298
7.18	A020R	400 X 200 mm	each	10816
7.19	A020S	400 X 250 mm	each	10083
7.20	A020T	400 X 300 mm	each	8935
7.21	A020U	400 X 350 mm	each	8278
7.22	A020V	450 X 250 mm	each	12118
7.23	A020W	450 X 300 mm	each	12402
7.24	A020X	450 X 350 mm	each	11410
7.25	A020Y	450 X 400 mm	each	10437
7.26	A020Z	500 X 100 mm	each	8698

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
8	A021	Suppling Ductile Iron Push on special confirming to IS 9523:2000 - **All Socketed D.I. Reducers / Tapers**		
8.1	A021A	500 X 150 mm	each	8710
8.2	A021B	500 X 200 mm	each	9267
8.3	A021C	500 X 250 mm	each	16628
8.4	A021D	500 X 300 mm	each	16628
8.5	A021E	500 X 350 mm	each	15504
8.6	A021F	500 X 400 mm	each	14912
8.7	A021G	500 X 450 mm	each	13069
8.8	A021H	600 X 150 mm	each	10110
8.9	A021I	600 X 200 mm	each	10754
8.10	A021J	600 X 250 mm	each	11440
8.11	A021K	600 X 300 mm	each	12172
8.12	A021L	600 X 350 mm	each	24412
8.13	A021M	600 X 400 mm	each	23881
8.14	A021N	600 X 450 mm	each	22629
8.15	A021O	600 X 500 mm	each	20635
9	A025	Suppling Ductile Iron Push on special confirming to IS 9523:2000 - **All D.I. Flanged Sockets, D.I. Flanged Spigots, MS End Plates**		
9.1	A025A	D.I. Flanged Sockets: 100.00 mm	each	1256
9.2	A025B	150.00 mm	each	2034
9.3	A025C	200.00 mm	each	2746
9.4	A025D	250.00 mm	each	4051
9.5	A025E	300.00 mm	each	5028
9.6	A025F	350.00 mm	each	7228
9.7	A025G	400.00 mm	each	8771
9.8	A025H	450.00 mm	each	10703
9.9	A025I	500.00 mm	each	13621
9.10	A025J	600.00 mm	each	19901
9.11	A025K	700.00 mm	each	32779
9.12	A025L	800.00 mm	each	43738
9.13	A025M	900.00 mm	each	54807
9.14	A025N	1000.00 mm	each	81019
9.15	A025O	**D.I. Flanged Spigots:** 100.00 mm	each	1415
9.16	A025P	150.00 mm	each	2362
9.17	A025Q	200.00 mm	each	3397
9.18	A025R	250.00 mm	each	4790

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
9.19	A025S	300.00 mm	each	6133
9.20	A025T	350.00 mm	each	9089
9.21	A025U	400.00 mm	each	11127
9.22	A025V	450.00 mm	each	13759
9.23	A025W	500.00 mm	each	17412
9.24	A025X	600.00 mm	each	24546
9.25	A025Y	700.00 mm	each	39409
9.26	A025Z	800.00 mm	each	51130
9.27	A025AA	900.00 mm	each	64313
9.28	A025AB	1000.00 mm	each	82556
9.29	A025AC	MS End Plates : 100.00 mm	each	627
9.30	A025AD	150.00 mm	each	1125
9.31	A025AE	200.00 mm	each	1874
9.32	A025AF	250.00 mm	each	2753
9.33	A025AG	300.00 mm	each	4194
10	A026	Suppling Ductile Iron Push on special confirming to IS 9523:2000 - **All D.I. Flanged MJ COLLAR**		
10.1	A026A	MJ COLLAR 100.00 mm	each	1002
10.2	A026B	MJ COLLAR 150.00 mm	each	1429
10.3	A026C	MJ COLLAR 200.00 mm	each	2581
10.4	A026D	MJ COLLAR 250.00 mm	each	4711
10.5	A026E	MJ COLLAR 300.00 mm	each	6876
10.6	A026F	MJ COLLAR 350.00 mm	each	5749
10.7	A026G	MJ COLLAR 400.00 mm	each	6915
10.8	A026H	MJ COLLAR 450.00 mm	each	11217
10.9	A026I	MJ COLLAR 500.00 mm	each	14465
10.10	A026J	MJ COLLAR 600.00 mm	each	20266
10.11	A026K	MJ COLLAR 700.00 mm	each	36821
10.12	A026L	MJ COLLAR 800.00 mm	each	46804
10.13	A026M	MJ COLLAR 900.00 mm	each	77655
10.14	A026N	MJ COLLAR 1000.00 mm	each	126381
11	A027	Suppling Ductile Iron Push on special confirming to IS 9523:2000 - **All Double Chambered Restarined Joint DI K12 Specials:** (To be Considered for Alternative to avoid concrete thrust blocks along with minimum length of Restarined joint DI pipes at bends).		
11.1	A027A	80 X 11.25^0	each	2144
11.2	A027B	80 X 22.5^0	each	1966
11.3	A027C	80 X 45^0	each	2109

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
11.4	A027D	80 X 90^0	each	2502
11.5	A027E	100 X 11.25^0	each	2502
11.6	A027F	100 X 22.5^0	each	2680
11.7	A027G	100 X 45^0	each	2999
11.8	A027H	100 X 90^0	each	3326
11.9	A027I	150 X 11.25^0	each	3932
11.10	A027J	150 X 22.5^0	each	4041
11.11	A027K	150 X 45^0	each	4541
11.12	A027L	150 X 90^0	each	5759
11.13	A027M	200 X 11.25^0	each	5917
11.14	A027N	200 X 22.5^0	each	6218
11.15	A027O	200 X 45^0	each	7639
11.16	A027P	200 X 90^0	each	10563
11.17	A027Q	250 X 11.25^0	each	7754
11.18	A027R	250 X 22.5^0	each	8464
11.19	A027S	250 X 45^0	each	10450
11.20	A027T	250 X 90^0	each	13670
11.21	A027U	300 X 11.25^0	each	10863
11.22	A027V	300 X 22.5^0	each	12958
11.23	A027W	300 X 45^0	each	15880
11.24	A027X	300 X 90^0	each	22397
11.25	A027Y	350 X 11.25^0	each	14283
11.26	A027Z	350 X 22.5^0	each	16840
11.27	A027AA	350 X 45^0	each	21424
11.28	A027AB	350 X 90^0	each	30444
11.29	A027AC	400 X 11.25^0	each	20538
11.30	A027AD	400 X 22.5^0	each	23624
11.31	A027AE	400 X 45^0	each	29707
11.32	A027AF	400 X 90^0	each	42913
11.33	A027AG	450 X 11.25^0	each	29238
11.34	A027AH	450 X 22.5^0	each	25631
11.35	A027AI	450 X 45^0	each	38409
11.36	A027AJ	450 X 90^0	each	52714
11.37	A027AK	500 X 11.25^0	each	31015
11.38	A027AL	500 X 22.5^0	each	37661
11.39	A027AM	500 X 45^0	each	52363
11.40	A027AN	500 X 90^0	each	77781

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
11.41	A027AO	600 X 11.25^0	each	46039
11.42	A027AP	600 X 22.5^0	each	58286
11.43	A027AQ	600 X 45^0	each	76410
11.44	A027AR	600 X 90^0	each	115925
11.45	A027AS	700 X 11.25^0	each	75192
11.46	A027AT	700 X 22.5^0	each	93654
11.47	A027AU	700 X 45^0	each	119318
11.48	A027AV	700 X 90^0	each	184154
11.49	A027AW	750 X 11.25^0	each	101528
11.50	A027BX	750 X 22.5^0	each	123721
11.51	A027BY	750 X 45^0	each	160554
11.52	A027BZ	750 X 90^0	each	258966
11.53	A027BA	800 X 11.25^0	each	111445
11.54	A027BB	800 X 22.5^0	each	134113
11.55	A027BC	800 X 45^0	each	139307
11.56	A027BD	800 X 90^0	each	259249
11.57	A027BE	900 X 11.25^0	each	157949
11.58	A027BF	900 X 22.5^0	each	178404
11.59	A027BG	900 X 450	each	238397
11.60	A027BH	900 X 90^0	each	370347
12	A028	Suppling Ductile Iron Push on special confirming to IS 9523:2000 - **D.I. PN 16.0 Dismantling Joints :**		
12.1	A028A	80 mm	each	2561
12.2	A028B	150 mm	each	4528
12.3	A028C	200 mm	each	6646
12.4	A028D	250 mm	each	9574
12.5	A028E	300 mm	each	12369
12.6	A028F	350 mm	each	17642
12.7	A028G	400 mm	each	20706
12.8	A028H	450 mm	each	23979
12.9	A028I	500 mm	each	33566
12.10	A028J	600 mm	each	48983
12.11	A028K	700 mm	each	64049
12.12	A028L	800 mm	each	85031
12.13	A028M	900 mm	each	117609

CHAPTER - 2
ROAD CUTTING AND BEDDING

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
1	A105	Cutting road surfaces for pipeline trenches and disposing of the excavated stuff as directed including barricading, danger lighting etc. in the classifications for:		
1.1	A105A	Macadam Road	m^3	816
1.2	A105B	Cutting asphalt Road surface by Machine cutting to demarcate the trench width of the surface.	m^3	891
1.3	A105C	Cutting Cement Concrete Road surface by Machine cutting to demarcate the trench width of the surface.	m^3	951
2	A107	Providing bedding for the pipeline trenches in black cotton and rock reaches including watering and consolidation by punners etc. complete with all lead and lift with:		
2.1	A107A	M-Sand	m^3	1620
2.2	A107B	Murrum.	m^3	365
2.3	A107C	Gravel	m^3	365
3	A110	Carting of excavated earth of all types upto a distance mentioned below and re-carting back the eath to the same site by vehicle including loading, unloading charges for to & fro, with all lifts, labour, HOM of machinery etc. complete, after obtaining the approval of the Chief Engineer, for:		
3.1	A110A	Distance upto 1 km	m^3	161
3.2	A110B	Distance 1 to 2 km	m^3	181
3.3	A110C	Distance 2 to 3 km	m^3	202
3.4	A110D	Distance 3 to 4 km	m^3	224
3.5	A110E	Distance 4 to 5 km	m^3	243
3.6	A110F	Distance above 5 Km for every 1 km	m^3	20
4	A115	Disposal off the excess excavated earth of all types by vehicle including loading, unloading with all lead and lifts, labour, HOM of machineries etc. for:		
4.1	A115A	Distance upto 1 km	m^3	62
4.2	A115B	Distance of 1 to 2 km	m^3	79
4.3	A115C	Distance of 2 to 3 km	m^3	97
4.4	A115D	Distance of 3 to 4 km	m^3	114
4.5	A115E	Distance of 4 to 5 km	m^3	132
4.6	A115F	Distance above 5 km for every 1 km	m^3	18
5	A120A	Providing Strutting & Shoring, etc. complete as per Engineers instructions. (Measurements to taken of the face area timbered).	m^3	52
6	A120B	Close timbering in case of shafts, wells, cesspits, manhole and the like including strutting, shoring and packing cavities (wherever required) etc. complete as per Engineers instructions. (Measurements to taken of the face area timbered).	m^3	103

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
7	A120C	Providing Bedding or Backfilling using approved stone dust / quarry dust of size not exceeding 5.6 mm for the pipe line trenches including watering and consolidation etc., complete with all lead and lifts as per specification and as directed by the engineer incharge, after obtaining the approval of the Chief Engineer.	m^3	1499
8	A120D	Excavation of Hard Rock by diamond rope cutting method using diamond rope,line draw machine,making holes by drilling machine for breaking the block by means of hydraulic breakers/splitters without any means of blasting or use of explosives,etc.,complete as per specification and directions of the Engineer-in-Charge.	m^3	7194
9	A130A	Providing and Filling in foundation with granite / trap broken metal 100mm and down size with approved M-Sand including hand packing, ramming, watering including cost of all materials and labour with all lead and lift complete as per specifications.	m^3	1593
	Note:			
1	The earth work excavation rates to be refered from the Uni SR. The measureement of earth work for pipe trenches shall be confined only to the excavation done below the classification of the road crest.			
2	Adoption of manual excavation/mechanical excavation for water supply/sewer trenches to be resorted as per the instructions in the Unis SR. However, if the same is not available, excavation by manual means shall be invariably adopted within City / Town limits wherever the Road width is less than 3.7m. Excavation by Mechanical means shall be adopted where the road width is more than 3.7m, in outside City limits, in layouts and for OHT/GLSR/Sump/WTP/STP etc.,			
3	Payment for excavation of pipe trenches will be restricted to the dimensions shown either in the drawing or estimate irrespective of whether the excavation is done in earth or rock. In case of variation in dimensions, the dimensions given at the time of markout will be final. (The dimensions shall strictly confirm to I.S. No. 3114 of 1965).			
4	Excavation for water supply pipe line trenches will be governed by the following condition. In case of S & S, tyton or other types of pipes wherever required for lead joints, mechanical joints with rubber gasket or any other type of moulded joints etc., extra payment will be made for caulking pits or collar pits at the same rate for excavation of pipe trenches. The condition is also applicable for pipelines laid for U.G.D. works.			
5	In case of excavation for trenches in hard rock by blasting, and hard laterite rock containing iron ore, the quality of rock removed will have to be stacked and shall be checked with the actual section measurements and the lesser of the two will be paid for, duly deducting 40% for voids in the stack measurements. The Executive Engineer should certify the classification of hard laterite rock containing iron ore along with test reports from reputed institutions.			
6	Shoring and strutting will be provided upto a depth of 2 meters beyond which depending upon the nature of the soil, steps will be provided at every lift of 2.0 Mtr. including shoring and strutting, the steps width shall vary from 0.3 meters to 0.45 meters depending upon the nature of the strata on either side of trench			
7	The minimum width of trench shall be as per the I.S.S.			
8	In special circumstances where earth work excavation has to be done in hard rock by chistelling in residential area where blasting is prohibited, the sectional measurement given for chistelling shall be cent percent check measured by the E.E. Random checking shall be done by the C.E. during the course of inspection of the works. If the cost of this items or component in any tendered work, exceeds Rs. 10.00 lakhs, the E.E. shall however to make an advance report to C.E. Wherever such item is to be taken up for execution			

9	When the overnight recuperation exceeds one Meter depth, a rate analysis may be worked out based on actual observation and got approved by C.E.
10	Where earth work excavation has to be done in hard lateriate rock containing above 20% Iron ore, by chistelling, the sectional measurements shall be cent percent check measured by the concerned Executive Engineer. If the cost of this item or component in any tendered work, exceeds or is likely to exceed Rs. 10.00 lakhs, random checking shall be done by the chief Engineer in respect of this item, during the inspection of works. The Executive Engineer shall have to make an advance report to Chief Engineer, when such chistelling work is to be done or taken up for execution, with necessary soil test report from reputed institutions.
11	Where earth work excavation has to be done in hard rock by controlled blasting, the sectional measurements for controlled blasting shall be cent percent check measured by the concerned Executive Engineer. If the cost of this item or component in any tendered work, exceeds or is likely to exceed Rs. 10.00 Lakhs, random checking shall be done by the Chief Engineer in respect of this item, during the inspection of works. The Executive Engineer shall have to make an advance report to Chief Engineer, when such controlled blasting work is to be done or is taken up for execution.
12	The Executive Engineer shall certify wherever, whenever specific changes in the above methods of excavation is required with specific inspection report while preparing the estimates or during implementation with the prior approval of Chief Engineer. If the financial implications exceed 10.00 lakhs prior approval is essential.

CHAPTER - 3
WATER SUPPLY WORKS

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
1	B008	Removing the G.I. pipes, cleaning, washing and using at spot or conveying from workspot to office/store with all lead and lift including removal of all items such as collars, elbows, tees, bends, gland cocks, cuts and threads with appurtenances.		
1.1	B008A	Pipes of dia 15mm to 25mm	m	23
1.2	B008B	Pipes of dia 32mm to 80mm	m	40
1.3	B008C	Pipes of dia 100mm	m	52
2	B010	Cutting and threading G.I. pipes for pump fitting, public fountains with appurtenances., where the length of pipe laid is less than 6 metres		
2.1	B010A	Pipes of dia 15mm to 32mm	each	86
2.2	B010B	Pipes of dia 32mm to 80mm	each	268
2.3	B010C	Pipes of dia 100mm	each	508
3	B012A	Removing gland cock with fittings and refixing the same for sizes 15mm to 65mm..	each	22
4	B012B	Dismantling the Cast Iron fountain and fittings and returning the materials to the stores.	each	105
5	B012C	Painting CI fountain stand and fittings with two coats of approved paint.	each	86
6	B017	Labour charges for laying and jointing GI pipes with earth work including fixing collars, elbows, tees, bends, gland cocks and other fittings with cuts and threads, white lead paints wherever necessary, conveying the materials from office to workspot and retuning the surplus materials from workspot to stores for:		
6.1	B017A	15mm dia. GI pipes & specials.	m	9
6.2	B017B	20mm dia. GI pipes & specials.	m	12
6.3	B017C	25mm dia. GI pipes & specials.	m	17
6.4	B017D	40mm dia. GI pipes & specials.	m	21
6.5	B017E	50mm dia. GI pipes & specials.	m	29
6.6	B017F	65mm dia. GI pipes & specials.	m	29
6.7	B017G	80mm dia. GI pipes & specials.	m	29
6.8	B017H	100mm dia. GI pipes & specials.	m	48
7	B018	Removing GI pipes without earth work excavation and filling in all soils but including cutting in tar roads, gravel roads, metal roads and clearing, washing at spot or conveying from workspot to office store including removal of fittings such as collars, elbows, tees, bends gland cocks, cuts and threads etc. for:		
7.1	B018A	GI pipes of 15mm dia.	m	14
7.2	B018B	GI pipes of 20mm dia.	m	14
7.3	B018C	GI pipes of 25mm dia.	m	16
7.4	B018D	GI pipes of 40mm dia.	m	20
7.5	B018E	GI pipes of 50mm dia.	m	18
7.6	B018F	GI pipes of 65mm dia.	m	23
7.7	B018G	GI pipes of 80mm dia.	m	27

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
9	B030	Cutting charges only for cutting CI DI pipes already laid in the ground with necessary approved tools for:		
9.1	B030A	50mm dia pipes	each	38
9.2	B030B	65mm dia pipes	each	45
9.3	B030C	80mm dia pipes	each	48
9.4	B030D	100mm dia pipes	each	62
9.5	B030E	125mm dia pipes	each	65
9.6	B030F	150mm dia pipes	each	69
9.7	B030G	175mm dia pipes	each	76
9.8	B030H	200mm dia pipes	each	97
9.9	B030I	225mm dia pipes	each	103
9.10	B030K	250mm dia pipes	each	138
9.11	B030L	300mm dia pipes	each	172
9.12	B030M	375mm dia pipes	each	190
9.13	B030N	400mm dia pipes	each	207
9.14	B030O	450mm dia pipes	each	242
9.15	B030P	600mm dia pipes	each	277
9.16	B030Q	700mm dia pipes	each	346
9.17	B030R	750mm dia pipes	each	414
9.18	B030S	900mm dia pipes	each	485
9.19	B030T	1200mm dia pipes	each	554
10	B032	Cutting of CI/DI pipes neatly on the surface with necessary approved tools for:		
10.1	B032A	50mm dia pipes	each	28
10.2	B032B	65mm dia pipes	each	34
10.3	B032C	80mm dia pipes	each	36
10.4	B032D	100mm dia pipes	each	46
10.5	B032E	125mm dia pipes	each	49
10.6	B032F	150mm dia pipes	each	52
10.7	B032G	175mm dia pipes	each	57
10.8	B032H	200mm dia pipes	each	73
10.9	B032I	225mm dia pipes	each	78
10.10	B032J	250mm dia pipes	each	103
10.11	B032K	300mm dia pipes	each	138
10.12	B032L	375mm dia pipes	each	173
10.13	B032M	400mm dia pipes	each	207
10.14	B032N	450mm dia pipes	each	241
10.15	B032O	600mm dia pipes	each	275
10.16	B032P	700mm dia pipes	each	311
10.17	B032Q	750mm dia pipes	each	346
10.18	B032R	900mm dia pipes	each	382
10.19	B032S	1200mm dia pipes	each	416

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
11	B034	Making cement mortar (1:1) and hemp yarn joint for CI pipes including cost of all materials like cement, sand, hemp yarn, water proofing materials, curing for 10 days and giving satisfactory hydraulic test pressure of 60 meters head of water etc. complete for :		
1.1	B034A	80 mm dia. pipes	joint	92
11.2	B034B	100 mm dia. pipes	joint	129
11.3	B034C	150 mm dia. pipes	joint	158
11.4	B034D	200 mm dia. pipes	joint	214
11.5	B034E	225 mm dia. pipes	joint	242
11.6	B034F	250 mm dia. pipes	joint	249
11.7	B034G	300 mm dia. pipes	joint	187
11.8	B034H	350 mm dia. pipes	joint	404
11.9	B034I	375 mm dia. pipes	joint	431
11.10	B034J	400 mm dia. pipes	joint	500
11.11	B034K	450 mm dia. pipes	joint	631
11.12	B034L	525 mm dia. pipes	joint	746
11.13	B034M	600 mm dia. pipes	joint	861
12	B040	Removing the CI/DI valves and its tail piece from the pipe line, cleaning, washing, painting and returning the same to the stores etc. for:		
12.1	B040A	50mm dia. pipe line	each	124
12.2	B040B	80mm dia. pipe line	each	209
12.3	B040C	100mm dia. pipe line	each	220
12.4	B040D	125mm dia. pipe line	each	223
12.5	B040E	150mm dia. pipe line	each	282
12.6	B040F	175mm dia. pipe line	each	295
12.7	B040G	200mm dia. pipe line	each	394
12.8	B040H	225mm dia. pipe line	each	410
12.9	B040I	250mm dia. pipe line	each	576
12.10	B040J	300mm dia. pipe line	each	684
12.11	B040K	375mm dia. pipe line	each	691
12.13	B040L	400mm dia. pipe line	each	976
12.14	B040M	450mm dia. pipe line	each	1100
12.15	B040N	600mm dia. pipe line	each	1333
12.16	B040O	700mm dia. pipe line	each	1488
12.17	B040P	750mm dia. pipe line	each	1660
12.18	B040Q	900mm dia. pipe line	each	1852
13	B042	Making main bore in CI/DI pipes with approved tools and procedures etc. for:		
13.1	B042A	15mm dia. bore	each	73
13.2	B042B	20mm dia. bore	each	83
13.3	B042C	25mm dia. bore	each	142
13.4	B042D	40mm dia. bore	each	276
13.5	B042E	50mm dia. bore	each	296
13.6	B042F	65mm dia. bore	each	377

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
14	B044	Removing and cleaning the CI / DI pipes and specials including jointing materials, washing (excluding valves) etc. for:		
14.1	B044A	80mm dia. pipes & specials	m	55
14.2	B044B	100mm dia. pipes & specials	m	67
14.3	B044C	150mm dia. pipes & specials	m	82
14.4	B044D	200mm dia. pipes & specials	m	91
14.5	B044E	250mm dia. pipes & specials	m	106
14.6	B044F	300mm dia. pipes & specials	m	131
14.7	B044G	350mm dia. pipes & specials	m	151
14.8	B044H	400mm dia. pipes & specials	m	171
14.9	B044I	450mm dia. pipes & specials	m	186
14.10	B044J	600mm dia. pipes & specials	m	216
14.11	B044K	700mm dia. pipes & specials	m	239
14.12	B044L	750mm dia. pipes & specials	m	255
14.13	B044M	900mm dia. pipes & specials	m	307
15	B046	Painting the CI/ M.S/ D.I pipes and specials with two coats of bitumastic paint both inside and outside etc. for:		
15.1	B046A	80mm dia. pipes	m	29
15.2	B046B	100mm dia. pipes	m	36
15.3	B046C	150mm dia. pipes	m	55
15.4	B046D	175 mm dia. pipes	m	64
15.5	B046E	200mm dia. pipes	m	73
15.6	B046F	225mm dia. pipes	m	92
15.7	B046G	250mm dia. pipes	m	105
15.8	B046H	300mm dia. pipes	m	110
15.9	B046I	375mm dia. pipes	m	137
16.10	B046J	400mm dia. pipes	m	146
16.11	B046K	450mm dia. pipes	m	164
16.12	B046L	600mm dia. pipes	m	220
16.13	B046M	700mm dia. pipes	m	256
16.14	B046N	750mm dia. pipes	m	275
16.15	B046O	900mm dia. pipes	m	329
17	B062A	Removing and restoring house connections (Labour Charges only)	each	154
18	B064	Conveying CI / DI pipes and specials through transporting vehicles like lorry, trucks etc. as detailed for:		
18.1	B064A	Conveyance including loading and unloading per quintal for distance upto 5.00 km	km	136
18.2	B064B	Conveyance excluding loading and unloading per quintal for distance 5.00 to 10.00 km	km	26
18.3	B064C	Conveyance excluding loading and unloading per quintal for distance beyond 10.00 km	km	16
19	B066	Fixing DI/CI specials of mechanical jointing of different sizes after setting into the pipe line system, including cleaning, introducing rubber gasket to proper alignment and lightening with bolts and nuts. The cost includes hire charges of tools and plants with appurtenances etc.		

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
19.1	B066A	For CI / DI mechanical specials of 100 to 200mm dia.	each	42
19.2	B066B	For CI / DI mechanical specials of 250 to 400mm dia.	each	71
19.3	B066C	For CI / DI mechanical specials of 450 to 700mm dia.	each	149
19.4	B066D	For CI / DI mechanical specials of 750 to 1000mm dia.	each	202
20	B068A	Labour charges for conveying and fixing standard size fire hydrants as per specifications including fixing duck foot bend and hydrant post.	each	319
21	B068B	Removing and refixing fire hydrants after cleaning and repainting.	each	343
22	B068C	Supply and fixing pot rest slab of size 0.45 x 0.30 x 0.20 meters with central dip for resting the pot including two line dressing and edges rounded and with all lead.	each	513
23	B070	Providing house connection with excavation in all types of soils cutting with machine cutter without damaging the other utilities and supplying and laying of MDPE pipe (PE80) -PN 12.5 manufactured in accordance with ISO 4427 - 1996 with minimum required strength of 8 Mpa, hydraulic design stress of 6.3 Mpa and with minimum wall thickness of 2.3mm /GI pipe by making the bore of 15mm dia. size on the distribution mains using drilling bits or machines only and laying the pipe line at a depth not less than 0.45 mtrs. from the road surface, including providing 40mm dia. "A" class GI pipe as casing over the MDPE pipe from the bore point and upto the entrance of the premises and removing the stone slab covering of the drain and dismantling the size stone masonry wherever necessary and making bore in the wall of the premises. On entering the premises, connection should be continued with 20mm GI pipe by making "U" shape for the meter point below the ground level by making pit with sufficient space for the easy installation and removal of the water meter and providing vertical stand pipes on both sides of the meter. The connection should be secured firmly on thedistribution main pipe with SS / Brass ferrule of size 1/2" x 3/4" and fixing the union joint and gate valve / stop cock before the meter point and a reflex valve / non-return valve should be fixed on the connection after the meter point. (All these fixtures should be of standard quality conforming to IS). The compression fittings for MDPE pipes conforming to ISO 14236 and its latest versions. If the connection is of HDPE pipe the work include electric fusion tapping T or saddles,PE 100 black color pipie of PN 16 /SDR 11 or Higher grade conforming to standards with brass cutter,flow regurator,water tight cap with O'ring ,long spigot for making bore/tapping suitable to HDPE pipe by Electro fusion welding as per BS EN 12201-3 & EN 1555-3 standards. The Product should be tested to comply with BS 6920 for drinking water service in WRC - NSF, UK and DVGW certificate, Gemany. The Saddle should be manufactured Virgin Compounded PE 100 material.Tapping Tee or Saddles with coupler and compression fittings with cost of GI pipes, all specials such as GI tee, GI elbow, GI coupler, stopper with appurtenances, and brass or SS tap The excavated trench should be refilled with soft selected earth and the dismantled masonry of the drain should be re-constructed with available size stones in CM 1:8 and providing coping in CC 1:3:6 wherever required and the stone slab covering should be refixed in position with pointing in CM 1:3 and also the bored wall of the premises should be re-done to the original position and the rates are inclusive of the cost of all the materials, cement, sand water etc., required for these works. The road suface should be compacted well and brought to the original condition and the excess earth or debris should		

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
		be disposed off to a distance with an initial lead of 10 Kms. etc. complete for The excavated trench should be refilled with soft selected earth and the dismantled masonry of the drain should be re-constructed with available size stones in CM 1:8 and providing coping in CC 1:3:6 wherever required and the stone slab covering should be refixed in position with pointing in CM 1:3 and also the bored wall of the premises should be re-done to the original position and the rates are inclusive of the cost of all the materials, cement, sand water etc., required for these works. The road suface should be compacted well and brought to the original condition and the excess earth or debris should be disposed off to a distance with an initial lead of 10 Kms. etc. complete for following diameters: (for minimum length of 2m)		
23.1	B070A	For 15 mm dia	each	5743
23.2	B070B	For 20mm dia	each	5866
23.3	B070C	For 25mm dia	each	5948
23.4	B070D	For connection pipe length beyond 2.0 mtrs for every 1 mtr. or part thereof	m	812
24	B072	Providing and fixing of non-corrosive Engineering Plastic moulded composite strap saddle with Stainless steel 304 threaded metal inserted for trapping outlet suiting for different sizes of clear bore conforming to IS 554 wide strap with elestrometic insulation for proper grip around the DI pipe with SS 304 bolts and nuts. Saddle to have rubber SBR grade 30 'O' ring around the tapping hole. All metal parts shall be made of SS 304 and saddle seal shall be of virgin rubber SBR grade 30/NBR (NSF 61 approved). Fastners shall be of stainless steel 202 NC rolled threaded. M12 with tightening torque 14-15 Kg-m. For 100mm dia. pipes:		
24.1	B072A	For 15mm connections	each	703
24.2	B072B	For 20mm connections	each	797
24.3	B072C	For 25mm connections	each	937
25	B073	Supplying and fixing DI Resilient seated soft sealing SLUICE VALVE of variouis dia. with body bonnet of ductile iron (DI) conforming to IS-1865 and of grade GGG 40/50, shaft of stainless steel, wedge fully rubber lined with EDPM seals of NBR and the valves should be vacum tight and 100% leak proof with face to face dimensions as per IS 14846-2000 only. The stem sealing should be with toroidal sealing rings (minimum 2 " O " rings). Body and bonut should be coated with Electrostatically applied Epoxy Powder Coating with minimum coating thickness of 250 micron both inside and outside. The rate is inclusive of cost of valves, T.P set, galvanized bolts & nuts and rubber insertions etc. but excluding earth work. **(Note:** TP set should be considered only for DI pipes estimate. For MS pipes estimates, TP sets cost of corresponding dia shall be deducted from the SR rates of valves and provision for corresponding dia MS flanges should be made in the estimate.) **For PN-10:**		
25.1	B073A	For Suilce Valve of PN - 10.0 and 50mm	each	4504
25.2	B073B	For Suilce Valve of PN -10.0 and 80mm	each	8013
25.3	B073C	For Suilce Valve of PN - 10.0 and 100mm	each	8858
25.4	B073D	For Suilce Valve of PN10.0 and 150mm	each	14234
25.5	B073E	For Suilce Valve of PN -10.0 and 200mm	each	23363
25.6	B073F	For Suilce Valve of PN - 10.0 and 250mm	each	37835

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
25.7	B073G	For Suilce Valve of PN -10.0 and 300mm	each	49093
25.8	B073H	For Suilce Valve of PN - 10.0 and 350mm	each	75873
25.9	B073I	For Suilce Valve of PN - 10.0 and 400mm	each	102024
25.10	B073J	For Suilce Valve of PN - 10.0 and 450mm	each	126032
25.11	B073K	For Suilce Valve of PN -10.0and 500mm	each	165836
25.12	B073L	For Suilce Valve of PN -10.0and 600mm	each	238828
26	B074	**do- For PN 16.0:**		
26.1	B074A	For Suilce Valve of PN 16.0 and 50mm	each	5638
26.2	B074B	For Suilce Valve of PN 16.0 and 80mm	each	8013
26.3	B074C	For Suilce Valve of PN 16.0 and 100mm	each	10137
26.4	B074D	For Suilce Valve of PN 16.0 and 150mm	each	17212
26.5	B074E	For Suilce Valve of PN 16.0 and 200mm	each	26885
26.6	B074F	For Suilce Valve of PN 16.0 and 250mm	each	42096
26.7	B074G	For Suilce Valve of PN 16.0 and 300mm	each	57327
26.8	B074H	For Suilce Valve of PN 16.0 and 350mm	each	106514
26.9	B074I	For Suilce Valve of PN 16.0 and 400mm	each	135882
26.10	B074J	For Suilce Valve of PN 16.0 and 450mm	each	181351
26.11	B074K	For Suilce Valve of PN 16.0 and 500mm	each	241765
26.12	B074L	For Suilce Valve of PN 16.0 and 600mm	each	364100
27	B075	**do- For PN-25:**		
27.1	B075A	For Suilce Valve of PN - 25 and 50mm	each	18856
27.2	B075B	For Suilce Valve of PN - 25 and 80mm	each	20576
27.3	B075C	For Suilce Valve of PN - 25 and 100mm	each	36647
27.4	B075D	For Suilce Valve of PN - 25 and 150mm	each	47146
27.5	B075E	For Suilce Valve of PN - 25 and 200mm	each	71335
27.6	B075F	For Suilce Valve of PN - 25 and 250mm	each	109474
27.7	B075G	For Suilce Valve of PN - 25 and 300mm	each	149052
27.8	B075H	For Suilce Valve of PN - 25 and 400mm	each	391110
27.9	B075I	For Suilce Valve of PN - 25 and 500mm	each	609184
28	B076	Supply and fixing of Cast steel ASTM A 216 Gr.WCB double flanged Dual plate check valve Conforming to API 594 with latest amendments Shaft material shall be SS420/431 and spring shall be spring steel superior grade quality as detailed below of following diameters and types and conveying to work site, loading, unloading, stacking with appurtenances., complete with all lead and lift. The rates are inclusive of cost of Galvanised Bolts and Nuts: **For Class 150**		
28.1	B076A	80mm	each	4043
28.2	B076B	100mm	each	4690
28.3	B076C	150mm	each	7976
28.4	B076D	200mm	each	15122
28.5	B076E	250mm	each	22042
28.6	B076F	300mm	each	27732
28.7	B076G	350mm	each	37864
28.8	B076H	400mm	each	53597
28.9	B076I	450mm	each	64331

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
28.10	B076J	500mm	each	74277
28.11	B076K	600mm	each	93280
28.12	B076L	700mm	each	121028
28.13	B076M	750mm	each	133905
28.14	B076N	800mm	each	148598
28.15	B076O	900mm	each	205875
28.16	B076P	1000mm	each	263917
28.17	B076Q	1100mm	each	784835
28.18	B076R	1200mm	each	1013120
29	B077	**do - For Class 300**		
29.1	B077A	80mm	each	4418
29.2	B077B	100mm	each	5117
29.3	B077C	150mm	each	8743
29.4	B077D	200mm	each	16580
29.5	B077E	250mm	each	24150
29.6	B077F	300mm	each	30519
29.7	B077G	350mm	each	41531
29.8	B077H	400mm	each	58951
29.9	B077I	450mm	each	70762
29.10	B077J	500mm	each	81716
29.11	B077K	600mm	each	93280
29.12	B077L	700mm	each	132918
29.13	B077M	750mm	each	147084
29.14	B077N	800mm	each	163218
29.15	B077O	900mm	each	226200
29.16	B077P	1000mm	each	290018
30	B078	Supplying and fixing Wafer type single flange Butterfly valve conforming to relevant IS 13099/9991 EN GGG40/50 with latest amendments as detailed below of the following diameter and types with TP set and conveying to work site, loading and unloading, stacking etc. with all lead and lift. The rate is inclusive of the cost of valve, TP set, bolts and nuts and excluding earth work. **(Note:** TP set should be considered only for DI pipes estimate. For MS pipes estimates, TP sets cost of corresponding dia shall be deducted from the SR rates of valves and provision for corresponding dia MS flanges should be made in the estimate.). **For PN 10.0**		
30.1	B078A	For Valve of PN - 10.0 and 100mm	each	4760
30.2	B078B	For Valve of PN 10.0 and 150mm	each	10215
30.3	B078C	For Valve of PN 10.0 and 200mm	each	11369
30.4	B078D	For Valve of PN 10.0 and 250mm	each	12512
30.5	B078E	For Valve of PN 10.0 and 300mm	each	14117
30.6	B078F	For Valve of PN 10.0 and 350mm	each	19106
30.7	B078G	For Valve of PN 10.0 and 400mm	each	26930
30.8	B078H	For Valve of PN 10.0 and 450mm	each	31915
30.9	B078I	For Valve of PN 10.0 and 500mm	each	40809

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
30.10	B078J	For Valve of PN 10.0 and 600mm	each	61416
31	B079	**do- For PN 16 :**		
31.1	B079M	For Valve of PN 16.0 and 100mm	each	4912
31.2	B079N	For Valve of PN 16.0 and 150mm	each	10215
31.3	B079O	For Valve of PN 16.0 and 200mm	each	11861
31.4	B079P	For Valve of PN 16.0 and 250mm	each	13625
31.5	B079Q	For Valve of PN 16.0 and 300mm	each	15999
31.6	B079R	For Valve of PN 16.0 and 350mm	each	21051
31.7	B079S	For Valve of PN 16.0 and 400mm	each	29840
31.8	B079T	For Valve of PN 16.0 and 450mm	each	37733
31.9	B079U	For Valve of PN 16.0 and 500mm	each	46630
31.10	B079V	For Valve of PN 16.0 and 600mm	each	67660
32	B080	Supplying and fixing of Double Flanged Resilient seated short body Butterfly valves of various dia as per IS 13095/EN 593 with integral DI seat face with approved soft sealing with body and disc of ductile iron (DI) of grade GGG-40/50, Body seat & Seal retaining ring of SS 304/ CF8, Shaft of stainless steel AISI 410/420/431, Bronze shaft bearing, periferal disk, seal end "o" rings of EPDM, double eccentric disk. Body and disk should be coated with electrostatcially applied epoxy powder coating with a coating thickness of 250 micron both inside and out side. The rate is inclusive of cost of valve, TP set, galvanised bolts and nuts and rubber insertions. (All the drilled holes in the body shall be of through holes, no tapped holes will be allowed.) **(Note:** TP set should be considered only for DI pipes estimate. For MS pipes estimates, TP sets cost of corresponding dia shall be deducted from the SR rates of valves and provision for corresponding dia MS flanges should be made in the estimate.) **For PN 10.0**		
32.1	B080A	For Valve of PN 10.0 and 700mm	each	150341
32.2	B080B	For Valve of PN 10.0 and 750mm	each	195127
32.3	B080C	For Valve of PN 10.0 and 800mm	each	215971
32.4	B080D	For Valve of PN 10.0 and 900mm	each	255388
32.5	B080E	For Valve of PN 10.0 and 1000mm	each	331946
32.6	B080F	For Valve of PN 10.0 and 1100mm	each	577936
32.7	B080G	For Valve of PN 10.0 and 1200mm	each	575940
33	B081	**do- For PN-16.0:**		
33.1	B081A	For Valve of PN 16.0 and 700mm	each	163928
33.2	B081B	For Valve of PN 16.0 and 750mm	each	214527
33.3	B081C	For Valve of PN 16.0 and 800mm	each	237315
33.4	B081D	For Valve of PN 16.0 and 900mm	each	303882
33.5	B081E	For Valve of PN 16.0 and 1000mm	each	399354
33.6	B081F	For Valve of PN 16.0 and 1100mm	each	563538
33.7	B081G	For Valve of PN 16.0 and 1200mm	each	654501
34	B082	Fixing sluice valves/ Butterfly Valves (labour charges only) conforming to relevant ISS with latest amendments as detailed below for the following diameter and types with two Nos of MJ collars, two flanged spigots, conveying to work site, loading, unloading, stacking with appurtenances. with all lead and lifts, aligning, fixing and testing with appurtenances. complete.		

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
34.1	B082A	For sluice valve with accessories - 50mm dia.	each	232
34.2	B082B	For sluice valve with accessories - 80mm dia.	each	259
34.3	B082C	For sluice valve with accessories - 100mm dia.	each	314
34.4	B082D	For sluice valve with accessories - 150mm dia.	each	355
34.5	B082E	For sluice valve with accessories - 200mm dia.	each	519
34.6	B082F	For sluice valve with accessories - 250mm dia.	each	841
34.7	B082G	For sluice valve with accessories - 300mm dia.	each	938
34.8	B082H	For sluice valve with accessories - 350mm dia.	each	970
34.9	B082I	For sluice valve with accessories - 400mm dia.	each	1065
34.10	B082J	For sluice valve with accessories - 450mm dia.	each	2820
34.11	B082K	For sluice valve with accessories - 500mm dia.	each	3137
34.12	B082L	For sluice valve with accessories - 600mm dia.	each	3744
35	B083	Supplying and fixing kinetic AIR VALVE PN 16.0 for automatic discharge of accumulate air during working condition, conforming to IS 14845 / EN 1074-4. Body and bonnet of DI conforming to IS-1865 of grade GGG-40/50, seals are made of approved EPDM, SS 304 float, guide and internals. Flange drilling according to IS-1538 with appurtenances. complete. Body and bonnet shall be coated with electrostatically applied epoxy powder coating with a coating thickness of 250 micron both inside and outside.		
35.1	B083A	For K Air Valves of 80mm dia.	each	21438
35.2	B083B	For K Air Valves of 100mm dia.	each	22469
35.3	B083C	For K Air Valves of 150mm dia.	each	31909
35.4	B083D	For K Air Valves of 200mm dia.	each	41081
36	B084	Labour Charges only for fixing double / isolated AIR VALVES (CI tamper proof of PN 16.0)conforming to ISS 14845 - 2000 and as detailed below with required stub and flange, conveying to work site, loading, unloading, stacking, with all lead and lifts, alignment, fixing and testing with appurtenances. complete.		
36.1	B084A	For Air Valves of 50mm dia.	each	215
36.2	B084B	For Air Valves of 80mm dia.	each	232
36.3	B084C	For Air Valves of 100mm dia.	each	291
36.4	B084D	For Air Valves of 150mm dia.	each	314
36.5	B084E	For Air Valves of 200mm dia.	each	460
37	B085	Supply and fixing of Single / Double chamber triple function tamper proof (Both the orifces to be housed in the single chamber) Air valves with Body and cover in Ductile cast iron of grade GGG 40/50. All internal parts such as float, shell with appurtenances., all cover bolts of austenitic alloy / SS 304 steel, DN 50 float of HOSTAFLON / SS 304 and gaskers and seals of EPDM. Epoxy powder coating (EP-P) inside and outside colour blue RAL5005. The valves should be designed for all the three functions i.e., 1. Large orifice for venting of large air volumes on start up. 2. Large orifice for intake of large air volumes. 3. Small orifice for discharge of pressurized air during operation. **For PN 10.0**		
37.1	B085A	For TP Air Valves of 50mm dia.	each	22942
37.2	B085B	For TP Air Valves of 80mm dia.	each	23604
37.3	B085C	For TP Air Valves of 100mm dia.	each	30175

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
37.4	B085D	For TP Air Valves of 150mm dia.	each	39528
37.5	B085E	For TP Air Valves of 200mm dia.	each	41059
38	B086	**do- For PN 16.0**		
38.1	B086A	For TP Air Valves of 50mm dia.	each	22942
38.2	B086B	For TP Air Valves of 80mm dia.	each	23604
38.3	B086C	For TP Air Valves of 100mm dia.	each	30175
38.4	B085D	For TP Air Valves of 150mm dia.	each	39528
38.5	B085E	For TP Air Valves of 200mm dia.	each	41059
39	B087	**do- For PN 25.0**		
39.1	B087A	For TP Air Valves of 50mm dia.	each	27212
39.2	B0867B	For TP Air Valves of 80mm dia.	each	39864
39.3	B087C	For TP Air Valves of 100mm dia.	each	36840
39.4	B087D	For TP Air Valves of 150mm dia.	each	44390
39.5	B087E	For TP Air Valves of 200mm dia.	each	51882
40	B088	Supplying and fixing DI MJ specials such as branches and bends suitable for DI K7 and K9 pipes and CI LA class pipes, as per IS 13382 with latest amendments with complete accessories and fixing at site excluding earth work but including loading, unloading, freight charges etc. complete for:		
40.1	B088A	DI MJ specials - Branch 100 x 100mm	each	1659
40.2	B088B	DI MJ specials - Branch 150 x 150mm	each	2632
40.3	B088C	DI MJ specials - Branch 150 x 100mm	each	2280
40.4	B088D	DI MJ specials - Bend 100 x 90 degree	each	1161
40.5	B088E	DI MJ specials - Bend 100 x 45 degree	each	1132
40.6	B088F	DI MJ specials - Bend 150 x 90 degree	each	2280
40.7	B088G	DI MJ specials - collar 100mm dia.	each	2245
40.8	B088H	DI MJ specials - collar 150mm dia.	each	4061
41	B090	Providing, fabricating, supplying and fixing at site various diameter MS MJ ends with dummy plates (END CAPS) to suit CI / DI spigots end as per the sketch. The cost is inclusive of all materials, i.e, rubber 'O' rings, flanges, bolts and nuts, dummy plates, consumables, hire charges, tools and welding equipments, lead and lifts, etc. complete as per the instructions of Engineer in charge.		
41.1	B090A	For CI / DI pipes of 100mm dia.	each	1149
41.2	B090B	For CI / DI pipes of 150mm dia.	each	1595
41.3	B090C	For CI / DI pipes of 200mm dia.	each	2213
41.4	B090D	For CI / DI pipes of 250mm dia.	each	3197
41.5	B090E	For CI / DI pipes of 300mm dia.	each	3230
41.6	B090F	For CI / DI pipes of 400mm dia.	each	5051
41.7	B090G	For CI / DI pipes of 450mm dia.	each	5522
41.8	B090H	For CI / DI pipes of 600mm dia.	each	7734
41.9	B090I	For CI / DI pipes of 700mm dia.	each	9210
41.10	B090J	For CI / DI pipes of 900mm dia.	each	13161

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
42	B091	Supply and fixing of DI Double flanged wafer type (Concentric) / double eccentrically disc, Resilent seated Butterfly valves confoming to BS EN 593 / IS 13095 with shaft shall be of stainless steel AISI 410/431/420 and renewable soft seal on the disc and body seat face of nickel weld overlay micro finished/Bolted External Seat of SS 304 / CF8 with Powder or liquid epoxy coating with minimum thickness of 250 microns applied on both body and disc inside and outside. Fce to face dimensions as per EN 558-1 Basic series 14 (DIN 3203 F4) or AWWA C 504 : 80 or IS 13095. The valves shall be supplied along with the required number of standard make galvanized Bolts and nuits. The flange drilling standard is IS 1538. hence, drilling of hole in the valves shall match with the pipe flange drilling standard, the valves are to be suitabale for buried operaion with the gear box sealed and lubricated for life time opration. (All the drilled holes in the body shall be of though holes, no tapped holes will be allowed) **For PN 10.0**		
42.1	B091A	50mm dia	each	11019
42.2	B091B	80mm dia	each	11451
42.3	B091C	100mm dia	each	11174
42.4	B091B	150mm dia	each	17294
43	B092	**do- For PN 16.0:**		
43.1	B092A	50mm dia	each	11019
43.2	B092B	80mm dia	each	11451
43.4	B092C	100mm dia	each	11174
43.5	B092D	150mm dia	each	17505
44	B093	**do- DI Double Flanged Eccentric Butterfly Valve For PN 10.0**		
44.1	B093A	200mm dia	each	26594
44.2	B093B	250mm dia	each	32497
44.3	B093C	300mm dia	each	49690
44.4	B093D	350mm dia	each	69750
44.5	B093E	400mm dia	each	76696
44.6	B093F	450mm dia	each	118925
44.7	B093G	500mm dia	each	127668
44.8	B093H	600mm dia	each	191316
44.9	B093I	700mm dia	each	335669
44.10	B093J	800 mm dia	each	486570
44.11	B093K	900mm dia	each	607245
44.12	B093L	1000mm dia	each	791570
44.13	B093M	1200mm dia	each	1310296
45	B094	**do- For PN 16.0:**		
45.1	B094A	200mm dia	each	26594
45.2	B094B	250mm dia	each	32497
45.3	B094C	300mm dia	each	49690
45.4	B094D	350mm dia	each	69750
45.5	B094E	400mm dia	each	76696
45.6	B094F	450mm dia	each	118925
45.7	B094G	500mm dia	each	127668

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
45.8	B094H	600mm dia	each	191316
45.9	B094I	700mm dia	each	335669
45.10	B094J	800 mm dia	each	486570
45.11	B094K	900mm dia	each	607245
45.12	B094L	1000mm dia	each	791570
45.13	B094M	1200mm dia	each	1310296
46	B095	**do- For PN 25.0**		
46.1	B095A	400mm dia	each	242672
46.2	B095B	500mm dia	each	411109
46.3	B095C	600mm dia	each	477445
46.4	B095D	700mm dia	each	910466
46.5	B095E	800 mm dia	each	939595
46.6	B095F	900mm dia	each	1647715
46.7	B095G	1000mm dia	each	1925370
46.8	B095H	1200mm dia	each	2425720
47	B096	Providing and fixing of Extension spindle rods,PN 10 /16 suitable for Gate valve of following dia for open and closing application, Extension Spindle lengths shall be available on required sizes as per site conditions, spindle shall be of fixed type, suitable size of MS Square bar epoxy coated, bottom adaptor & Spindle cap (epoxy coated /galvanised) ductile iron grade of EN1563 EN-EJS-400-15 / IS1865 Spheroidal Graphite Iron Gr40. Protection tube of PVC, Top and Bottom cover / Bottom Connector shall be made by PVC, Bolt shall be made by Zinc coated steel 8.8 Split pin shall be made by Electro galvanized, this set up should help to have a buried application of Gate Valves etc., as per the directions of the Engineer-in-Charge.		
47.1	B096A	50 - 150mm dia	each	4698
47.2	B096B	200 - 450mm dia	each	6385
48	B097A	Supplying and fixing surface box of required dia. and size with synthetic lid for valves or spindle rods. The surface box should be usable for 50 to 400mm dia. valves, PN 10 / 16 and will consist of lid, housing, locking clip, notched bolt, cross bar, washer and torque nut.	each	3339
49	B098A	Supply & fixing RCC Pre-cast Cover Slab of size 0.8 m x 0.8 m x 0.2m of M25-Design mix concrete with 12 mm steel @ 120 mm c/c both ways, over Gate valve extension spindle with central opening along with lid for smooth operation with appurtenances., complete with all lead and lifts.	each	2690
50	B099	Supply and fixing of ductile iron double flanged swing check vavles with slanted seat or with lever weight with straight disc, with metallic corrosion proof and wear resistant seat faces with nickel overlay micro - finished/ Integral seat with body and disc in Ductile Iron in GGG 40/50 shaft of stainless steel and bearings of zinc free bronze and surface protection with epoxy liquid of GSK quality. **For PN 10.0**		
50.1	B099A	50mm dia	each	12100
50.2	B099B	80mm dia	each	14497
50.3	B099C	100mm dia	each	17111
50.4	B099D	150mm dia	each	30578
50.5	B099E	200mm dia	each	56091

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
50.6	B099F	250mm dia	each	86905
50.7	B099G	300mm dia	each	122336
50.8	B099H	350mm dia	each	384812
50.9	B099I	400mm dia	each	413736
50.10	B099J	450mm dia	each	477747
50.11	B099K	500mm dia	each	480517
50.12	B099L	600mm dia	each	654162
50.13	B099M	700mm dia	each	1533891
50.14	B099N	800mm dia	each	1798456
50.15	B099O	900mm dia	each	2047938
50.16	B099P	1000mm dia	each	2505259
51	B100	**do- For PN 16.0**		
51.1	B100A	50mm dia	each	12100
51.2	B100B	80mm dia	each	14497
51.3	B100C	100mm dia	each	17088
51.4	B100D	150mm dia	each	30578
51.5	B100E	200mm dia	each	56091
51.6	B100F	250mm dia	each	86905
51.7	B100G	300mm dia	each	122336
51.8	B100H	350mm dia	each	384812
51.9	B100I	400mm dia	each	413736
51.10	B100J	450mm dia	each	611318
51.11	B100K	500mm dia	each	530575
51.12	B100L	600mm dia	each	665070
51.13	B100M	700mm dia	each	1533912
51.14	B100N	800mm dia	each	1866953
51.15	B100O	900mm dia	each	2150202
51.16	B100P	1000mm dia	each	2537027
52	B116A	Supply and fixing of fixed height surface box H-4057 MD-KU with PP 40% GF Lid, Housing of PA+, Locking clip of PP with Notched bolt M 12 x 130 hexagon head A2-70 for service connection valves, design derived from DIN 4057, should be supplied with Support tile I (FSL, FSS, SI). Should be able to receive class AA traffic loads.	each	2731
53	B117A	Supply & fixing RCC Pre-cast Cover Slab of size 0.8 m x 0.8 m x 0.15m of M25-Design mix concrete with 12 mm steel @ 120 mm c/c both ways, over Gate valve extension spindle with central opening along with lid for smooth operation with appurtenances., complete with all lead and lifts.	each	2242
54	B118	Supplying and fixing Multijet class B inferential type, AMR compatible water meters with IP 68 protection totalizer confoming to IS 779 with its latest amendments of following size to service connections including conveying and fixing of necessary G.I. specials with appurtenances. complete, with all lead and lift.		
54.1	B118A	15mm dia	each	1649
54.2	B118B	20mm dia	each	2645
54.3	B118C	25mm dia	each	5515

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
55	B119	Conveying with all lead & lift and fixing C.I/D.I specials, bends, branches, tees,with appurtenances, all sizes and aligning.		
55.1	B119A	50 mm dia to 100 mm dia	each	93
55.2	B119B	125 mm dia to 225 mm dia	each	117
55.3	B119C	250 mm dia to 600 mm dia	each	183
55.4	B119D	above 600 mm dia to 900mm dia	each	755
56	B130A	Supplying at site RCC verticle fountain slab with CC 1:1½ :3 with 20 mm and down size granite jelly with nominal reinforcements as per design plastered with C.M. 1:4, 20 mm thick, with all lead and lift including plank centering, fom work, machine mixing, tamping, curing with appurtenances, Complete as per specifications including cost of steel.	each	1620
57	B130B	Supply at site RCC curb slab with granite metal 20mm and down size with C.C. 1:1½:3 proportion including wooden planks fom work, centering, curing, machine mixing, tamping and plastering with CM 1:4 proportion 20mm thick with all lead & lift as per specification including cost of reinforcement, size 1.22 m x 0.30 m x 0.05 m for square **public fountains** (One set of 4 Nos).	each	2117
58	B130C	Supply at site RCC curb slab with granite metal 20mm and down size with C.C. 1:1½:3 proportion including wooden planks fom work, centering, curing, machine mixing, tamping and plastering with CM 1:4 proportion 20mm thick with all lead & lift as per specification including cost of reinforcement, size 1.22 m x 0.30 m x 0.05 m **for circular public fountains** (One set of 4 Nos).	each	1717
59	B130D	Supplying at site pot rest slab of 0.45mx0.30mx0.20m in CC. 1:2:4 proportion with granite metal 20 mm and down size including plank centering and fom work, machine mixing, tamping including plastering 20 mm thick in C.M. 1:4 proportion with all lead as per specification with appurtenances., complete	each	391
60	B140A	Labour charges for fixing a set of precast RCC Public fountain slab viz, (1) Vertical slab, (2) Pot rest slab, (3) Curb slab or Curbing including necessary earthwork and fixing them in proper position with necessary cement mortar curing for 10 days wherever required	each	350
61	B150A	Supply of Gunmetal Ball Valve of Non rising stem, screwed in bonnet, inside screw, integral seats, screwed female ends to IS:554/ BS 21/ ISO 7, Unbreakable sheet metal Handwheel, confoming to IS:778 Class-1 including provision of re-packing under pressure with appurtenances, complete : 150 mm nominal bore	each	211
62	B160A	Providing and constructing stand post 1.22m x 1.22m size for public fountain with R.C.C. post of size 1.22m x 0.38m x 0.10m with top rounded and R.C.C. curb slab of size 1.22m x 0.30m x 0.05m in CC 1:2:4 proportion with 20 mm and down size granite jelly with nominal reinforcement as per design, plastered with CM. 1:4, 20 mm thick to the exposed faces with pot rest slab of size 0.45m x 0.30m x 0.20m in CC 1:2:4 proportion 10 cms thick and smooth finishing with CM 1:4 to the exposed faces with necessary fom work centering, machine mixing, tamping, curing as per specifications including cost of steel and necessary earth work excavation and disposing off the excavated earth as directed with all lead and lift with appurtenances., complete.	each	4531

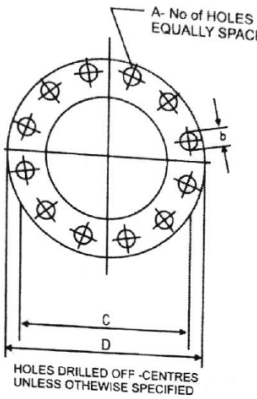
NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
63	B170	Providing and fixing 3 layer PP-R (Poly Propylene Random Copolymer) pipes confirming to IS.15801, UV stabilized and anti-microbial fusion welded, having thermal stability for hot and cold water supply, including all PP-R plain and brass threaded polypropylene random fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes testing of joints complete as per direction of Engineer-In- Charge.		
63.1	B170A	PN - 16 Pipe, SDR 7.4 -16 mm OD	m	167
63.2	B170B	PN - 16 Pipe, SDR 7.4 -20 mm OD	m	180
63.3	B170C	PN - 16 Pipe, SDR 7.4-25 mm OD	m	227
63.4	B170D	PN - 16 Pipe,SDR 7.4- 32 mm OD	m	314
63.5	B170E	PN - 16 Pipe,SDR 7.4-40 mm OD	m	461
63.6	B170F	PN - 16 Pipe,SDR 7.4-50 mm OD	m	625
63.7	B170G	PN - 16 Pipe,SDR 7.4-63 mm OD	m	904

Note: Bolt, Nuts and Rubber Insertions Required to Fix Valves

Sl No.	Valves Nominal dia (mm)	Dia & length of bolts (mm)	no of bolts (each)	Weight of bolts (kg)
1	50	16x50	8	2
2	80	16x50	8	2
3	100	16x75	16	4
4	150	16x75	16	4
5	200	20x90	16	6
6	250	20x90	24	8
7	300	20x100	24	9
8	400	24x100	32	20
9	450	24x100	40	25
10	600	27x150	40	38
11	700	27x150	48	46
12	800	27x150	52	56
13	900	27x150	56	64

STANDARD FLANGE DRILLING OF FLANGED PIPES AND FITTINGS

All dimension in millimetres



Nominal Diameter (DN)	D	C	Holes		Diameter of Bolts'
			Number	Diameter	
			A	d	
(1)	(2)	(3)	(4)	(5)	(6)
80	200	160	4	19	16
100	220	180	8	19	16
125	250	210	8	19	16
150	285	240	8	23	20
200	340	295	8	23	20
250	395	350	12	23	20
300	445	400	12	23	20
350	505	460	16	23	20
400	565	515	16	28	24
450	615	565	20	28	24
500	670	620	20	28	24
600	780	725	20	31	27
700	895	840	24	31	27
750	960	900	24	31	27
800	1015	950	24	34	30
900	1115	1050	28	34	30
1000	1230	1160	28	37	33
1050	1258	1194	28	37	33
1100	1340	1270	32	37	33
1200	1455	1380	32	40	36
1500	1800	1710	40	43	39

CHAPTER - 4
ATTENDING LEAKS ON WATER SUPPLY LINES

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
1	C010	Supplying CI/DI pipes socket leak repair MJ clamps for attending to leak joints in socket / spigot joints of CI / DI pipes with necessary earth work excavation including using of pneumatic breakers and JCB excavator wherever required and providing DI MJ leak repair clamp, including cost of all materials required for jointing comprising of DI MJ clamps and its accessories such as rubber gaskets made of SBR / EPDM on the socket face, making the socket / spigot joint water tight at the operating pressure, backfilling with available earth and consolidation and bailing out water wherever necessary etc. complete and In all types of road surfaces like Concrete, Asphalt roads etc, for:		
1.1	C010A	CI / DI pipes of 100mm dia.	each	2303
1.2	C010B	CI / DI pipes of 150mm dia.	each	3510
1.3	C010C	CI / DI pipes of 200mm dia.	each	3979
1.4	C010D	CI / DI pipes of 250mm dia.	each	5196
1.5	C010E	CI / DI pipes of 300mm dia.	each	6367
1.6	C010F	CI / DI pipes of 400mm dia.	each	8990
1.7	C010G	CI / DI pipes of 450mm dia.	each	11179
2	C020	Attending to leaking socket / spigots joints in CI / DI pipes in all types of road surfaces including concrete and asphalt roads, with necessary earth work excavation including using of pneumatic breakers and JCB excavator wherever required for jointing DI MJ clamp and its accessories such as rubber gaskets made of SBR / EPDM on the socket face, making the socket / spigot joint water tight at the operating pressure, backfilling with available earth and consolidation and bailing out water wherever necessary etc.complete.		
2.1	C020A	For CI / DI pipes of 100mm dia.	each	722
2.2	C020B	For CI / DI pipes of 150mm dia.	each	814
2.3	C020C	For CI / DI pipes of 200mm dia.	each	820
2.4	C020D	For CI / DI pipes of 250mm dia.	each	954
2.5	C020E	For CI / DI pipes of 300mm dia.	each	1254
2.6	C020F	For CI / DI pipes of 400mm dia.	each	1289
2.7	C020G	For CI / DI pipes of 450mm dia.	each	1406
3	C030A	Cutting Asphalt /Concrete road surface using machine cutter for leakage pit with earth work excavation in all classifications of soil including all lead and lifts bailing out water with pumps including barricading, danger lighting etc., as per requirement and disposing of the excavated stuff as directed. After attending the leak, refilling the trench for 30 cm depth quarry dust above and around pipelines and balance with available earth in layers not exceeding 20 cms in depth, compacting each deposited layer by ramming including watering and consolidation by mechanical means approved by Engineer Incharge. (Work to be carried out as per leak repair manual and the rate includes hire charges of dewatering Pump, tractor, Jeep with all kinds of Labour in a Complete manner).	m^3	976

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
4	C040A	Road Reinstatement of Asphalt /Concrete roads after leak attending with earth work excavation of compacted soil depositing on bank with all lead and lifts including danger lighting and barricading. Providing, laying, spreading and compacting graded stones aggregate as per wet mix macadam specifications. Applying tack coat on granular base such as WBM and WMM surface hote bitumen primer at 4 kg per 10 sqm, heating bitumen in layer to be laid with boiler fitted with spray set of 300 mm thickness. Above laid with bituminous concrete or M20 concrete premixed with bituminous binder at 5.4 to 5.6% of mix and filler, to achieve the desired compaction to give minimum of 45mm thickness compacted. The work shall be carried as per leak repair manual and includes all kinds of materials disposing off the excess excavated Earth with all lead and lifts by vehicle including loading, unloading, labour, HOM of machinery etc. in a complete manner.	m^2	1654

CHAPTER - 5
DUCTILE IRON (DI) PIPES

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
1	E010	Providing and laying Ductile Iron pipes of class ----- conforming to IS 8329:2000 with latest amendments, conveyiing 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 at both destinations, cutting of pipes wherever necessary, jointing with DI specials (excluding cost of 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 to include soap solution, soft soap, waste etc. and giving necessary hydraulic test to the required pressure as per ISS with all lead and lifts and cost of all jointing materials. (The contractor will make his own arrangements for water for testing. Earth work excavation in trenches to be measured and paid for seperately) Note: In sewerage projects for internal cement mortal lining (CML) of DI pipes, if High Alumina Cement (HAC) as recommended in Annexure B clause 16.3 of IS8329:2000 is considered in place of Slag or Sulphate Resistance Cement (SRC), the cost of pipes may be increased by 5-6% from the prices listed. **For DI K7 pipes:**		
1.1	E010A	100mm dia pipe	m	1134
1.2	E010B	150mm dia pipe	m	1618
1.3	E010C	200mm dia pipe	m	1998
1.4	E010D	250mm dia pipe	m	2671
1.5	E010E	300mm dia pipe	m	3351
1.6	E010F	350mm dia pipe	m	3968
1.7	E010G	400mm dia pipe	m	4837
1.8	E010H	450mm dia pipe	m	5676
1.9	E010I	500mm dia pipe	m	6699
1.10	E010J	600mm dia pipe	m	8747
1.11	E010K	700mm dia pipe	m	11685
1.12	E010L	750mm dia pipe	m	13234
1.13	E010M	800mm dia pipe	m	14933
1.14	E010N	900mm dia pipe	m	18257
1.15	E010O	1000mm dia pipe	m	21794
1.16	E010P	1100mm dia pipe	m	31531
1.17	E010Q	1200mm dia pipe	m	36911
2	E020	**do- For DI K9 Pipes:**		
2.1	E020A	100mm dia pipe	m	1305
2.2	E020B	150mm dia pipe .	m	1845
2.3	E020C	200mm dia pipe	m	2367
2.4	E020D	250mm dia pipe	m	3224
2.5	E020E	300mm dia pipe	m	4036
2.6	E020F	350mm dia pipe	m	4740
2.7	E020G	400mm dia pipe	m	5762

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
2.8	E020H	450mm dia pipe	m	6848
2.9	E020I	500mm dia pipe	m	7950
2.10	E020J	600mm dia pipe	m	10389
2.11	E020K	700mm dia pipe	m	13136
2.12	E020L	750mm dia pipe	m	14539
2.13	E020M	800mm dia pipe	m	16108
2.14	E020N	900mm dia pipe	m	19570
2.15	E020O	1000mm dia pipe	m	23617
2.16	E020P	1100mm dia pipe	m	33725
2.17	E020Q	1200mm dia pipe	m	36582
3	E040	Providing Mechanical joints to cast iron pipes or Ductile iron pipes including cost of rubber gaskets and testing of joints. mechanical joints items will be supplied by the department. (contractor will make his own arrangements for procuring water for testing) for:		
3.1	E040A	100mm dia pipes.	each	230
3.2	E040B	150mm dia pipes.	each	299
3.3	E040C	200mm dia pipes.	each	510
3.4	E040D	250mm dia pipes.	each	1485
3.5	E040E	300mm dia pipes.	each	1671
3.6	E040F	350mm dia pipes.	each	1805
3.7	E040G	400mm dia pipes.	each	2050
3.8	E040H	450mm dia pipes.	each	2227
3.9	E040I	500mm dia pipes.	each	2367
	E040J	600mm dia pipes.	each	2558
3.10	E040K	700mm dia pipes.	each	2908
3.11	E040L	800mm dia pipes.	each	3246
3.12	E040M	900mm dia pipes.	each	3642
3.13	E040N	1000mm dia pipes.	each	3897
3.14	E040O	1100mm dia pipes.	each	4109
	E040P	1200mm dia pipes.	each	4799
4	E050	Labour charges for DI pipes of all classes rolling and lowering into trenches, laying ture to line, level and perfect linking at joints and commissioning, including loading and unloading at both destinations and cuts of pipes wherever necessary including jointing of DI pipes and specials (excluding cost of pipes,rubber gasket and specials) with rubber gaskets including cleaning the sockets and spigot ends with saop solutions and applying soft soap to the spigot and socket end before insertion of rubber gaskets, jointing and fixing in perfect conditions including the cost of soap solution, soft soap, waste etc. and giving necessary hydraulic test to the required pressure as per ISS etc. with all leads and lifts (Earth work excavation in trenches,conveying of materials from stores to be measured and paid for separately) (Contractor will make his own arrangements for procuring water for testing) etc. for:		
4.1	E050A	100mm dia pipe	m	62
4.2	E050B	150mm dia pipe	m	89
4.3	E050C	200mm dia pipe	m	129

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
4.4	E050D	250mm dia pipe	m	224
4.5	E050E	300mm dia pipe	m	266
4.6	E050F	350mm dia pipe	m	291
4.7	E050G	400mm dia pipe	m	324
4.8	E050H	450mm dia pipe	m	364
4.9	E050I	500mm dia pipe	m	374
4.10	E050J	600mm dia pipe	m	455
4.11	E050K	700mm dia pipe	m	557
4.12	E050L	800mm dia pipe	m	665
4.13	E050M	900mm dia pipe	m	749
4.14	E050N	1000mm dia pipe	m	877
4.15	E050O	1100mm dia pipe	m	971
4.16	E050P	1200mm dia pipe	m	1182
5	E060	Labour charges for making flanged joints including cost of jointing materials comprising of rubber insertion, bolts and nuts including giving hydraulic test to the required pressure as per ISS with all lead & lift (contractor will make his own arrangement for procuring water for testing).		
5.1	E060A	Pipes and specials of dia 50mm.	each	108
5.2	E060A	Pipes and specials of dia 80mm.	each	119
5.3	E060B	Pipes and specials of dia 100mm.	each	204
5.4	E060C	Pipes and specials of dia 150mm.	each	305
5.5	E060D	Pipes and specials of dia 200mm.	each	330
5.6	E060E	Pipes and specials of dia 250mm.	each	494
5.7	E060F	Pipes and specials of dia 300mm.	each	514
5.8	E060G	Pipes and specials of dia 350mm.	each	698
5.9	E060H	Pipes and specials of dia 400mm.	each	1025
5.10	E060I	Pipes and specials of dia 450mm.	each	1281
5.11	E060J	Pipes and specials of dia 500mm.	each	1350
5.12	E060K	Pipes and specials of dia 600mm.	each	1780
5.13	E060L	Pipes and specials of dia 700mm.	each	2111
5.14	E060M	Pipes and specials of dia 800mm.	each	2141
5.15	E060N	Pipes and specials- pipe dia 900mm.	each	2494
5.16	E060O	Pipes and specials- pipe dia 1000mm.	each	2529
5.17	E060P	Pipes and specials- pipe dia 1100mm.	each	2744
5.18	E060Q	Pipes and specials- pipe dia 1200mm.	each	2940
6	E070	Providing RUBBER JOINTING for CI / DI pipes with rubber gaskets including cleaning the socket and spigot ends with soap solution and applying soft soap to the spigot and socket ends before insertion of rubber gaskets, jacking and fixing in perfect conditions including cost of soap solution, soft soap, waste etc with all lead and lift including cost of jointing materials etc. for:		
6.1	E070A	100mm dia	each	81
6.2	E070B	150mm dia	each	110
6.3	E070C	200mm dia	each	118
6.4	E070D	250mm dia	each	149

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
6.5	E070E	300mm dia	each	174
6.6	E070F	350mm dia	each	197
6.7	E070G	400mm dia	each	222
6.8	E070H	450mm dia	each	243
6.9	E070I	500mm dia	each	267
6.10	E070J	600mm dia	each	295
6.11	E070K	700mm dia	each	176
6.12	E070L	750mm dia	each	383
6.13	E070M	900mm dia	each	438
6.14	E070N	1000mm dia	each	481
6.15	E070O	1100mm dia	each	544
6.16	E070P	1200mm dia	each	587
7	E080A	Supplying and fixing of DI specials with ISI mark confoming to IS 9523 / 2000 suitable for jointing 100 mm to 600 mm dia DI pipes coated with rust prevention coatings as below:	kg	186
		NOTE: **A) External coating:** a) Metalic zinc with finishing layer of bituminous as per Annexure "A" of IS:9523/2000 b) Zinc rich paint with finishing layer of bituminous as per Annexure "A" of IS:9523 / 2000 c) Bituminous paint as per Annexure "C" of IS:9523 / 2000 **B) Internal Lining:** a) Portaland Cement (with or without additives) mortar as per Annexure - "B" of IS:9523/2000 b) Cement Mortar with coat coat as per Annexure "B" of IS:9523 / 2000 c) Bituminous paint as per Annexure "C" of IS:9523 / 2000		
8	E090	Providing and laying of Double Chambered Restrained Joint DI K9 Pipes (to be used to for minimum required length as per design along with Double Chambered Restrained DI fittings to avoid concerete thrust block at bends) conforming to IS 5382-1985 with latest amendments, 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 at both destinations, cutting of pipes wherever necessary, jointing with DI specials (excluding cost of 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 to include soap solution, soft soap, waste etc. and giving necessary hydraulic test to the required pressure as per ISS with all lead and lifts and cost of all jointing materials. (The contractor will make his own arrangements for water for testing. Earth work excavation in trenches to be measured and paid for seperately)		
8.1	E090A	100mm dia	m	1972
8.2	E090B	150mm dia	m	2720
8.3	E090C	200mm dia	m	3401
8.4	E090D	250mm dia	m	4565

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
8.5	E090E	300mm dia	m	5788
8.6	E090F	350mm dia	m	7091
8.7	E090G	400mm dia	m	8669
8.8	E090H	450mm dia	m	10336
8.9	E090I	500mm dia	m	12089
8.10	E090J	600mm dia	m	15852
8.11	E090K	700mm dia	m	18532
8.12	E090L	750mm dia	m	20598
8.13	E090M	800mm dia	m	22760
8.14	E090N	900mm dia	m	27742
8.15	E090O	1000mm dia	m	33514
8.16	E090P	1100mm dia	m	38883
8.17	E090Q	1200mm dia	m	45041

CHAPTER - 6
MILD STEEL (MS) PIPES AND SPECIALS

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
1	F010	Manufacturing, providing, trasporting, rolling, lowering, laying, jointing and commissioning of ERW (Electric Resistance Welded)/ SAW (Submerged Arc Welded) MS pipes of Outer dia (Fe-410 grade) conforming to IS 3589-2001 with latest amendments, including perfect linking and welding of joints to correct position, cost of the pipes, conveyance, lead, lift charges, cost of all labour and giving satisfactory hydraulic test as per IS 3589-2001 with latest amendments for test pressure and working pressure both at factory and site etc. complete as per detailed specifications inside with CM 1:1.5 lining of minimum 10mm thick for pipes upto 610mm OD and with minimum 12mm thick beyond 610mm OD and out side with minimum 25mm thick coating in CM 1:3 over 50 x 50mm weld mesh of 13 gauge, including loading and unloading of pipes for the following diameters and specified thickness of plate as noted below, including bailing out of water wherever necessary. (Contractor will make his own arrangements for procuring water for testing) **Note:** a) No Negative tolerance in respect of thickness is pemissible. b) Basic Cost of MS Plate is considered as **Rs.68,200.00 per MT.** The bare pipe cost worked out is **Rs. 77.59/kg** weight/m of pipe c) The pipe costs are FOR destination anywhere in Karnataka. **For MS Pipes of 219mm dia:**		
1.1	F010A	Pipe of 219mm dia -4.8mm thick	m	3381
1.2	F010B	Pipe of 219mm dia 5.4mm thick	m	3653
1.3	F010C	Pipe of 219mm dia 5.6mm thick	m	3754
1.4	F010D	Pipe of 219mm dia 6.0mm thick	m	3941
1.5	F010E	Pipe of 219mm dia 6.4mm thick	m	4125
1.6	F010F	Pipe of 219mm dia 7.0mm thick	m	4403
1.7	F010G	Pipe of 219mm dia 7.9mm thick	m	4813
1.8	F010H	Pipe of 219mm dia 8.2mm thick	m	4950
1.9	F010I	Pipe of 219mm dia 8.7mm thick	m	5177
1.10	F010J	Pipe of 219mm dia 9.5mm thick	m	5537
2	F020	**For MS pipe of 273.1mm dia**		
2.1	F020A	Pipe of 273.1mm dia -4.8mm thick	m	4204
2.2	F020B	Pipe of 273.1mm dia -5.6mm thick	m	4673
2.3	F020C	Pipe of 273.1mm dia -6mm thick	m	4910
2.4	F020D	Pipe of 273.1mm dia -6.4mm thick	m	5143
2.5	F020E	Pipe of 273.1mm dia -7.2mm thick	m	5609
2.6	F020F	Pipe of 273.1mm dia -7.8mm thick	m	5955
2.7	F020G	Pipe of 273.1mm dia -8.7mm thick	m	6473
2.8	F020H	Pipe of 273.1mm dia -9.3mm thick	m	6816
3	F030	**For MS pipes of 323.9mm dia**		
3.1	F030A	Pipe of 323.9mm dia -5.6mm thick	m	5563
3.2	F030B	Pipe of 323.9mm dia -6.0mm thick	m	5843
3.3	F030C	Pipe of 323.9mm dia -6.4mm thick	m	6122

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
3.4	F030D	Pipe of 323.9mm dia -7.1mm thick	m	6608
3.5	F030E	Pipe of 323.9mm dia -7.9mm thick	m	7161
3.6	F030F	Pipe of 323.9mm dia -8.4mm thick	m	7494
3.7	F030G	Pipe of 323.9mm dia -8.7mm thick	m	7712
3.8	F030H	Pipe of 323.9mm dia -9.5mm thick	m	8260
4	F040	**For MS pipes of 355.6mm dia**		
4.1	F040A	Pipe of 355.6mm dia -5.6mm thick	m	6096
4.2	F040B	Pipe of 355.6mm dia -6.0mm thick	m	6405
4.3	F040C	Pipe of 355.6mm dia -6.4mm thick	m	6712
4.4	F040D	Pipe of 355.6mm dia -7.1mm thick	m	7249
4.5	F040E	Pipe of 355.6mm dia -7.9mm thick	m	7819
4.6	F040F	Pipe of 355.6mm dia -8.7mm thick	m	8467
4.7	F040G	Pipe of 355.6mm dia -9.5mm thick	m	9072
5	F050	**For MS pipe of 406mm dia**		
5.1	F050A	Pipe of 406mm dia -5.6mm thick	m	6971
5.2	F050B	Pipe of 406mm dia -6mm thick	m	7356
5.3	F050C	Pipe of 406mm dia -6.4mm thick	m	7677
5.4	F050D	Pipe of 406mm dia -7.1mm thick	m	8293
5.5	F050E	Pipe of 406mm dia -7.9mm thick	m	8994
5.6	F050F	Pipe of 406mm dia -8.7mm thick	m	9692
5.7	F050G	Pipe of 406mm dia -9.5mm thick	m	10387
5.8	F050H	Pipe of 406mm dia -10mm thick	m	10819
6	F060	**For MS pipe of 457mm dia**		
6.1	F060A	Pipe of 457mm dia-5.6mm thick	m	7849
6.2	F060B	Pipe of 457mm dia-6.4mm thick	m	8646
6.3	F060C	Pipe of 457mm dia-7.1mm thick	m	9342
6.4	F060D	Pipe of 457mm dia-7.9mm thick	m	10134
6.5	F060E	Pipe of 457mm dia-8.7mm thick	m	10924
6.6	F060F	Pipe of 457mm dia-9.5mm thick	m	11711
6.7	F060G	Pipe of 457mm dia-10mm thick	m	12202
7	F070	**For MS pipe of 508mm dia**		
7.1	F070A	Pipe of 508mm dia-5.6mm thick	m	8725
7.2	F070B	Pipe of 508mm dia-6.4mm thick	m	9614
7.3	F070C	Pipe of 508mm dia-7.1mm thick	m	10390
7.4	F070D	Pipe of 508mm dia-7.9mm thick	m	11273
7.5	F070E	Pipe of 508mm dia-8.7mm thick	m	12157
7.6	F070F	Pipe of 508mm dia-9.5mm thick	m	13029
7.7	F070G	Pipe of 508mm dia-10mm thick	m	13575
8	F080	**For MS pipe of 559mm dia**		
8.1	F080A	Pipe of 559mm dia-5.6mm thick	m	9591
8.2	F080B	Pipe of 559mm dia-6.4mm thick	m	10581
8.3	F080C	Pipe of 559mm dia-7.1mm thick	m	11437
8.4	F080D	Pipe of 559mm dia-7.9mm thick	m	12411
8.5	F080E	Pipe of 559mm dia-8.7mm thick	m	13383

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
8.6	F080F	Pipe of 559mm dia-9.5mm thick	m	14356
8.7	F080G	Pipe of 559mm dia-10mm thick	m	14956
9	F090	**For MS pipe of 610mm dia**		
9.1	F090A	Pipe of 610mm dia-5.6mm thick	m	10928
9.2	F090B	Pipe of 610mm dia-6.4mm thick	m	11541
9.3	F090C	Pipe of 610mm dia-7.1mm thick	m	12475
9.4	F090D	Pipe of 610mm dia-7.9mm thick	m	13084
9.5	F090E	Pipe of 610mm dia-8.7mm thick	m	14556
9.6	F090F	Pipe of 610mm dia-9.5mm thick	m	15665
9.7	F090G	Pipe of 610mm dia-10mm thick	m	16329
9.8	F090H	Pipe of 610mm dia-12mm thick	m	18965
10	F100	**For MS pipe of 660mm dia**		
10.1	F100A	Pipe of 660mm dia-6.4mm thick	m	12615
10.2	F100B	Pipe of 660mm dia-7.1mm thick	m	13633
10.3	F100C	Pipe of 660mm dia-7.9mm thick	m	14778
10.4	F100D	Pipe of 660mm dia-8.7mm thick	m	15942
10.5	F100E	Pipe of 660mm dia-9.5mm thick	m	17087
10.6	F100F	Pipe of 660mm dia-10mm thick	m	17805
11	F110	**For MS pipe of 711mm dia**		
11.1	F110A	Pipe of 711mm dia-6.4mm thick	m	13599
11.2	F110B	Pipe of 711mm dia-7.1mm thick	m	14699
11.3	F110C	Pipe of 711mm dia-7.9mm thick	m	15944
11.4	F110D	Pipe of 711mm dia-8.7mm thick	m	17189
11.5	F110E	Pipe of 711mm dia-9.5mm thick	m	18435
11.6	F110F	Pipe of 711mm dia-10.0mm thick	m	19207
11.7	F110G	Pipe of 711mm dia-12mm thick	m	22298
12	F120	**For MS pipe of 762mm dia**		
12.1	F120A	Pipe of 762mm dia-7.1mm thick	m	15764
12.2	F120B	Pipe of 762mm dia-7.9mm thick	m	17664
12.3	F120C	Pipe of 762mm dia-8.7mm thick	m	18437
12.4	F120D	Pipe of 762mm dia-9.5mm thick	m	19773
12.5	F120E	Pipe of 762mm dia-10mm thick	m	20609
13	F130	**For MS pipe of 813mm dia**		
13.1	F130A	Pipe of 813mm dia-7.1mm thick	m	16841
13.2	F130B	Pipe of 813mm dia-7.9mm thick	m	18277
13.3	F130C	Pipe of 813mm dia-8.7mm thick	m	19704
13.4	F130D	Pipe of 813mm dia-9.5mm thick	m	21122
13.5	F130E	Pipe of 813mm dia-10mm thick	m	22013
13.6	F130F	Pipe of 813mm dia-12mm thick	m	25558
14	F140	**For MS pipe of 864mm dia**		
14.1	F140A	Pipe of 864mm dia-7.9mm thick	m	19410
14.2	F140B	Pipe of 864mm dia-8.7mm thick	m	20928
14.3	F140C	Pipe of 864mm dia-9.5mm thick	m	22446
14.4	F140D	Pipe of 864mm dia-10mm thick	m	23391

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
15	F150	**For MS pipe of 914mm dia**		
15.1	F150A	Pipe of 914mm dia-7.9mm thick	m	20553
15.2	F150B	Pipe of 914mm dia-8.7mm thick	m	22161
15.3	F150C	Pipe of 914mm dia-9.5mm thick	m	23770
15.4	F150D	Pipe of 914mm dia-10mm thick	m	24770
15.5	F150E	Pipe of 914mm dia-12mm thick	m	28769
16	F160	**For MS pipe of 965mm dia**		
16.1	F160A	Pipe of 965mm dia-8.7mm thick	m	23394
16.2	F160B	Pipe of 965mm dia-9.5mm thick	m	25085
16.3	F160C	Pipe of 965mm dia-10mm thick	m	26148
17	F170	**For MS pipe of 1016mm dia**		
17.1	F170A	Pipe of 1016mm dia-8.7mm thick	m	24666
17.2	F170B	Pipe of 1016mm dia-9.5mm thick	m	26457
17.3	F170C	Pipe of 1016mm dia-10mm thick	m	27566
17.4	F170D	Pipe of 1016mm dia-12mm thick	m	32020
18	F180	**For MS pipe of 1067 mm dia**		
18.1	F180A	Pipe of 1067mm dia-8.7mm thick	m	25890
18.2	F180B	Pipe of 1067mm dia-9.5mm thick	m	27772
18.3	F180C	Pipe of 1067mm dia-10mm thick	m	28944
19	F190	**For MS pipe of 1118mm dia**		
19.1	F190A	Pipe of 1118mm dia-8.7mm thick	m	27113
19.2	F190B	Pipe of 1118mm dia-9.5mm thick	m	29085
19.3	F190C	Pipe of 1118mm dia-10mm thick	m	30312
20	F200	**For MS pipe of 1168mm dia**		
20.1	F200A	Pipe of 1168mm dia-9.5mm thick	m	30377
20.2	F200B	Pipe of 1168mm dia-10mm thick	m	31659
21	F210	**For MS pipe of 1219mm dia**		
21.1	F210A	Pipe of 1219mm dia-10mm thick	m	33129
21.2	F210B	Pipe of 1219mm dia-12.5mm thick	m	39821
22	F230	**For MS pipe of 1422mm dia**		
22.1	F230A	Pipe of 1422mm dia-12.5mm thick	m	46858
22.2	F230B	Pipe of 1422mm dia-14.20mm thick	m	52163
23	F240	**For MS pipe of 1626 mm dia**		
23.1	F240A	Pipe of 1626mm dia-14.20mm thick	m	59694
23.2	F240B	Pipe of 1626mm dia-16.00mm thick	m	66117
24	F250	**For MS pipe of 1829 mm dia**		
24.1	F250A	Pipe of 1829mm dia-14.20mm thick	m	67268
24.2	F250B	Pipe of 1829mm dia-16.00mm thick	m	74535
24.3	F250C	Pipe of 1829mm dia-17.50mm thick	m	80554
25	F260	**For MS pipe of 2032 mm dia**		
25.1	F260A	Pipe of 2032 mm dia-16.00mm thick	m	83472
25.2	F260B	Pipe of 2032 mm dia-17.50mm thick	m	90177
25.3	F260C	Pipe of 2035 mm dia-20.00mm thick	m	101354
26	F270	**For MS pipe of 2235 mm dia**		

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
26.1	F270A	Pipe of 2235 mm dia-16.00mm thick	m	91874
26.2	F270B	Pipe of 2235 mm dia-17.50mm thick	m	99269
26.3	F270C	Pipe of 2235 mm dia-20.00mm thick	m	111570
27	F280	**For MS pipe of 2540 mm dia**		
27.1	F280A	Pipe of 2540 mm dia-20.00mm thick	m	126820
27.2	F280B	Pipe of 2540 mm dia-22.20mm thick	m	139133
27.3	F280C	Pipe of 2540 mm dia-25.00mm thick	m	154760
28	F290	Providing, fabricating, supplying and fixing at site various diameter MS SPECIALS of mechanised ends as per sketch to suite for PSC pipes roll on joint and confined O ring system. The cost is inclusive of all materials inlcluding rubber 'O' rings, labour, consumables, hire charges for tools, tackles, welding equipments, lead and lifts, etc. complete as per the instructions of Engineer in charge.		
28.1	F290A	For PSC pipes of 450mm dia.	each	7455
28.2	F290B	For PSC pipes of 600mm dia.	each	11097
28.3	F290C	For PSC pipes of 700mm dia.	each	13513
29	F300	Providing, fabricating, supplying and fixing at site various diameter MS MJ ends to suit CI / DI pipe as per the sketch . The cost is inclusive of all materials, i.e, rubber 'O' rings, flanges, bolts and nuts, consumables, hire charges, tools and tackles, welding equipments, lead and lifts, etc. complete as per the instructions of Engineer in charge.		
29.1	F300A	For CI / DI pipes of 100mm dia.	each	1965
29.2	F300B	For CI / DI pipes of 150mm dia.	each	2382
29.3	F300C	For CI / DI pipes of 200mm dia.	each	3127
29.4	F300D	For CI / DI pipes of 250mm dia.	each	4376
29.5	F300E	For CI / DI pipes of 300mm dia.	each	4674
29.6	F300F	For CI / DI pipes of 400mm dia.	each	6491
29.7	F300G	For CI / DI pipes of 450mm dia.	each	7276
29.8	F300H	For CI / DI pipes of 600mm dia.	each	9596
29.9	F300I	For CI / DI pipes of 700mm dia.	each	11271
29.10	F300J	For CI / DI pipes of 900mm dia.	each	15231
30	F310	Providing, fabricaing, supplying and fixing at site various diameters of MS Flanges as per IS standards to fix sluice valves as per sketch. The rate to include cost of all materials, labour, consumables, hire charges for tools and tackles, weldiing equipments etc. complete as per instructions of the Engineer in charge for:		
30.1	F310A	Flanges of 100mm dia and 10mm thick.	each	646
30.2	F310B	Flanges of 100mm dia and 8mm thick.	each	539
30.3	F310C	Flanges of 150mm dia and 16mm thick.	each	1517
30.4	F310D	Flanges of 150mm dia and 12mm thick.	each	1157
30.5	F310E	Flanges of 200mm dia and 20mm thick.	each	2542
30.6	F310F	Flanges of 200mm dia and 16mm thick.	each	2126
30.7	F310G	Flanges of 250mm dia and 20mm thick.	each	3402
30.8	F310H	Flanges of 250mm dia and 16mm thick.	each	2816
30.9	F310I	Flanges of 300mm dia and 20mm thick.	each	3941

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
30.10	F310J	Flanges of 300mm dia and 16mm thick.	each	3268
30.11	F310K	Flanges of 400mm dia and 25mm thick.	each	6215
30.12	F310L	Flanges of 400mm dia and 20mm thick.	each	5096
30.13	F310M	Flanges of 450mm dia and 25mm thick.	each	7218
30.14	F310N	Flanges of 450mm dia and 20mm thick.	each	6034
30.15	F310O	Flanges of 600mm dia and 25mm thick.	each	8910
30.16	F310P	Flanges of 600mm dia and 20mm thick.	each	7654
30.17	F310Q	Flanges of 700mm dia and 30mm thick.	each	11051
30.18	F310R	Flanges of 700mm dia and 25mm thick.	each	11823
30.19	F310S	Flanges of 900mm dia and 32mm thick.	each	15598
30.20	F310T	Flanges of 900mm dia and 28mm thick.	each	13720
30.21	F310U	Flanges of 1000mm dia and 32mm thick.	each	17129
30.22	F310V	Flanges of 1000mm dia and 30mm thick.	each	16192
30.23	F310W	Flanges of 1100mm dia and 30mm thick.	each	18337
30.24	F310Y	Flanges of 1100mm dia and 32mm thick.	each	20680
30.25	F310Z	Flanges of 1200mm dia and 32mm thick.	each	21889
31	F320	Providing Inner lining by spinning to M.S pipes including cleaning the inside surface, removing rust, millscales etc., with CM 1:1.5 lining of minimum 10 mm thick upto 610mm outer dia and minimum 12 mm thick beyond 610mm OD and conforming to IS-11906 / 1986 etc. for:		
31.1	F320A	Inside of 219mm dia pipes for 10mm thick	m	219
31.2	F320B	Inside of 273.1 mm dia pipes for 10 mm thick	m	237
31.3	F320C	Inside of 323.9 mm dia pipes for 10 mm thick	m	283
31.4	F320D	Inside of 355.6 mm dia pipes for 10 mm thick	m	312
31.5	F320E	Inside of 406 mm dia pipes for 10 mm thick	m	357
31.6	F320F	Inside of 457 mm dia pipes for 10 mm thick	m	404
31.7	F320G	Inside of 508 mm dia pipes for 10 mm thick	m	451
31.8	F320H	Inside of 559 mm dia pipes for 10 mm thick	m	497
31.9	F320I	IInside of 610 mm dia pipes for 10 mm thick	m	543
31.10	F320J	Inside of 660 mm dia pipes for 12 mm thick	m	679
31.11	F320K	Inside of 711 mm dia pipes for 12 mm thick	m	732
31.12	F320L	Inside of 762 mm dia pipes for 12 mm thick	m	785
31.13	F320M	Inside of 813 mm dia pipes for 12 mm thick	m	838
31.14	F320N	Inside of 864 mm dia pipes for 12 mm thick	m	891
31.15	F320O	Inside of 914 mm dia pipes for 12 mm thick	m	945
31.16	F320P	Inside of 965 mm dia pipes for 12mm thick	m	999
31.17	F320Q	Inside of 1016 mm dia pipes for 12mm thick	m	1051
31.18	F320R	Inside of 1067 mm dia pipes for 12 mm thick	m	1106
31.19	F320S	Inside of 1118 mm dia pipes for 12 mm thick	m	1160
31.20	F320T	Inside of 1168 mm dia pipes for 12 mm thick	m	1213
31.21	F320U	Inside of 1219 mm dia pipes for 12 mm thick	m	1266
31.22	F320V	Inside of 1422 mm dia pipes for 12mm thick	m	1475
31.23	F320W	Inside of 1626 mm dia pipes for 12 mm thick	m	1684
31.24	F320X	Inside of 1829 mm dia pipes for 12 mm thick	m	1895

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
31.25	F320Y	Inside of 2032 mm dia pipes for 12 mm thick	m	2104
31.26	F320Z	Inside of 2235 mm dia pipes for 12 mm thick	m	2315
31.27	F320AA	Inside of 2540 mm dia pipes for 12 mm thick	m	2628
32	F330	Providing Outer lining to M.S pipes by spinning including cleaning the outer surface, removing rust, millscales etc., with CM 1:3 for minimum 25mm thick over 50x50 weldmesh of 13 gauge lining and conforming to IS-11906/1986 etc. for:		
32.1	F330A	Outside of 219mm dia pipes	m	587
32.2	F330B	Outside of 273.1mm dia pipes	m	721
32.3	F330C	Outside of 323.9mm dia pipes	m	847
32.4	F330D	Outside of 355.6mm dia pipes	m	939
32.5	F330E	Outside of 406mm dia pipes	m	1073
32.6	F330F	Outside of 457mm dia pipes	m	1203
32.7	F330G	Outside of 508mm dia pipes	m	1338
32.8	F330H	Outside of 559mm dia pipes	m	1473
32.9	F330I	Outside of 610mm dia pipes	m	1607
32.10	F330J	Outside of 660mm dia pipes	m	1736
32.11	F330K	Outside of 711mm dia pipes	m	1870
32.12	F330L	Outside of 762mm dia pipes	m	2004
32.13	F330M	Outside of 813mm dia pipes	m	2138
32.14	F330N	Outside of 864mm dia pipes	m	2273
32.15	F330O	Outside of 914mm dia pipes	m	2407
32.16	F330P	Outside of 965mm dia pipes	m	2541
32.17	F330Q	Outside of 1016mm dia pipes	m	2675
32.18	F330R	Outside of 1067mm dia pipes	m	2809
32.19	F330S	Outside of 1118mm dia pipes	m	2943
32.20	F330T	Outside of 1168mm dia pipes	m	3069
32.21	F330U	Outside of 1219mm dia pipes	m	3211
32.22	F330V	Outside of 1422mm dia pipes	m	3748
32.23	F330W	Outside of 1626mm dia pipes	m	4285
32.24	F330X	Outside of 1829mm dia pipes	m	4822
32.25	F330Y	Outside of 2032mm dia pipes	m	5350
32.26	F330Z	Outside of 2232mm dia pipes	m	5887
32.27	F330AA	Outside of 2540mm dia pipes	m	6692
33	F340	Lowering, laying, jointing and commissioning of ERW (Electric Resistance Welded)/ SAW (Submerged Arc Welded) MS pipes of Outer dia , including perfect linking and site welding of joints to M.S pipes after cleaning the surface including removing rust, millscales by using standard welding rod conforming to IS 6419 to correct position and giving satisfactory hydraulic test as per IS 3589-2001 at site as per detailed specifications for the following diameters as noted below, including bailing out of water wherever necessary including cost of all labour etc. complete . (Contractor will make his own arrangements for procuring water for testing)		
33.1	F340A	M.S pipe 219mm dia	m	263

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
33.2	F340B	M.S pipe 273.1mm dia	m	313
33.3	F340C	M.S pipe 323.9mm dia	m	367
33.4	F340D	M.S pipe 355.6mm dia	m	399
33.5	F340E	M.S pipe 406mm dia	m	443
33.6	F340F	M.S pipe 457mm dia	m	491
33.7	F340G	M.S pipe 508mm dia	m	530
33.8	F340H	M.S pipe 559mm dia	m	584
33.9	F340I	M.S pipe 610mm dia	m	623
33.10	F340J	M.S pipe 660mm dia	m	701
33.11	F340K	M.S pipe 711mm dia	m	761
33.12	F340L	M.S pipe 762mm dia	m	821
33.14	F340M	M.S pipe 813mm dia	m	892
33.15	F340N	M.S pipe 864mm dia	m	933
33.16	F340O	M.S pipe 914mm dia	m	1001
33.17	F340P	M.S pipe 965mm dia	m	1042
33.18	F340Q	M.S pipe 1016mm dia	m	1131
33.19	F340R	M.S pipe 1067mm dia	m	1172
33.20	F340S	M.S pipe 1118mm dia	m	1212
33.21	F340T	M.S pipe 1168mm dia	m	1252
33.22	F340U	M.S pipe 1219mm dia	m	1381
33.23	F340V	M.S pipe 1422mm dia	m	1963
33.24	F340W	M.S pipe 1626mm dia	m	2222
33.25	F340X	M.S pipe 1829mm dia	m	2551
33.26	F340Y	M.S pipe 2032m dia	m	3415
33.27	F340Z	M.S pipe 2235 mm dia	m	3729
33.28	F340AA	M.S pipe 2540mm dia	m	4137
34	F350	Providing coal taring two coats to the outer surface of M.S pipes as per AWWA specifications including the cost of coal tar etc.complete for:		
34.1	F350A	M.S pipes of 219 mm dia..	m	54
34.2	F350B	M.S pipes of 273 mm dia..	m	67
34.3	F350C	M.S pipes of 324 mm dia..	m	80
34.4	F350D	M.S pipes of 355 mm dia..	m	88
34.5	F350E	M.S pipes of 406mm dia.	m	100
34.6	F350F	M.S pipes of 457mm dia.	m	113
34.7	F350G	M.S pipes of 508mm dia.	m	125
34.8	F350H	M.S pipes of 559mm dia.	m	138
34.9	F350I	M.S pipes of 610mm dia.	m	150
34.10	F350J	M.S pipes of 660mm dia.	m	163
34.11	F350K	M.S pipes of 711mm dia.	m	175
34.12	F350L	M.S pipes of 762mm dia.	m	188
34.13	F350M	M.S pipes of 813mm dia.	m	199
34.14	F350N	M.S pipes of 864mm dia.	m	213
34.15	F350O	M.S pipes of 914mm dia.	m	225
34.16	F350P	M.S pipes of 965mm dia.	m	238

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
34.17	F350Q	M.S pipes 1016mm dia.	m	251
34.18	F350R	M.S pipes 1067mm dia.	m	263
34.19	F350S	M.S pipes 1118mm dia.	m	277
34.20	F350T	M.S pipes 1168mm dia.	m	288
34.21	F350U	M.S pipes 1219mm dia.	m	301
34.22	F350V	M.S pipes 1422mm dia.	m	348
34.23	F350W	M.S pipes 1626mm dia.	m	398
34.24	F350X	M.S pipes 1829mm dia.	m	447
34.25	F350Y	M.S pipes 2032mm dia.	m	496
34.26	F350Z	M.S pipes 2232mm dia.	m	546
34.27	F350AA	M.S pipes 2540mm dia.	m	621
35	F360A	Providing and applying Rigid Direct to Metal, 100% Solids Polyurethane Coating meeting AWWA C-222 (Latest Revision) and certified for drinking water as per WRAS : BS- 6920 / Singapore SS375 to a thickness of 500 microns (SSPCPA2) on the internal surface of MS pipe after blast cleaning to SSPCSP-10/ NACE 2 & 1/2 with anchor profile of >75 microns using steel grit, in factory premises with automated equipment. The Coating should meet Total Organic Carban (TOC) as per APHA - AWWA WEF 5310C < 2.0 mg/l. Site application shall not be permited. The product shall be supplied and applied as per detailed specification. **For internal surface.**	m^2	407
36	F360B	Providing and applying Rigid, Direct to Metal, 100% Solids Polyurethane Coating meeting BIS 16719 (Latest Revision) or AWWA C-222 (Latest Revision) to thickness of 625 micron for >400mm upto 1000mm dia pipes, 750 micron for >1000mm upto 1500mm dia pipes, 875 micron for >1500mm upto 2200mm dia pipes and 1000 micron for >2200mm upto 3200mm dia pipes on the external surface of MS pipe after blast cleaning to SSPC SP-10/ NACE 2 & 1/2 with anchor profile of >75 microns using steel grit. Pipelining shall only be permitted in the pipe manufacturer's facility with automated equipment. Site application shall not be permited. The product shall be supplied and applied as per the detailed specification. **For external surface**	m^2	572
37	F370	Manufacturing, providing, transporting, rolling, lowering, laying, jointing & testing and commissioning of MS specials of minimum 8mm thick such as bends, tail pieces, reduces etc. conforming to IS-7322:1985 with latest amendments and including perfect linking and welding of joints to correct position includng cost and conveyance of materials with all lead and lifts, cost all labour and giving satisfactory hydraulic test as per IS:3589:2001 with latest amendments for test pressure and working pressure both at factory and site etc. complete as per detailed specifications with inside lining two coat of food grade epoxy painting of approved make with each coat of 250 micron thick (after dry) over one coat of food grade epoxy primer of approved make with minium of 50 micron thick (after dry) and outside 25mm thick coating in CM 1:3 by providing 50x50mm weld mesh including loading and unloading of the pipes for the following category to suit PSC / MS / CI / AC / DI / PVC pipes. The weight of MS shell only by considered before lining and coating for arriving at the rate. The thickness of plate will be specified by the engineer. (Contractor will make his own arrangements for procuring water for testing) for:		

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
		Note: 1) For small works where the C.M. lining is not practicable for inside surface of the pipe, food grade expoxy painting of two coat over one coat of epoxy primer may be proposed and got approved. 2) The above rates are applicable only for pipe works.		
37.1	F370A	Pipe bends,branches, tail pieces, reducers etc. for upto 500mm dia pipes	kg	161
37.2	F370B	Pipe bends,branches, tail pieces, reducers etc. for above 500mm dia pipes	kg	147

CHAPTER - 7
LABORATORY CHEMICALS AND EQUIPMENTS

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
1	G010A	Providing & preparing sodium hypochlorite solution for 500 ltrs capacity tank. The hypochlorite generator tank should consist of non-metallic tank of 500 lts capacity. Preferably sintex / supreme / voltas or equivalent fitted with a drain cock at the bottom for cleaning and periodic maintenance and outlet valve to let out the prepared sodium hypochlorite at bottom an orifice to fill the water at the top edge with lid and funnel. (water will be supplied by the organisation). Iodized salt should be provided by the firm for one year for the preparation of hypochlorite. The elements to generate hypochlorite are to be made of imported electrode material "intri" mounted in PVC housing with wire leads for energizing in a water proof sealing. The electrode assembly should be mounted inside the hypochlorite generator tank. The hypochlorite generation tank should be mounted on a MS fabricated stand.The power panel should consist of on-off button, fuse, MCB, line charger indicator, process complete indicator, and timer unit housed in a cabinet with panel lock facility.The firm should provide dosing pump for suitable dosage operated by 230V 50 Hz AC mains provided by the organisation.The residual chlorine at a radius of 2 Km should be maintained at 0.02 ppm at end.	each	93720
2	G020A	Supply & preparing of Iodized salt for one 500 ml tank along with operation of plant with operator, consumables, maintenance and supply of spares for effective and successful operation of the plants for second year ie., after one year of commissioning	each	70290
3	G030	Supply of Laboratory Chemicals and Equipments		
3.1	G030A	Potassium Permanganate	kg	1650
3.2	G030B	Bleaching Powder	kg	464
3.3	G030C	Glassware Cleaner	l	350
3.4	G030D	Hand wash Cleaner	l	400
3.5	G030E	Hand Gloves	pair	100
3.6	G030F	Mask	pair	35
3.7	G030G	Aprons	each	300
3.8	G030H	Supply of Chlorine Gas in 100 KG Cylnder	nos	17000
3.9	G030I	Supply of Chlorine Gas in 900 KG Cylnder	nos	49000
3.10	G030J	conical flask 1000ml borosil	each	333
3.11	G030K	conical flask 500ml borosil	each	196
3.12	G030L	conical flask 250ml borosil	each	137
3.13	G030M	conical flask 100ml borosil	each	93
3.14	G030N	Beaker 1000ml Borosil	each	284
3.15	G030O	Beaker 500ml Borosil	each	137
3.16	G030P	Beaker 250ml Borosil	each	88
3.17	G030Q	Beaker 100ml Borosil	each	78

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
3.18	G030R	Beaker 50ml Borosil	each	78
3.19	G030S	Pipette Graduated 25ml Borosil A Grade with NABL Certificate	each	676
3.20	G030T	Pipette Graduated 10ml Borosil A Grade with NABL Certificate	each	573
3.21	G030U	Pipette Graduated 5ml Borosil A Grade with NABL Certificate	each	534
3.22	G030V	Pipette Graduated 2ml Borosil A Grade with NABL Certificate	each	461
3.23	G030W	Pipette Graduated 1ml Borosil A Grade with NABL Certificate	each	568
3.24	G030X	Volumetric Pipette 10ml A Class with NABL Certificate	each	446
3.25	G030Y	Volumetric Pipette 5ml A Class with NABL Certificate	each	372
3.26	G030Z	Volumetric Pipette 2ml A Class with NABL Certificate	each	328
3.27	G030AA	Volumetric Pipette 1ml A Class with NABL Certificate	each	323
3.28	G030AB	Volumetric Pipette 25ml A Class with NABL Certificate	each	617
3.30	G030AC	Measuring Cylinder 1000ml Borosil A Class	each	2038
3.31	G030AD	Measuring Cylinder 500ml Borosil A Class	each	1671
3.32	G030AE	Measuring Cylinder 100ml Borosil A Class	each	813
3.33	G030AF	Measuring Cylidner 50ml Borosil A Class	each	715
3.34	G030AG	Measuring Cylinder 25ml Borosil A Class	each	593
3.35	G030AH	Measuring Cylinder 10ml Borosil A Class	each	515
3.36	G030AI	Measuring Cylinder 5ml Borosil A Class	each	451
3.37	G030AJ	Glass Rod 20cm	each	25
3.38	G030AK	Volumetric Flask 2000ml Borosil A Grade with NABL Certificate	each	2651
3.39	G030AL	Volumetric Flask 1000ml Borosil A Grade with NABL Certificate	each	1632
3.40	G030AM	Volumetric Flask 500ml Borosil A Grade with NABL Certificate	each	1117
3.41	G030AN	Volumetric Flask 250ml Borosil A Grade with NABL Certified	each	853
3.42	G030AO	Volumetric Flask 100ml Borosil A Grade with NABL Certificate	each	603
3.43	G030AP	Volumetric Flask 50ml Borosil A Grade with NABL Certificate	each	617
3.44	G030AQ	Volumetric Flask 25ml Borosil A Grade with NABL Certificate	each	1464
3.45	G030AR	Volumetric Flask 10ml Borosil A Grade with NABL Certificate	each	706
3.46	G030AS	Volumetric Flask 5ml Borosil A Grade with NABL Certificate	each	813
3.47	G030AT	Nessler's Tube 50ml Borosil	each	181
3.48	G030AU	Reagent Bottle Narrow 2000ml Borosilicate 3.3 Glass	each	1171
3.49	G030AV	Reagent Bottle Narrow 1000ml Borosilicate 3.3 Glass	each	637
3.50	G030AW	Reagent Bottle Narrow 500ml Borosilicate 3.3 Glass	each	397
3.51	G030AX	Reagent Bottle Narrow 250ml Borosilicate 3.3 Glass	each	370
3.52	G030AY	Reagent Bottle Narrow 100ml Borosilicate 3.3 Glass	each	397
3.53	G030AZ	Reagent Bottle Narrow 60ml Borosilicate 3.3 Glass	each	397
3.54	G030BA	Reagent Bottle Amber 1000ml Borosilicate 3.3 Glass	each	990
3.55	G030BB	Spactula 6" SS	each	20

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
3.56	G030BC	Burette 50ml Borosil A Grade with NABL	each	2141
3.57	G030BD	Foreceps 6”	each	50
3.58	G030BE	Motor and Pestle 6”	each	410
3.59	G030BF	Motor and Pestle 4”	each	150
3.60	G030BG	Plastic Pipette Stand Round	each	280
3.61	G030BH	Plastic Burette Stand with clamps	each	550
3.62	G030BI	BOD Bottle 300ml	each	617
3.63	G030BJ	Plastic Test Tube Stand 3 Tier 25mmx36	each	689
3.64	G030BK	Test Tube Holders	each	25
3.65	G030BL	Glass Droppers	each	25
3.66	G030BM	Funnel 6” Glass	each	417
3.67	G030BN	Funnel 2” Glass	each	123
3.68	G030BO	Analytical Weight Box 1mg to 200gm with NABL Class F2	each	16000
3.69	G030BP	Test Tube Cleaning Brush	each	18
3.70	G030BQ	Non Absorbent Cotton Roll	each	210
3.71	G030BR	Petri Plates	each	93
3.72	G030BS	Evaporating Dish 55x23	each	486
3.73	G030BT	Watch Glass 4”	each	30
3.74	G030BU	Cuvette for UV Quartz	each	2700
3.75	G030BV	Cuvette for UV Glass	each	1800
3.76	G030BW	Cuvette for Turbiditymeter	each	35
3.77	G030BX	Tongs 12”	each	60
3.78	G030BY	Micropipette finn Thermo 5- 500	each	2695
3.80	G030BZ	Micropipette Finn Thermo 1-100	each	2695
3.81	G030CA	Micropipette tips 5ml	each	550
3.82	G030CB	Micropipette tips 1ml	each	550
3.83	G030CC	Dessicator 300mm Glass with Borosilicate 3.3 Glass Complies with IS6128	each	20115
3.84	G030CD	Whatman Filter Paper No.41	each	3360
3.85	G030CE	Thermometer 110C	each	90
3.86	G030CF	Thermometer 360C	each	140
3.87	G030CG	Digital Hygrometer with NABL Certificate	each	1225
3.88	G030CH	First Aid Box metal with All Accessories	each	1798
3.89	G030CI	Beaker Plastic 100ml	each	50
4	G040	Chemical & Reagents Required for Taluka & District Water Quality Testing Laborotary		
4.1	G040A	Chemical/ Reagents-Phenolpthlien %,Reagent-SR11	100gm	554

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
4.2	G040B	Chemical/ Reagents-Sulphuric Acid 0.02N std,Reagent-SR13	500ml	202
4.3	G040C	Chemical/ Reagents-Methyl Orenge 0.040%, Reagent-SR12	100gm	212
4.4	G040D	Chemical/ Reagents-Silver Nitrate 0.02N std, Reagent-SR6	500ml	671
4.5	G040E	Chemical/ Reagents-Silver Nitrate 0.02N std, Reagent-SR5	500ml	671
4.6	G040F	Chemical/ Reagents-Reagent-7 (Zirconium Oxychloride, O-Xylanol), Reagent-SR7	500gm	1968
4.7	G040G	Chemical/ Reagents- STD Fluoride Solution 100 ppm, Reagent-RD7,NIST trasable standard	500ml	6588
4.8	G040H	Chemical/ Reagents-Tisab 3 buffer solution, Reagent-SR51, ,NIST trasable standard	500ml	13158
4.9	G040I	Chemical/ Reagents-Edta 0.02 N std, O-Xylanol), Reagent-SR4	500ml	169
4.10	G040J	Chemical/ Reagents-EBT 1%, Reagent-SR3	100gm	1233
4.11	G040K	Chemical/ Reagents-Buffer Solution (ammonia/Amm.chloride), Reagent-SR2	500ml	264
4.12	G040L	Chemical/ Reagents-STD Iron Solution 100 PPM, Reagent-RS8, NIST trasable standard	500ml	3140
4.13	G040M	Chemical/ Reagents-Reagent-8(1:10phenonetrolie base, Hydroxyl amine hydrochloride, ammonium accetate), Reagent-SR8	10gm	340
4.14	G040N	Chemical/ Reagents-HYDROCHLORIC ACID, Reagent-AR	500ml	291
4.15	G040O	Chemical/ Reagents-SDT. Nitrate Solution 1000gm/l, Reagent-RS14, NIST trasable standard	500ml	5340
4.16	G040P	Chemical/ Reagents-NFEDA Reagent/Sulphanalmide/Zin, Reagent-SR14	100gm	780
4.17	G040Q	Chemical/ Reagents-Reductant Reagent/Acetic Acid/Citric, Reagent-SR15	500gm	314
4.18	G040R	Chemical/ Reagents-POTASSIUM CHLORIDE, Reagent-AR	500gm	312
4.19	G040S	Chemical/ Reagents-BUFFER SOLUTION 4, 7, 10, Reagent-RS2	set	1440
4.20	G040T	Chemical/ Reagents-SODIM CHLORIED SOL.STD 1000 PPM, Reagent-RS1	500ml	150
4.21	G040U	Chemical/ Reagents-Mercury Papers/(Mercuric Lodide), Reagent-SR31	pkt	1108
4.22	G040V	Chemical/ Reagents-Sulphamic Acid, Reagent-SR32	500gm	342
4.23	G040W	Chemical/ Reagents-Zinc Granules, Reagent-SR33	500gm	1150
4.24	G040X	Chemical/Reagents-Sdt.40NtuSol.(HydrazimeSulphate,Hexamethylene Tetramide), Reagent-RST,NIST trasable standard	100ml	5930
4.25	G040Y	Chemical/ Reagents-BARIUM CHLORIDE, Reagent-AR	500gm	428
4.26	G040Z	Chemical/ Reagents- STD. SULPHATE SOLUTION 1000 PPM, Reagent-SRS,NIST trasable standard	100ml	4950
4.27	G040AA	Chemical/ Reagents- REAGENT-Free Chlorine/DPD	100ml	650
4.28	G040AB	Chemical/ Reagents- SODIUM HYDROXIDE, Reagent-LR	500gm	264
4.29	G040AC	Chemical/ Reagents- SULPHURIC ACID CONC 99%, Reagent-LR	500ml	342

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
4.30	G040AD	Chemical/ Reagents- MURAXIDE INDICATOR, Reagent-LR	5gm	276
4.31	G040AE	Chemical/ Reagents- HYDROCHORIC ACIDE, Reagent-LR	500ml	280
4.32	G040AF	Chemical/ Reagents- BACTARIOLOGICAL VIALS, Reagent-LR	1 voil	50
4.33	G050A	pH Buffer solution 4(Himedia/Merckfor normal pH meter) 4-100 Capsules/500ml	500ml	274
4.34	G050B	pH Buffer solution (Himedia/Merckfor normal pH meter)7-100 Capsules/500ml	500ml	274
4.35	G050C	PH Buffer solution (Himedia/Merckfor normal pH meter)10-100 Capsules/500ml	500ml	274
4.36	G050D	Specific Conductance - Potassium chloride AR	500gm	312
4.37	G050E	Total Dissolved Solid - Potassium chloride AR	500gm	312
4.38	G050F	Turbidity - Hydrazine sulphate AR	100gm	447
4.39	G050G	Turbidity - Hexamethylene Tetramine AR	500gm	504
4.40	G050H	Total Alkanity - Phenolphthalein indicator	125ml	165
4.41	G050I	Total Alkanity - Methyl Orange Indicatorr	125ml	175
4.42	G050J	Total Alkanity - Sodium carbonate AR	500gm	360
4.43	G050K	Total Alkanity - Sulphuric Acid AR	500ml	342
4.45	G050L	Total Hardness - Eriochrome Black T AR	25gm	312
4.46	G050M	Total Hardness - EDTA AR	500gm	1116
4.47	G050N	Total Hardness -Ammonium Chloride AR	500gm	372
4.48	G050O	Total Hardness - Triethenolamime AR	500ml	660
4.49	G050P	Total Hardness - Calcium carbonate AR	500gm	360
4.50	G050Q	Total Hardness - Ammonia A	500ml	216
4.51	G050R	Calcium Hardness - EDTA AR	500gm	1116
4.52	G050S	Calcium Hardness - Calconcarboxylic acid AR	25gm	270
4.53	G050T	Calcium Hardness - Sodium Sulphate AR	500gm	288
4.54	G050U	Calcium Hardness - Triethenolamine AR	500ml	660
4.55	G050V	Calcium Hardness - Calcium carbonate AR	500gm	360
4.56	G050W	Calcium Hardness - Sodium Hydroxide AR	500gm	264
4.57	G050X	Chloride - Pottassium Chromate AR	500gm	1200
4.58	G050Y	Chloride - Silver Nitrate AR	25gm	5640
4.59	G050Z	Chloride - Sodium Chloride AR	500gm	180
4.60	G050AA	Iron Method (1) 1-10 Phenanthroline Method - Ammonium Acetate AR	500gm	432
4.61	G050AB	Iron Method (1) 1-10 Phenanthroline Method -Glacial Acetic Acid AR	500ml	312
4.62	G050AC	Iron Method (1) 1-10 Phenanthroline Method -1,10,Phenanthroline monohydrate AR	5gm	729
4.63	G050AD	Iron Method (1) 1-10 Phenanthroline Method -Hydroxylamine Hydrochloride AR	500gm	1920

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
4.64	G050AE	Iron Method (1) 1-10 Phenanthroline Method -Conc.Hydrochloric Acid AR	500ml	290
4.65	G050AF	Iron Method (1) 1-10 Phenanthroline Method -Sodium Acetate AR	500gm	480
4.66	G050AG	Iron Method (1) 1-10 Phenanthroline Method -Ferrous ammonium sulphate AR	500gm	360
4.67	G050AH	Iron Method (1) 1-10 Phenanthroline Method -Pottassium permanganate AR	500gm	564
4.68	G050AI	Fluoride Method (1) Zirconium oxychloride method - Sodium Fluoride AR	500gm	1020
4.69	G050AJ	Fluoride Method (1) Zirconium oxychloride method - Alazarin S AR	25gm	774
4.70	G050AK	Fluoride Method (1) Zirconium oxychloride method - Zirconium Oxychloride AR	100gm	459
4.71	G050AL	Fluoride Method (1) Zirconium oxychloride method - Conc.Hydrochloric Acid AR	500ml	290
4.72	G050AM	Fluoride Method (1) Zirconium oxychloride method - Conc.Sulphuric Acid AR	500ml	342
4.73	G050AN	Fluoride Method (1) Zirconium oxychloride method - Sodium Hydroxide AR	500gm	360
4.74	G050AO	Fluoride Method (1) Zirconium oxychloride method - Sodium Thiosulphate AR	500gm	252
4.75	G050AP	Fluoride Method (2) Ion Selective Electrode Method - Fluoride Standard Solution 1000mg/L NIST	500ml	6588
4.76	G050AQ	Fluoride Method (2) Ion Selective Electrode Method - TISAB III Concetrated NIST	500ml	15140
4.77	G050AR	Fluoride Method (3) SPADNS Photometric method - conc. Sulphuric acid AR	500ml	390
4.78	G050AS	Fluoride Method (3) SPADNS Photometric method - Silver Sulphate AR	25gm	6000
4.79	G050AT	Fluoride Method (3) SPADNS Photometric method - Sodium fluride AR	500gm	1020
4.80	G050AU	Fluoride Method (3) SPADNS Photometric method - SPADNS Reagent AR	25gm	4440
4.81	G050AV	Fluoride Method (3) SPADNS Photometric method - Zirconium oxy chloride octahydrate AR	100gm	2700
4.82	G050AW	Fluoride Method (3) SPADNS Photometric method - Sodium Arsenite AR	100gm	2160
4.83	G050AX	Fluoride Method (3) SPADNS Photometric method - Conc. Hydrochloric acid AR	500ml	290
4.84	G050AY	Nitrate Method (1) UV Spectrophotometer Screening Method - Phottassium Nitrate A	500gm	444
4.85	G050AZ	Nitrate Method (1) UV Spectrophotometer Screening Method - Conc. Hydrochloric Acid AR	500ml	290
4.86	G050BA	Nitrate Method (2) Chromototropic acid Method - Potassium Nitrate AR	500gm	444

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
4.87	G050BB	Nitrate Method (2) Chromototropic acid Method - Anhydrous Sodium Sulphate AR	500gm	288
4.88	G050BC	Nitrate Method (2) Chromototropic acid Method - Urea AR	500gm	348
4.89	G050BD	Nitrate Method (2) Chromototropic acid Method -Antimony Metal	500gm	4080
4.90	G050BE	Nitrate Method (2) Chromototropic acid Method - Conc Sulphuric Acid AR	500ml	390
4.91	G050BF	Nitrate Method (2) Chromototropic acid Method - Conc Hydrochloric Acid AR	500ml	290
4.92	G050BG	Nitrate Method (2) Chromototropic acid Method - Chromotropic Acid Crystals AR	25gm	936
4.93	G050BH	Nitrate Method (3) Ion Selective Electrode Method - Aluminium Sulphate AR	500gm	336
4.94	G050BI	Nitrate Method (3) Ion Selective Electrode Method - Silver Sulphate AR	25gm	6000
4.95	G050BJ	Nitrate Method (3) Ion Selective Electrode Method - Boric Acid AR	500gm	504
4.96	G050BK	Nitrate Method (3) Ion Selective Electrode Method - Sulphamic Acid AR	500gm	1140
4.97	G050BL	Nitrate Method (3) Ion Selective Electrode Method - Sodium Hydroxie Flakes AR	500gm	360
4.98	G050BM	Sulphate Method (1) Nephelo Turbidity meter - Sodium Sulphate AR	500gm	288
4.99	G050BN	Sulphate Method (1) Nephelo Turbidity meter - Iso-propyl alcohal AR	500ml	432
5	G050BO	Sulphate Method (1) Nephelo Turbidity meter - Glycerol AR	500ml	456
5.1	G050BP	Sulphate Method (1) Nephelo Turbidity meter - Conc.Hydrochloric Acid AR	500ml	290
5.2	G050BQ	Sulphate Method (1) Nephelo Turbidity meter - Sodium Chloride AR	500gm	180
5.3	G050BR	Sulphate Method (2) Spectrophotometer Method - Sodium Sulphate AR	500gm	288
5.4	G050BS	Sulphate Method (2) Spectrophotometer Method - Magnesium Chloride AR	500gm	336
5.5	G050BT	Sulphate Method (2) Spectrophotometer Method - Sodium Acetate AR	500gm	480
5.6	G050BU	Sulphate Method (2) Spectrophotometer Method - Potassium Nitrate AR	500gm	444
5.7	G050BV	Sulphate Method (2) Spectrophotometer Method - Glacial Acetic Acid AR	500ml	312
5.8	G050BW	Sulphate Method (2) Spectrophotometer Method - Conc Hydrochloric Acid AR	500ml	290
5.9	G050BX	Sulphate Method (2) Spectrophotometer Method - Barium Chloride AR	500ml	396
5.10	G050BY	Total Coliforms - H2S vials-1 box contain 10 bottles	1box	390
5.11	G050BZ	E-coli - H2S vials-1 box contain 10 bottles	1box	390

CHAPTER - 8
RCC OVERHEAD TANKS

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
	NOTE:	1) Use approved quality of water proof cement compound for inside plastering and finishing works of water retaining structures.		
		2) For balance old works of OHT's for which staging work, i.e., including ring beam work is completed 50 % weightage for RCC items and hoisting of CI/DI/flanged pipes is applicable on basic rate excluding cost of cement and steel.		
		3) A weightage of 20% is applicable on the basic rate excluding cost of cement and steel only for concrete items for ESRs of capacity 2.5 Lakh litres and below.		
		4) Staging is defined as the height above top of foundation girder and below top of bottom ring girder.		
1	H010	Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, plywood / steel formwork, cost of all materials of quality, labour, Usage charges of machineries, curing and all the other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement shall be paid separately).		
1.1	H010A	PCC 1:4:8 using 40 mm aggregate	m^3	5351
1.2	H010B	PCC 1:3:6 using 40 mm aggregate	m^3	5742
1.3	H010C	PCC 1:2:4 using 40 mm aggregate	m^3	5911
1.4	H010D	PCC 1:1.5:3 using 20 mm aggregate	m^3	6550
2	H020	Providing and laying in position Reinforced cement concrete for all Foundation works. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticizers laid in finished layers, well compacted using needle vibrators, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes , labour, strutting, plywood / steel form work , Usage charges of machinery, curing and all the other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement to be paid separately) (Minimum cement content: 340 kgs (6.80 bags)).		
2.1	H020A	RCC M25 Design Mix with 20mm aggregate	m^3	8292
2.2	H020B	RCC M25 Design Mix with 20mm aggregate for footings, rafts and combind footing etc.with smooth finishing the exposed faces in CM 1:4, 12mm thick etc.	m^3	9689
3	H030	Providing and laying in position Reinforced cement concrete for columns, braces and ring beam above ground level. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted		

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
		using needle vibrators, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes with plastering and smooth finishing the exposed faces in cement mortar 1:3, 12 mm thick, labour,centering, scaffolding, staging, strutting, plywood/ steel form work , Usage charges of machinery, curing and all other appurtenances required to complete the work as per design and technical specifications. (The cost of steel reinforcement, dowel bars to be paid separately). (Minimum cement content: 360 kgs (7.20 bags)).		
3.1	H030A	RCC M30 Design Mix with 20mm aggregate for level upto 6 m height.	m^3	12326
3.2	H030B	RCC M30 Design Mix with 20mm aggregate for level 6m to 9m height.	m^3	13731
3.3	H030C	RCC M30 Design Mix with 20mm aggregate for level 9m to 12m height.	m^3	15171
3.4	H030D	RCC M30 Design Mix with 20mm aggregate for level 12m to 15m height.	m^3	16646
4	H040	Providing and laying in position Reinforced cement concrete for RCC Shafts. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes with plastering and smooth finishing the exposed faces in cement mortar 1:3, 12 mm thick, labour,centering, scaffolding, staging, strutting, plywood/ steel form work , Usage charges of machinery, curing and all other appurtenances required to complete the work as per design and technical specifications. (The cost of steel reinforcement, dowel bars to be paid separately). (Minimum cement content: 340 kgs (6.80 bags)).		
4.1	H040A	RCC M25 Design Mix with 20mm aggregate for below ground level.	m^3	12089
4.2	H040B	RCC M25 Design Mix with 20mm aggregate for level upto 6 m height.	m^3	13672
4.3	H040C	RCC M25 Design Mix with 20mm aggregate for level upto 6 to 9m height.	m^3	15285
4.4	H040D	RCC M25 Design Mix with 20mm aggregate for level upto 9 to 12m height.	m^3	16933
4.5	H040E	RCC M25 Design Mix with 20mm aggregate for level upto 12 to 15m height.	m^3	18620
5	H050	Providing and laying in position Reinforced cement concrete for shell portion, bottom dome / slab and ribs over the staging. The granite/trap/ basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes with plastering and smooth finishing the exposed faces in cement mortar 1:3, 12 mm thick and CM plastering 1:3 proportion 20mm thick for inside with an admixture of water proof compound of requisite proportion of approved quality, labour,centering, scaffolding, staging, strutting, plywood/ steel form work , Usage charges of machinery, curing		

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
		and all other appurtenances required to complete the work as per design and technical specifications.(Contractor will make his own arrangements for procuring water for testing). (The cost of steel reinforcement, dowel bars to be paid separately). (Minimum cement content: 360 kgs (7.20 bags)).		
5.1	H050A	M30 Design Mix with 20mm aggregate for level and upto 6 m height.	m^3	18995
5.2	H050B	M30 Design Mix with 20mm aggregate for level and 6 to 9 m height.	m^3	20305
5.3	H050C	M30 Design Mix with 20mm aggregate for level and 9 to12 m height.	m^3	22014
5.4	H050D	M30 Design Mix with 20mm aggregate for level and 12 to 15 m height.	m^3	23748
6	H060	Providing and laying in position Reinforced cement concrete for side walls of water tank over the staging above the ground level. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes with plastering and smooth finishing the exposed faces in cement mortar 1:3, 12 mm thick and CM plastering 1:3 proportion 20mm thick for inside with an admixture of water proof compound of requisite proportion of approved quality, labour,centering, scaffolding, staging, strutting, plywood/ steel form work , Usage charges of machinery, curing and all other appurtenances required to complete the work as per design and technical specifications.(Contractor will make his own arrangements for procuring water for testing). (The cost of steel reinforcement, dowel bars to be paid separately). (Minimum cement content: 360 kgs (7.20 bags)).		
6.1	H060A	RCC M30 Design Mix with 20mm aggregate for level and upto 6 m height.	m^3	18632
6.2	H060B	RCC M30 Design Mix with 20mm aggregate for level and upto 6 - 9 mheight.	m^3	21359
6.3	H060C	RCC M30 Design Mix with 20mm aggregate for level and upto 9-12 m height.	m^3	23234
6.4	H060D	RCC M30 Design Mix with 20mm aggregate for level and upto 12-15 m height.	m^3	25134
7	H070	Providing and laying in position Reinforced cement concrete for top dome of water tank over the staging above the ground level. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes with plastering and smooth finishing in cement mortar 1:3, 12 mm thick for both inside and outside surface, labour,centering, scaffolding, staging, strutting, plywood/ steel form work , Usage charges of machinery, curing and all other appurtenances required to complete the work as per design and technical specifications. (The cost of steel reinforcement, dowel bars to be paid separately). (Minimum cement content: 360 kgs (7.20 bags))		

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
7.1	H070A	RCC M30 Design Mix with 20mm aggregate for level and upto 6 m height.	m^3	18090
7.2	H070B	RCC M30 Design Mix with 20mm aggregate for level and upto 6-9 m height.	m^3	20696
7.3	H070C	RCC M30 Design Mix with 20mm aggregate for level and 9 - 12 m height.	m^3	22408
7.4	H070D	RCC M30 Design Mix with 20mm aggregate for level and 12 -15 m height.	m^3	24160
8	H080	Providing and laying in position Reinforced cement concrete for top slab of water tank over the staging above the ground level. The granite/trap/ basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes with plastering and smooth finishing in cement mortar 1:3, 12 mm thick for both inside and outside surface, labour,centering, scaffolding, staging, strutting, plywood/ steel form work , Usage charges of machinery, curing and all other appurtenances required to complete the work as per design and technical specifications. (The cost of steel reinforcement, dowel bars to be paid separately). (Minimum cement content: 360 kgs (7.20 bags))		
8.1	H080A	RCC M30 Design Mix with 20mm aggregate for level and upto 6 mheight.	m^3	15173
8.2	H080B	RCC M30 Design Mix with 20mm aggregate for level and upto 6-9 m height.	m^3	16556
8.3	H080C	RCC M30 Design Mix with 20mm aggregate for level and 9 - 12 m height.	m^3	17983
8.4	H080D	RCC M30 Design Mix with 20mm aggregate for level and 12 -15 m height.	m^3	19440
9	H090	Providing and laying in position Reinforced cement concrete for Spiral Staircase over the staging above the ground level. The granite/trap/ basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes with plastering and smooth finishing the exposed faces in cement mortar 1:3, 12 mm thick, labour,centering, scaffolding, staging, strutting, plywood/ steel form work , Usage charges of machinery, curing and all other appurtenances required to complete the work as per design and technical specifications. (The cost of steel reinforcement, dowel bars to be paid separately). (Minimum cement content: 340 kgs (6.80 bags))		
9.1	H090A	RCC M25 Design Mix with 20mm aggregate for level and upto 6 m height.	m^3	22064
9.2	H090B	RCC M25 Design Mix with 20mm aggregate for level and upto 6-9 m height.	m^3	25255
9.3	H090C	RCC M25 Design Mix with 20mm aggregate for level and upto 9-12 m height.	m^3	27380

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
9.4	H090D	RCC M25 Design Mix with 20mm aggregate for level and upto 12-15 m height.	m^3	29539
10	H100	Labour charges for fabricating mild steel or torsteel bars of all sizes for reinforcement for RCC works including conveying steel to work spot with all lead including cleaning, straightening, bending, fabricating, placing in position and tieing as per design including cost of binding wire, hoisting etc. with all lifts etc. complete (excluding the cost of steel) for:		
10.1	H100A	Staging upto 6 m height	t	10932
10.2	H100B	Staging 6 to 9 m height	t	11557
10.3	H100C	Staging 9 to 12 m height	t	12138
10.4	H100D	Staging 12 to 15 m height	t	12719
11	H110	Providing and fixing MS ladder between landings, 45 cms wide using angle iron of specified sizes, 20mm MS bars at 25 cms. centre to centre, with necessary supports of same angle iron etc. as directed, including hand railing on both sides with 25mm dia. GI pipes with angle iron props at 2 mtrs. intervals and 0.5M heigh, including fixing in ground with CC 1:2:4 and two coats of anticorrosive bituminous paint etc. with all lead and lifts etc. complete with:		
11.1	H110A	MS angle of 65 x 65 x 8mm	m	4323
11.2	H110B	MS angle of 65 x 65 x 10mm	m	4747
12	H120	Providing and fixing RCC final and ventilators as per approved design and specifications with form works and protected with wire mesh. The plinth to be of RCC circular pillars and canopy with an ornamental finish at top. The first 22.5 cms height to be covered with RCC panelling as per detailed drawings etc. with all lead and lifts and excluding reinforcement steel.		
12.1	H120A	For over head tanks upto 2.5 lakhs capacity.	each	5750
12.2	H120B	For over head tanks 2.5 to 5.0 lakhs capacity.	each	8219
12.3	H120C	For over head tanks 5 to 10 lakhs capacity.	each	9719
13	H140A	Providing and fixing MS inspection door of size 60 cms x 60 cms, including MS frame made of 50x50x6mm angle, shutters made of 3mm thick MS sheets, with hinges, locking arrangements at top etc. including painting with anticorrosive approved paint etc. complete including all lead and lifts etc.	each	2111
14	H150	Providing and fixing gauge with iron sheet or enamelled guage plate of 3mm to 4mm thick, 0.23 M width with copper floats indicators and flexible nylone wires, painting figures with approved enamel paint etc. with all lead and lifts, complete for:		
15.1	H150A	M.S Guage sheet for 1.5 m depth	each	3401
14.2	H150B	MS Guage sheet for 2.0 m depth	each	4440
14.3	H150C	MS Guage sheet for 2.5 m depth	each	5486
14.4	H150D	Extra for MS Guage sheet for every 0.5 m beyond 2.5 m depth	each	1026

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
14.5	H150F	Enamelled Guage plate for 1.5 m depth	each	2792
14.6	H150G	Enamelled guage plate for 2.0 m depth	each	3406
14.7	H150H	Enamelled guage plate for 2.5 m depth	each	3987
14.8	H150I	Extra for enamelled guage plate for every 0.5 m beyond 2.5 m depth	each	711
15	H160	Supplying and fixing DI/CI puddle flanges conforming to IS 7181-1986 with latest ammendments., in position for RCC walls including hoisting and conveying them to work spot with all lead and lifts etc. complete .		
15.1	H160A	For DI/CI puddle flanges of 80mm dia.	each	1526
15.2	H160B	For DI/CI puddle flanges of 100mm dia.	each	1807
15.3	H160C	For DI/CI puddle flanges of 150mm dia.	each	2314
15.4	H160D	For DI/CI puddle flanges of 200mm dia.	each	3121
15.5	H160E	For DI/CI puddle flanges of 250mm dia.	each	4409
15.6	H160F	For DI/CI puddle flanges of 300mm dia.	each	5565
15.7	H160G	For DI/CI puddle flanges of 350mm dia.	each	7288
15.8	H160H	For DI/CI puddle flanges of 400mm dia.	each	9308
15.9	H160I	For DI/CI puddle flanges of 450mm dia.	each	11230
15.10	H160J	For DI/CI puddle flanges of 500mm dia.	each	15475
15.11	H160K	For DI/CI puddle flanges of 600mm dia.	each	21085
16	H170	Supplying, Laying and Jointing Cast Iron (CI) double flanged pipes true to line / hoisting of DIflanged pipe in position and aligning to correct plumb, including cost of jointing materials, conveying to work spot with all lead and lifts etc.complete.		
16.1	H170A	For double flanged CI pipes of 80mm dia.	m	2205
16.2	H170B	For double flanged CI pipes of 100mm dia.	m	2929
16.3	H170C	For double flanged CI pipes of 150mm dia.	m	4707
16.4	H170D	For double flanged CI pipes of 200mm dia.	m	6452
16.5	H170E	For double flanged CI pipes of 250mm dia.	m	9052
16.6	H170F	For double flanged CI pipes of 300mm dia.	m	11522
16.7	H170G	For double flanged CI pipes of 350mm dia.	m	15316
16.8	H170H	For double flanged CI pipes of 400mm dia.	m	19012
16.9	H170I	For double flanged CI pipes of 450mm dia.	m	22398
16.10	H170J	For double flanged CI pipes of 500mm dia.	m	26021
16.11	H170K	For double flanged CI pipes of 600mm dia.	m	33803
17	H180	Supplying and fixing lightening arrestor with aluminium strip 25mm x 3mm size including finial and grounding, aluminium strip to be embeded in one of the columns in and independent GI conduit of 40mm dia. pipe suitably jointed by collars with all specials with all lead and lifts etc. complete for:		
17.1	H180A	For Over Head Tanks upto 6 m staging	each	7509

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
17.2	H180B	For Over Head Tanks upto 9 m staging	each	8606
17.3	H180C	For Over Head Tanks upto 12m staging	each	10418
17.4	H180D	For Over Head Tanks upto 15m staging	each	12402
18	H190	Providing plastering in CM 1:3 proportion after removing old plaster of existing RCC over head tanks, including smooth finishing, minimum 2% of approved quality water proofing compound, curing, scaffolding and giving satisfactory water proof testing as per direction etc. complete with all lead lifts etc. for side walls, shell portions, bottom doom, bottom slab and ribs etc. for:		
18.1	H190A	12mm thick for exposed surfaces upto 6.0 m staging.	m^2	298
18.2	H190B	12mm thick for exposed surfaces 6.0 to 9.0 m staging.	m^2	339
18.3	H190C	12mm thick for exposed surfaces 9.0 to 12.0 m staging.	m^2	385
18.4	H190D	12mm thick for exposed surfaces 12.0 to 15.0 m staging.	m^2	414
18.5	H190E	20mm thick for exposed surfaces upto 6.0 m staging.	m^2	339
18.6	H190F	20mm thick for exposed surfaces 6.0 to 9.0 m staging.	m^2	383
18.7	H190G	20mm thick for exposed surfaces 9.0 to 12.0 m staging.	m^2	426
18.8	H190H	20mm thick for exposed surfaces 12.0 to 15.0 m staging.	m^2	444
19	H200	Providing plastering in CM 1:3 proportion for RCC over head tanks, including smooth finishing, minimum 2% of approved quality water proofing compound, curing, scaffolding and giving satisfactory water proof testing as per direction etc. complete with all lead lifts etc. for side walls, shell portions, bottom doom, bottom slab and ribs etc. for:		
19.1	H200A	12mm thick for exposed surfaces upto 6.0 m staging.	m^2	259
19.2	H200B	12mm thick for exposed surfaces 6.0 to 9.0 m staging.	m^2	299
19.3	H200C	12mm thick for exposed surfaces 9.0 to 12.0 m staging.	m^2	346
19.4	H200D	12mm thick for exposed surfaces 12.0 to 15.0 m staging.	m^2	375
19.5	H200E	20mm thick for exposed surfaces upto 6.0 m staging.	m^2	300
19.6	H200F	20mm thick for exposed surfaces 6.0 to 9.0 m staging.	m^2	343
19.7	H200G	20mm thick for exposed surfaces 9.0 to 12.0 m staging.	m^2	387
19.8	H200H	20mm thick for exposed surfaces 12.0 to 15.0 m staging.	m^2	404
20	H210	Providing two coats of water proof cement painting with approved colour and shade over one coat of primer including scrapping the surface with wire brushes etc. before removal of scaffolding for new RCC over head tanks and cleaning of paint stains wherever necessary with all lead and lifts etc. complete for:		
20.1	H210A	Tanks upto 6 Mtrs. staging.	m^2	135
20.2	H210B	Tanks staging above 6 m and upto 9 m	m^2	153
20.3	H210C	Tanks staging above 9 m and upto 12 m	m^2	175
20.4	H210D	Tanks staging above 12 m and upto 15 m	m^2	196

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
21	H220	Providing two coats of water proof cement painting with approved colour and shade over one coat of primer including necessary scaffolding and scrapping of old paint and stain with wire brushes and cleaning of paint stains etc. wherever necessary for old RCC over head tanks with all lead and lifts etc. complete for:		
21.1	H220A	Tanks upto 6 m staging.	m^2	146
21.2	H220B	Tanks staging above 6 m and upto 9 m	m^2	164
21.3	H220C	Tanks staging above 9 m and upto 12 m	m^2	185
21.4	H220D	Tanks staging above 12 m and upto 15 m	m^2	207
22	H230A	Supplying and fixing 40mm dia. GI pipe medium duty pipes hand railing 3 rows fixed to RCC 1:2:4 vibrated post of 150x150mm at bottom and 100x150mm at top, placed at 2 Mtrs. intervals for a height of 750mm including curing, painting GI pipes with two coats of anticorrosive steel paint over a primer coat etc. with all lead lift etc. (The rate per meter is for 3 rows of GI pipes and RCC post)	m	1098
23	H240	Supplying, of DI flanged pipe conforming to IS 8329 : 2000 with latest amendments with Cement Mortar Lining (CML) with Portland Slag Cement as per IS 455:1989 and Metallic Zinc Coating as per annexure A of IS 8329 with finishing layer of Bituminous Coating as per Annex C of IS 8329 and Flanges: Metallic zinc rich epoxy paint & Bituminous Coating, laying true to line and hoisting in position and aligning to correct plumb including cost of jointing material, conveying to work spot with all lead and lifts etc., complete. **For PN 10:**		
23.1	H240A	100mm	m	4631
23.2	H240B	150mm	m	6535
23.3	H240C	200mm	m	8837
23.4	H240D	250mm	m	12776
23.5	H240E	300mm	m	16060
23.6	H240F	350mm	m	20798
23.7	H240G	400mm	m	25699
23.8	H240H	450mm	m	32561
23.9	H250	**do- For PN 16:**		
23.10	H250A	100mm	m	4760
23.11	H250B	150mm	m	6699
23.12	H250C	200mm	m	8305
23.13	H250D	250mm	m	13104
23.14	H250E	300mm	m	16470
23.15	H250F	350mm	m	21348
23.16	H250G	400mm	m	26789
23.17	H250H	450mm	m	33452

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
24	H260	Suppling Ductile Iron Push on special confirming to IS 9523:2000 - All Double Socket Duck Foot DI Bends:		
24.1	H260A	80 X 900	each	2365
24.2	H260B	100 X 900	each	3063
24.3	H260C	150 X 900	each	5162
24.4	H260D	200 X 900	each	8750
24.5	H260E	250 X 900	each	13770
24.6	H260F	300 X 900	each	18320
24.7	H260G	350 X 900	each	25842
24.8	H260H	400 X 900	each	32804
24.9	H260I	450 X 900	each	38272
24.10	H260J	500 X 900	each	63085
24.11	H260J	600 X 900	each	140942
24.12	H260K	700 X 900	each	161810

CHAPTER - 9
GROUND LEVEL SERVICE RESERVOIRS

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
1	I030	Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, plywood / steel formwork, cost of all materials of quality, labour, Usage charges of machineries, curing and all the other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement shall be paid separately).		
1.1	I030A	P&L PCC 1:3:6 (40mm aggregates) in foundations incld. shutter, compaction, curing etc..	m^3	5742
1.2	I030B	P&L PCC 1:1.5:3 (20mm aggregates) in foundations incld. shutter, compaction, curing etc..	m^3	6550
2	I040A	Providing and laying in position Reinforced cement concrete of M25 Design Mix for raft, footings, beams below ground level in GLSR Foundation works. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticizers laid in finished layers, well compacted using needle vibrators, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes , labour, strutting, plywood / steel form work , Usage charges of machinery, curing and all the other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement to be paid separately) (Minimum cement content: 340 kgs (6.80 bags)).	m^3	8292
3	I050A	Providing and laying in position Reinforced cement concrete M30 Design Mix for main and secondary beams below and above ground level. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes with plastering and smooth finishing the exposed faces in cement mortar 1:3, 12 mm thick, labour,centering, scaffolding, strutting, plywood/ steel form work , Usage charges of machinery, curing and all other appurtenances required to complete the work as per design and technical specifications. (The cost of steel reinforcement, dowel bars to be paid separately). (Minimum cement content: 360 kgs (7.20 bags)).	m^3	9678
4	I060A	Providing and laying in position Reinforced cement concrete M30 Design Mix for flat or sloping floor slabs resting on the ground. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes with plastering and smooth finishing in cement mortar 1:3, 20 mm thick for inside with admixture of water proof compound of requisite proportion, labour,centering, scaffolding, strutting, plywood/ steel form	m^3	10567

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
		work , Usage charges of machinery, curing and all other appurtenances required to complete the work as per design and technical specifications. (The cost of steel reinforcement, dowel bars to be paid separately). (Minimum cement content: 360 kgs (7.20 bags)) (Contractor will make his own arrangements for testing).		
5	I070A	Providing and laying in position Reinforced cement concrete M30 Design Mix for vertical side walls, effluent channel baffle walls etc. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes with plastering and smooth finishing the exposed faces in cement mortar 1:3, 20 mm thick for inside with an admixture of water proof compound of requisite proportion of approved quality, labour,centering, scaffolding, strutting, plywood/ steel form work , Usage charges of machinery, curing and all other appurtenances required to complete the work as per design and technical specifications.(Contractor will make his own arrangements for procuring water for testing). (The cost of steel reinforcement, dowel bars to be paid separately). (Minimum cement content: 360 kgs (7.20 bags)).	m^3	13343
6	I080A	Providing and laying in position Reinforced cement concrete M30 Design Mix for columns below and above ground level. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes with plastering and smooth finishing the exposed faces in cement mortar 1:3, 12 mm thick, labour,centering, scaffolding, strutting, plywood/ steel form work , Usage charges of machinery, curing and all other appurtenances required to complete the work as per design and technical specifications. (The cost of steel reinforcement, dowel bars to be paid separately). (Minimum cement content: 360 kgs (7.20 bags)).	m^3	12393
7	I090A	Providing and laying in position Reinforced cement concrete M30 Design Mix for top cover flat slab. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes with plastering and smooth finishing in cement mortar 1:3, 12 mm thick for inside surface, labour,centering, scaffolding, strutting, plywood/ steel form work , Usage charges of machinery, curing and all other appurtenances required to complete the work as per design and technical specifications. (The cost of steel reinforcement, dowel bars to be paid separately). (Minimum cement content: 360 kgs (7.20 bags))	m^3	13433
8	I100A	Providing and laying in position Reinforced cement concrete of M30 Design Mix for top dome. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle		17661

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
		vibrators, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes with plastering and smooth finishing in cement mortar 1:3, 12 mm thick for both inside and outside surface, labour,centering, scaffolding, strutting, plywood/ steel form work , Usage charges of machinery, curing and all other appurtenances required to complete the work as per design and technical specifications. (The cost of steel reinforcement, dowel bars to be paid separately). (Minimum cement content: 360 kgs (7.20 bags))		
9	I120	Providing plastering in cement mortar 1:3 proportion with minimum 2% of approved quality water proof compound, including scaffolding, racking out joints 25mm deep, smooth finishing, curing etc. with all lead and lifts for all materials etc. complete for:		
9.1	I120A	20mm thick plastering	m^2	337
9.2	I120B	25mm thick plastering	m^2	372
9.3	I120C	30mm thick plastering	m^2	407
10	I130A	Labour charges for fabricating Mild Steel or TMT Steel bars of all sizes for reinforcement for RCC works, including conveying steel to work spot with all lead, cleaning, straightening, cutting, bending, fabricating, placing in position, tieing as per design, cover blocks, binding wire, hoisting to different levels etc. complete but excluding the cost of MS or TMT bars.(Laps and wastages should not be measured)	t	10042
11	I130B	Labour charges for M.S ladder,final,lightening arrestor and fixing guage	each	244
12	I140A	Providing and applying integral crystalline slurry of hydrophilic in nature for waterproofing treatment to RCC structures like floor and walls of reservoirs, sewe, effluent and water treatment plants, over head tanks, etc. prepared by mixing in the ratio of 5:2 (5 parts integral crystalline slurry 2 parts water) for horizontal and vertical surfaces and applying the same from negative (internal) side with the help of synthetic fibre brush. The material shall meet the requirements as specified in ACI - 212-3R-2010 ie. by reducing permeability of concrete by more than 90% compared with control concrete as per DIN 1048 and resistant to 16 Bar hydrostatic pressure on negative side. The crystalline slurry shall be capable of self healing of cracks upto a width of 0.50 mm. The work shall be carried out all complete as per specification and the direction of the Engineer in charge. The product performance shall carry guarantee for 10 years against any leakage. For horizontal and vertical surfaces in two coats @ 0.70 kg per sqm per coat	m^2	433
13	I150A	Providing and applying crystalline mortar by mixing in the ratio of 4.5 : 1 (4.5 parts integral crystalline mortar : 1 parts water) for treatment of faulty construction joints, cracks, tie rod holes, spalled and honey combed surface, coves at junction joints of RCC structures like floor and walls of reservoirs, sewage, effluent and water treatment plants, over head tanks, etc. The crystalline mortar shall conform to EN 1504-3 having compressive strength class R4 > 45 MPa and adhesive bond strength class R3 > 1.5 MPa. The work shall be carried out all complete as per specification and the direction of the Engineer in charge. The product	m^2	480

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
		performance shall carry guarantee for 10 years against any leakage. For sealing cracks and faulty construction joints, and making coves at junction joints by preparing the surface, making U shaped groove size 25mm x 25mm and then priming the surface with integral crystalline slurry @ 0.05 kg per running meter and while the surface is tacky, then filling the groove up to top edge with crystalline mortar @ 1.50 kg per running meter. Once crystalline mortar is tocuh dry then finally applying two coats of integral crystalline slurry @ 0.05 kg per running meter per coat on treated surface.		
14	I160A	Providing and fixing PVC water stopper of suitable type of 230 mm width and 5 mm thickness for construction joints as per detailed technical specifications and as directed by Engineer-in-charge.	m	310
15	I170A	Providing, fixing, applying of contraction joint with suitable type PVC water stopper of 230 mm width and 5 mm thick sealed with 12 mm x 25 mm gun grade polysulphide elastomeric joint sealant of FOSROC make (NITO seal MS 600) over a backer rod and high performance laminated closed cell polyethylene foam joint filler of suitable make (CAPCELL-HD-100) in sheet foam having a density of 100 Kg / Cum, non staining with less than 1% water absorption, having 97% recovery at compression and as directed by Engineer-in-charge.	m	600
16	I180A	Providing & fixing of Aluminium Ventilators of frame size 40 x 18 mm of 1.3 mm thick, 0.933 Kg/ m all aluminium sections including cutting to required length, joints mitred subdiving the frame tenonned and riveted, in the assembled frame, stiffened with end clips for corners, angles etc., and fixed to the walls, lintels, floor beams/cills as the case may be with necessary steel screws, raul plugs or teak wood gatties including supply along with fixing of SS - 304 mesh with necessary required materials etc., complete.	m^2	3180

CHAPTER - 10
RCC INTERLOCK SLABS FOR COMPOUND WALL

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
1	J010A	Providing and laying in position reinforced cement concrete of design mix M20, with OP cement @ 320 kgs/cum, 20mm and down size graded granite metal coarse aggregate @ 0.69 per/cum, fine aggregate @ 0.46 per/cum, super plasticizer conforming to IS 9103-1999 reaffirmed 2008 @ 3 ltr / cum, machine mixed, laid into fabricated steel form work, vibrated / compacted and cured for RCC precast columns of size 200 x 200 x 3000 mm. The precast columns to have grooves of size 50mm x 90mm on opposite vertical faces suitable to insert 70mm thick precast slab panels. The precast columns to have 8 nos of 16mm dia. vertical bars and 8mm dia. ties at 200mm centre to centre. The rate includes cost of reinforcement steel, repetative cost of fabricated steel form work and fixing in position at site as directed by Engineer in charge, cost of all materials, labour, HOM of machinery, casting yard, curing etc. complete as per specifications. The rate excludes the cost of RCC footings and other related works.	each	3909
2	J020A	Providing and erecting in position, 2400 x 600 x 60 mm size precast slab panels of M25 grade design mix reinforced cement concrete with OP cement @ 320 kgs/cum, 20mm and down size graded granite metal coarse aggregate, super plasticizer conforming to IS 9103-1999 reaffirmed 2008 @ 3 ltr / cum, machine mixed, laid into fabricated steel form work, vibrated / compacted and cured for RCC precast slabs with groove finish, with logo of organisation and other side plain finish. The precast slabs to have reinforcements 1no. of 10mm dia. loop and round the panel, 5 Nos of 8mm dia. horizontals and 15 Nos of 8mm dia. verticals equally spaced. The thickness of panel shall be 60mm thick at the middle and 70mm thick at the edges for a width of 250mm. The gaps between the panels shall be packed with CM 1:4 and final surface between the panel and RCC post shall be finished using silicon sealant of approved make etc. The cost includes the cost of all materials, labour, HOM of machinery, casting yard, curing etc. complete as per specifications.	each	1731

CHAPTER - 11
HDPE PIPE WORKS

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
1	K010	Supplying, laying and jointing HDPE pipes of specified grade and conforming to IS 4984-2016 with latest ammendments and conveying to work site including loading and unloading at both destinations and rolling and lowering into trenches, laying true to line and jointing of pipes and specials with electrofusion welding, giving hydraulic test as per relevant ISS with all lead and lifts including encasing the pipe alround to a depth of not less than 15 cms. with soft gravel or selected earth available from the excation, testing and commissioning. The rate is exclusive of required specials and fittings wherever necessary like saddle Tee, stub ends, flanged sets, bedns, reducers etc. complete (Contractor will make his own arrangements for procuring water for testing) etc. **Note:** Upto 110mm dia Coil shall be used. **For Grade PE80 PN6.0 :**		
1.1	K010A	HDPE Grade PE80-PN6.0, 63mm dia	m	143
1.2	K010B	HDPE Grade PE80-PN6.0, 75mm dia	m	184
1.3	K010C	HDPE Grade PE80-PN6.0, 90mm dia	m	238
1.4	K010D	HDPE Grade PE80-PN6.0,110mm dia	m	348
1.5	K010E	HDPE Grade PE80-PN6.0,125mm dia	m	434
1.6	K010F	HDPE Grade PE80-PN6.0,140mm dia	m	535
1.7	K010G	HDPE Grade PE80-PN6.0,160mm dia	m	679
1.8	K010H	HDPE Grade PE80-PN6.0,180mm dia	m	835
1.9	K010I	HDPE Grade PE80-PN6.0,200mm dia	m	1013
1.10	K010J	HDPE Grade PE80-PN6.0,225mm dia	m	1283
1.11	K010K	HDPE Grade PE80-PN6.0,250mm dia	m	1549
1.12	K010L	HDPE Grade PE80-PN6.0,280mm dia	m	1919
1.13	K010M	P,L&J HDPE- PE80-PN6.0,315mm dia	m	2396
1.14	K010N	HDPE Grade PE80-PN6.0,355mm dia	m	3082
1.15	K010O	HDPE Grade PE80-PN6.0,400mm dia	m	3887
1.16	K010P	HDPE Grade PE80-PN6.0,450mm dia	m	4869
1.17	K010Q	HDPE Grade PE80-PN6.0,500mm dia	m	5987
1.18	K010R	HDPE Grade PE80-PN6.0,560mm dia	m	7723
1.19	K010S	HDPE Grade PE80-PN6.0,630mm dia	m	9709
1.20	K010T	HDPE Grade PE80-PN6.0,710mm dia	m	13000
2	K020	**For Grade PE80 PN8.0 :**		
2.1	K020A	HDPE Grade PE80-PN8.0,63mm dia	m	163
2.2	K020B	HDPE Grade PE80-PN8.0.75mm dia	m	211
2.3	K020C	HDPE Grade PE80-PN8.0,90mm dia	m	282
2.4	K020D	HDPE Grade PE80-PN8.0,110mm dia	m	407

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
2.5	K020E	HDPE Grade PE80-PN8.0,125mm dia	m	510
2.6	K020F	HDPE Grade PE80-PN8.0,140mm dia	m	629
2.7	K020G	HDPE Grade PE80-PN8.0,160mm dia	m	802
2.8	K020H	HDPE Grade PE80-PN8.0,180mm dia	m	998
2.9	K020I	HDPE Grade PE80-PN8.0,200mm dia	m	1201
2.10	K020J	HDPE Grade PE80-PN8.0,225mm dia	m	1542
2.11	K020L	HDPE Grade PE80-PN8.0,250mm dia	m	1866
2.12	K020K	HDPE Grade PE80-PN8.0,280mm dia	m	2316
2.13	K020M	HDPE Grade PE80-PN8.0,315mm dia	m	2895
2.14	K020N	HDPE Grade PE80-PN8.0,355mm dia	m	3740
2.15	K020O	HDPE Grade PE80-PN8.0,400mm dia	m	4731
2.16	K020P	HDPE Grade PE80-PN8.0,450mm dia	m	5926
2.17	K020Q	HDPE Grade PE80-PN8.0,500mm dia	m	7555
2.18	K020R	HDPE Grade PE80-PN8.0,560mm dia	m	9424
2.19	K020S	HDPE Grade PE80-PN8.0,630mm dia	m	11877
2.20	K020T	HDPE Grade PE80-PN8.0,710mm dia	m	15897
3	K030	**For Grade PE80 PN10.0 :**		
3.1	K030A	HDPE Grade PE80-PN10.0,63mm dia	m	191
3.2	K030B	HDPE Grade PE80-PN10.0,75mm dia	m	249
3.3	K030C	HDPE Grade PE80-PN10.0,90mm dia	m	335
3.4	K030D	HDPE Grade PE80-PN10.0,110mm dia	m	490
3.5	K030E	HDPE Grade PE80-PN10.0,125mm dia	m	622
3.6	K030F	HDPE Grade PE80-PN10.0,140mm dia	m	769
3.7	K030G	HDPE Grade PE80-PN10.0,160mm dia	m	981
3.8	K030H	HDPE Grade PE80-PN10.0,180mm dia	m	1220
3.9	K030I	HDPE Grade PE80-PN10.0,200mm dia	m	1487
3.10	K030J	HDPE Grade PE80-PN10.0,225mm dia	m	2038
3.11	K030K	HDPE Grade PE80-PN10.0,250mm dia	m	2348
3.12	K030L	HDPE Grade PE80-PN10.0,280mm dia	m	2914
3.13	K030M	HDPE Grade PE80-PN10.0,315mm dia	m	3653
3.14	K030N	HDPE Grade PE80-PN10.0,355mm dia	m	4754
3.15	K030O	HDPE Grade PE80-PN10.0,400mm dia	m	6002
3.16	K030P	HDPE Grade PE80-PN10.0,450mm dia	m	7551
3.17	K030Q	HDPE Grade PE80-PN10.0,500mm dia	m	9302
3.18	K030R	HDPE Grade PE80-PN10.0,560mm dia	m	12010
3.19	K030S	HDPE Grade PE80-PN10.0,630mm dia	m	15146

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
4	K040	**For Grade PE80 PN12.5 :**		
4.1	K040A	HDPE Grade PE80-PN12.5,63mm dia	m	208
4.2	K040B	HDPE Grade PE80-PN12.5, 75mm dia	m	275
4.3	K040C	HDPE Grade PE80-PN12.5,90mm dia	m	371
4.4	K040D	HDPE Grade PE80-PN12.5,110mm dia	m	544
4.5	K040E	HDPE Grade PE80-PN12.5,125mm dia	m	692
4.6	K040F	HDPE Grade PE80-PN12.5,140mm dia	m	856
4.7	K040G	HDPE Grade PE80-PN12.5,160mm dia	m	1095
4.8	K040H	HDPE Grade PE80-PN12.5,180mm dia	m	1363
4.9	K040I	HDPE Grade PE80-PN12.5,200mm dia	m	1662
4.10	K040J	HDPE Grade PE80-PN12.5,225mm dia	m	2152
4.11	K040K	HDPE Grade PE80-PN12.5,250mm dia	m	2631
4.12	K040L	HDPE Grade PE80-PN12.5,280mm dia	m	3275
4.13	K040M	HDPE Grade PE80-PN12.5,315mm dia	m	4101
4.14	K040N	HDPE Grade PE80-PN12.5,355mm dia	m	5333
4.15	K040O	HDPE Grade PE80-PN12.5,400mm dia	m	6737
4.16	K040P	HDPE Grade PE80-PN12.5,450mm dia	m	8470
4.17	K040Q	HDPE Grade PE80-PN12.5,500mm dia	m	10432
5	K050	**For Grade PE80 PN16.0 :**		
5.1	K050A	HDPE Grade PE80-PN16.0, 63mm dia	m	239
5.2	K050B	HDPE Grade PE80-PN16.0, 75mm dia	m	315
5.3	K050C	HDPE Grade PE80-PN16.0,90mm dia	m	433
5.4	K050D	HDPE Grade PE80-PN16.0,110mm dia	m	637
5.5	K050E	HDPE Grade PE80-PN16.0,125mm dia	m	806
5.6	K050F	HDPE Grade PE80-PN16.0,140mm dia	m	1002
5.7	K050G	HDPE Grade PE80-PN16.0,160mm dia	m	1288
5.8	K050H	HDPE Grade PE80-PN16.0,180mm dia	m	1609
5.9	K050I	HDPE Grade PE80-PN16.0,200mm dia	m	1968
5.10	K050J	HDPE Grade PE80-PN16.0,225mm dia	m	2524
5.11	K050K	HDPE Grade PE80-PN16.0,250mm dia	m	3078
5.12	K050L	HDPE Grade PE80-PN16.0,280mm dia	m	3835
5.13	K050M	HDPE Grade PE80-PN16.0,315mm dia	m	4815
5.14	K050N	HDPE Grade PE80-PN16.0,355mm dia	m	6260
5.15	K050O	HDPE Grade PE80-PN16.0,400mm dia	m	7914
6	K055	**For Grade PE 80 PN 3.0:**		
6.1	K055A	HDPE Grade PE80-PN 3.0, 63mm dia	m	128

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
6.2	K055B	HDPE Grade PE80-PN 3.0, 75mm dia	m	142
6.3	K055C	HDPE Grade PE80-PN 3.0, 90mm dia	m	186
6.40	K055D	HDPE Grade PE80-PN 3.0,110mm dia	m	265
6.5	K055E	HDPE Grade PE80-PN 3.0,125mm dia	m	336
6.6	K055F	HDPE Grade PE80-PN 3.0,140mm dia	m	412
6.7	K055G	HDPE Grade PE80-PN 3.0,160mm dia	m	516
6.8	K055H	HDPE Grade PE80-PN 3.0,180mm dia	m	635
6.9	K055I	HDPE Grade PE80-PN 3.0,200mm dia	m	760
6.10	K055J	HDPE Grade PE80-PN 3.0,225mm dia	m	942
6.11	K055K	HDPE Grade PE80-PN 3.0,250mm dia	m	1126
6.12	K055L	HDPE Grade PE80-PN 3.0,280mm dia	m	1381
6.13	K055M	HDPE Grade PE80-PN 3.0,315mm dia	m	1717
6.14	K055N	HDPE Grade PE80-PN 3.0,355mm dia	m	2136
6.15	K055O	HDPE Grade PE80-PN 3.0 ,400mm dia	m	2678
6.16	K055P	HDPE Grade PE80-PN 3.0,450mm dia	m	3347
6.17	K055Q	HDPE Grade PE80-PN 3.0,500mm dia	m	4204
6.18	K055R	HDPE Grade PE80-PN 3.0,560mm dia	m	5222
6.19	K055S	HDPE Grade PE80-PN 3.0,630mm dia	m	6542
6.20	K055T	HDPE Grade PE80-PN 3.0,710mm dia	m	8304
6.21	K055U	HDPE Grade PE80-PN 3.0,800mm dia	m	10593
6.22	K055V	HDPE Grade PE80-PN 3.0,900mm dia	m	13291
6.23	K055W	HDPE Grade PE80-PN 3.0,1000mm dia	m	16328
6.24	K055X	HDPE Grade PE80-PN 3.0,1200mm dia	m	23354
7	K056	**For Grade PE 80 PN 4.0 :**		
7.1	K056A	HDPE Grade PE80-PN 4.0, 63mm dia	m	132
7.2	K056B	HDPE Grade PE80-PN 4.0, 75mm dia	m	164
7.3	K056C	HDPE Grade PE80-PN 4.0, 90mm dia	m	215
7.4	K056D	HDPE Grade PE80-PN 4.0,110mm dia	m	311
7.5	K056E	HDPE Grade PE80-PN 4.0,125mm dia	m	397
7.6	K056F	HDPE Grade PE80-PN 4.0,140mm dia	m	486
7.7	K056G	HDPE Grade PE80-PN 4.0,160mm dia	m	616
7.8	K056H	HDPE Grade PE80-PN 4.0,180mm dia	m	764
7.9	K056I	HDPE Grade PE80-PN 4.0,200mm dia	m	917
7.10	K056J	HDPE Grade PE80-PN 4.0,225mm dia	m	1139
7.11	K056K	HDPE Grade PE80-PN 4.0,250mm dia	m	1379
7.12	K056L	HDPE Grade PE80-PN 4.0,280mm dia	m	1691

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
7.13	K056M	HDPE Grade PE80-PN 4.0,315mm dia	m	2109
7.14	K056N	HDPE Grade PE80-PN 4.0,355mm dia	m	2635
7.15	K056O	HDPE Grade PE80-PN 4.0,400mm dia	m	3296
7.16	K056P	HDPE Grade PE80-PN 4.0,450mm dia	m	4125
7.17	K056Q	HDPE Grade PE80-PN 4.0,500mm dia	m	5227
7.18	K056R	HDPE Grade PE80-PN 4.0,560mm dia	m	6514
7.19	K056S	HDPE Grade PE80-PN 4.0,630mm dia	m	8174
7.20	K056T	HDPE Grade PE80-PN 4.0,710mm dia	m	10314
7.21	K056U	HDPE Grade PE80-PN 4.0,800mm dia	m	13202
7.22	K056V	HDPE Grade PE80-PN 4.0,900mm dia	m	16633
7.23	K056W	HDPE Grade PE80-PN 4.0,1000mm dia	m	20446
7.24	K056X	HDPE Grade PE80-PN 4.0,1200mm dia	m	29239
8	K057	**For Grade PE 100 PN 3.0 :**		
8.1	K057A	HDPE Grade PE100-PN 3.0,63mm dia	m	119
8.2	K057B	HDPE Grade PE100-PN 3.0,75mm dia	m	133
8.3	K057C	HDPE Grade PE100-PN 3.0, 90mm dia	m	161
8.4	K057D	HDPE Grade PE100-PN 3.0,110mm dia	m	232
8.5	K057E	HDPE Grade PE100-PN 3.0,125mm dia	m	295
8.6	K057F	HDPE Grade PE100-PN 3.0,140mm dia	m	363
8.7	K057G	HDPE Grade PE100-PN 3.0,160mm dia	m	441
8.8	K057H	HDPE Grade PE100-PN 3.0,180mm dia	m	539
8.9	K057I	HDPE Grade PE100-PN 3.0,200mm dia	m	649
8.10	K057J	HDPE Grade PE100-PN 3.0,225mm dia	m	151
8.11	K057K	HDPE Grade PE100-PN 3.0,250mm dia	m	948
8.12	K057L	HDPE Grade PE100-PN 3.0,280mm dia	m	1170
8.13	K057M	HDPE Grade PE100-PN 3.0,315mm dia	m	1437
8.14	K057N	HDPE Grade PE100-PN 3.0,355mm dia	m	1789
8.15	K057O	HDPE Grade PE100-PN 3.0,400mm dia	m	2234
8.16	K057P	HDPE Grade PE100-PN 3.0,450mm dia	m	2769
8.17	K057Q	HDPE Grade PE100-PN 3.0,500mm dia	m	3472
8.18	K057R	HDPE Grade PE100-PN 3.0,560mm dia	m	4327
8.19	K057S	HDPE Grade PE100-PN 3.0,630mm dia	m	5400
8.20	K057T	HDPE Grade PE100-PN 3.0,710mm dia	m	6787
8.21	K057U	HDPE Grade PE100-PN 3.0,800mm dia	m	8717
8.22	K057V	HDPE Grade PE100-PN 3.0,900mm dia	m	10954
8.23	K057W	HDPE Grade PE100-PN 3.0,1000mm dia	m	13424

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
8.24	K057X	HDPE Grade PE100-PN 3.0,1200mm dia	m	19175
9	K058	**For Grade PE 100 PN 4.0 :**		
9.1	K058A	HDPE Grade PE100-PN 4.0,63mm dia	m	123
9.2	K058B	HDPE Grade PE100-PN 4.0,75mm dia	m	143
9.3	K058C	HDPE Grade PE100-PN 4.0, 90mm dia	m	187
9.4	K058D	HDPE Grade PE100-PN 4.0,110mm dia	m	268
9.5	K058E	HDPE Grade PE100-PN 4.0,125mm dia	m	338
9.6	K058F	HDPE Grade PE100-PN 4.0,140mm dia	m	415
9.7	K058G	HDPE Grade PE100-PN 4.0,160mm dia	m	467
9.8	K058H	HDPE Grade PE100-PN 4.0,180mm dia	m	642
9.9	K058I	HDPE Grade PE100-PN 4.0,200mm dia	m	767
9.10	K058J	HDPE Grade PE100-PN 4.0,225mm dia	m	951
9.11	K058K	HDPE Grade PE100-PN 4.0,250mm dia	m	1138
9.12	K058L	HDPE Grade PE100-PN 4.0,280mm dia	m	1396
9.13	K058M	HDPE Grade PE100-PN 4.0,315mm dia	m	1737
9.14	K058N	HDPE Grade PE100-PN 4.0,355mm dia	m	2160
9.15	K058O	HDPE Grade PE100-PN 4.0,400mm dia	m	2710
9.16	K058P	HDPE Grade PE100-PN 4.0,450mm dia	m	3376
9.17	K058Q	HDPE Grade PE100-PN 4.0,500mm dia	m	4239
9.18	K058R	HDPE Grade PE100-PN 4.0,560mm dia	m	5265
9.19	K058S	HDPE Grade PE100-PN 4.0,630mm dia	m	6597
9.20	K058T	HDPE Grade PE100-PN 4.0,710mm dia	m	8362
9.21	K058U	HDPE Grade PE100-PN 4.0,800mm dia	m	10664
9.22	K058V	HDPE Grade PE100-PN 4.0,900mm dia	m	13384
9.23	K058W	HDPE Grade PE100-PN 4.0,1000mm dia	m	16440
9.24	K058X	HDPE Grade PE100-PN 4.0,1200mm dia	m	23519
10	K060	**For Grade PE100 PN6.0 :**		
10.1	K060A	HDPE Grade PE100-PN6.0,63mm dia	m	126
10.2	K060B	HDPE Grade PE100-PN6.0,75mm dia	m	159
10.3	K060C	HDPE Grade PE100-PN6.0, 90mm dia	m	207
10.4	K060D	HDPE Grade PE100-PN6.0,110mm dia	m	303
10.5	K060E	HDPE Grade PE100-PN6.0,125mm dia	m	375
10.6	K060F	HDPE Grade PE100-PN6.0,140mm dia	m	459
10.7	K060G	HDPE Grade PE100-PN6.0,160mm dia	m	578
10.8	K060H	HDPE Grade PE100-PN6.0,180mm dia	m	711
10.9	K060I	HDPE Grade PE100-PN6.0,200mm dia	m	860

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
10.10	K060J	HDPE Grade PE100-PN6.0,225mm dia	m	1085
10.11	K060K	HDPE Grade PE100-PN6.0,250mm dia	m	1306
10.12	K060L	HDPE Grade PE100-PN6.0,280mm dia	m	1605
10.13	K060M	P,L&J HDPE- PE100-PN6.0,315mm dia	m	1990
10.14	K060N	HDPE Grade PE100-PN6.0,355mm dia	m	2559
10.15	K060O	HDPE Grade PE100-PN6.0,400mm dia	m	3222
10.16	K060P	HDPE Grade PE100-PN6.0,450mm dia	m	4042
10.17	K060Q	HDPE Grade PE100-PN6.0,500mm dia	m	4953
10.18	K060R	HDPE Grade PE100-PN6.0,560mm dia	m	6378
10.19	K060S	HDPE Grade PE100-PN6.0,630mm dia	m	8001
10.20	K060T	HDPE Grade PE100-PN6.0,710mm dia	m	10150
11	K070	**For Grade PE100 PN8.0 :**		
11.1	K070A	HDPE Grade PE100-PN8.0,63mm dia	m	143
11.2	K070B	HDPE Grade PE100-PN8.0,75mm dia	m	184
11.3	K070C	HDPE Grade PE100-PN8.0,90mm dia	m	238
11.4	K070D	HDPE Grade PE100-PN8.0,110mm dia	m	348
11.5	K070E	HDPE Grade PE100-PN8.0,125mm dia	m	434
11.6	K070F	HDPE Grade PE100-PN8.0,140mm dia	m	535
11.7	K070G	HDPE Grade PE100-PN8.0,160mm dia	m	679
11.8	K070H	HDPE Grade PE100-PN8.0,180mm dia	m	835
11.9	K070I	HDPE Grade PE100-PN8.0,200mm dia	m	1013
11.10	K070J	HDPE Grade PE100-PN8.0,225mm dia	m	1283
11.11	K070K	HDPE Grade PE100-PN8.0,250mm dia	m	1549
11.12	K070L	HDPE Grade PE100-PN8.0,280mm dia	m	1919
11.13	K070M	HDPE Grade PE100-PN8.0,315mm dia	m	2396
11.14	K070N	HDPE Grade PE100-PN8.0,355mm dia	m	3082
11.15	K070O	HDPE Grade PE100-PN8.0,400mm dia	m	3887
11.16	K070P	HDPE Grade PE100-PN8.0,450mm dia	m	4869
11.17	K070Q	HDPE Grade PE100-PN8.0,500mm dia	m	5987
11.18	K070R	HDPE Grade PE100-PN8.0,560mm dia	m	7723
11.19	K070S	HDPE Grade PE100-PN8.0,630mm dia	m	9709
11.20	K070T	HDPE Grade PE100-PN8.0,710mm dia	m	12298
12	K080	**For Grade PE100 PN10.0 :**		
12.1	K080A	HDPE Grade PE100-PN10.0,63mm dia	m	169
12.2	K080B	HDPE Grade PE100-PN10.0, 75mm dia	m	217
12.3	K080C	HDPE Grade PE100-PN10.0,90mm dia	m	291
12.4	K080D	HDPE Grade PE100-PN10.0,110mm dia	m	420

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
12.5	K080E	HDPE Grade PE100-PN10.0,125mm dia	m	527
12.6	K080F	HDPE Grade PE100-PN10.0,140mm dia	m	650
12.7	K080G	HDPE Grade PE100-PN10.0,160mm dia	m	830
12.8	K080H	HDPE Grade PE100-PN10.0,180mm dia	m	1033
12.9	K080I	HDPE Grade PE100-PN10.0,200mm dia	m	1251
12.10	K080J	HDPE Grade PE100-PN10.0,225mm dia	m	1619
12.11	K080K	HDPE Grade PE100-PN10.0,250mm dia	m	1957
12.12	K080L	HDPE Grade PE100-PN10.0,280mm dia	m	2433
12.13	K080M	HDPE Grade PE100-PN10.0,315mm dia	m	3043
12.14	K080N	HDPE Grade PE100-PN10.0,355mm dia	m	3955
12.15	K080O	HDPE Grade PE100-PN10.0,400mm dia	m	5005
12.16	K080P	HDPE Grade PE100-PN10.0,450mm dia	m	6272
12.17	K080Q	HDPE Grade PE100-PN10.0,500mm dia	m	7717
12.18	K080R	HDPE Grade PE100-PN10.0,560mm dia	m	9958
12.19	K080S	HDPE Grade PE100-PN10.0,630mm dia	m	12555
12.20	K080T	HDPE Grade PE100-PN10.0, 710mm dia	m	15885
13	K090	**For Grade PE100 PN12.5 :**		
13.1	K090A	HDPE Grade PE100-PN 12.5, 63mm dia	m	184
13.2	K090B	HDPE Grade PE100-PN 12.5, 75 mm dia	m	240
13.4	K090C	HDPE Grade PE100-PN12.50,90mm dia	m	324
13.5	K090D	HDPE Grade PE100-PN12.5,110mm dia	m	468
13.6	K090E	HDPE Grade PE100-PN12.5,125mm dia	m	589
13.7	K090F	HDPE Grade PE100-PN12.5,140mm dia	m	727
13.8	K090G	HDPE Grade PE100-PN12.5,160mm dia	m	932
13.9	K090H	HDPE Grade PE100-PN12.5,180mm dia	m	1161
13.10	K090I	HDPE Grade PE100-PN12.5,200mm dia	m	1409
13.11	K090J	HDPE Grade PE100-PN 12.5, 225mm dia	m	1834
13.12	K090K	HDPE Grade PE100-PN 12.5, 250mm dia	m	2235
13.13	K090L	HDPE Grade PE100-PN 12.5, 280mm dia	m	2773
13.14	K090M	HDPE Grade PE100-PN 12.5, 315mm dia	m	3474
13.15	K090N	HDPE Grade PE100-PN 12.5, 355mm dia	m	4494
13.16	K090O	HDPE Grade PE100-PN 12.5, 400mm dia	m	5672
13.17	K090P	HDPE Grade PE100-PN 12.5, 450mm dia	m	7133
13.18	K090Q	HDPE Grade PE100-PN 12.5, 500mm dia	m	8784
14	K100	**For Grade PE100 PN16.0 :**		
14.10	K100A	HDPE Grade PE100-PN 16.0, 75 mm dia	m	276

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
14.2	K100B	HDPE Grade PE100-PN16.0, 90mm dia	m	375
14.3	K100C	HDPE Grade PE100-PN16.0, 110mm dia	m	553
14.4	K100D	HDPE Grade PE100-PN16.0, 125mm dia	m	697
14.5	K100E	HDPE Grade PE100-PN16.0, 140mm dia	m	865
14.6	K100F	HDPE Grade PE100-PN16.0, 160mm dia	m	1106
14.7	K100G	HDPE Grade PE100-PN16.0, 180mm dia	m	1381
14.8	K100H	HDPE Grade PE100-PN16.0, 200mm dia	m	1688
14.9	K100I	HDPE Grade PE100-PN16.0, 225mm dia	m	2152
14.10	K100J	HDPE Grade PE100-PN 16.0, 250mm dia	m	2631
14.11	K100K	HDPE Grade PE100-PN 16.0, 280mm dia	m	3275
14.12	K100L	HDPE Grade PE100-PN 16.0, 315mm dia	m	4101
14.13	K100M	HDPE Grade PE100-PN 16.0, 355mm dia	m	5333
14.14	K100N	HDPE Grade PE100-PN 16.0, 400 mm dia	m	6737
14.15	K100O	HDPE Grade PE100-PN 16.0, 450mm dia	m	8470
14.16	K100P	HDPE Grade PE100-PN 16.0, 500mm dia	m	10432
15	K110	Lowering,laying and fusion welding Jointing for HDPE Pipes Grade PE-80 / PE-100 conforming to IS 4984-2016, of specified dia. including hydrualic testing and commissioning etc.(Contractor will make his own arrangements for procuring water for testing) for:		
15.1	K110A	63mm dia	m	55
15.2	K110B	75mm dia	m	57
15.3	K110C	90mm dia	m	61
15.4	K110D	110mm dia	m	82
15.5	K110E	125mm dia	m	92
15.6	K110F	140mm dia	m	105
15.7	K110G	160mm dia	m	115
15.8	K110H	180mm dia	m	129
15.9	K110I	200mm dia	m	139
15.10	K110J	225mm dia	m	151
15.11	K110K	250mm dia	m	157
15.12	K110L	280mm dia	m	168
15.13	K110M	315mm dia	m	178
15.14	K110N	355mm dia	m	188
15.15	K110O	400mm dia	m	205
15.16	K110P	450mm dia	m	218
15.17	K110Q	500mm dia	m	236
15.18	K110R	560mm dia	m	250

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
15.19	K110S	630mm dia	m	259
15.20	K110T	710mm dia	m	279
15.21	K110U	800mm dia	m	437
15.22	K110V	900mm dia	m	457
15.23	K110W	1000mm dia	m	502
15.24	K110X	1200mm dia	m	548
16	K130	Supplying and installation of Class SN8 Double Wall Corrugated HDPE pipe outer wall corrugated and inner wall smooth piping system in accordance with IS 16098 part 2 and conveying to work site and lowering into trenches, laying true to line and level and perfect linking at joints with the help of two "O" rings and a coupler of suitable size, including loading and unloading at both destination and cutting of pipes where ever necessary including jointing with all labour, all lead and lift including encasing the pipe around to a depth of not less than 15 cm with screened soft soil available from the excavated soil. The testing commissioning including necessary hydraulic test to the required pressure as per ISS shall be done the contractor shall have to make his own arrangement for procuring water for testing		
16.1	K130A	SN8 Double Wall Corrugated HDPE pipe sizes of 100 mm dia	m	222
16.2	K130B	SN8 Double Wall Corrugated HDPE pipe sizes of 135 mm dia	m	268
16.3	K130C	SN8 Double Wall Corrugated HDPE pipe sizes of 150 mm dia	m	316
16.4	K130D	SN8 Double Wall Corrugated HDPE pipe sizes of 170 mm dia	m	413
16.5	K130E	SN8 Double Wall Corrugated HDPE pipe sizes of 200 mm dia	m	506
16.6	K130F	SN8 Double Wall Corrugated HDPE pipe sizes of 250 mm dia	m	732
16.7	K130G	SN8 Double Wall Corrugated HDPE pipe sizes of 300 mm dia	m	1044
16.8	K130H	SN8 Double Wall Corrugated HDPE pipe sizes of 400 mm dia	m	1233
16.9	K130I	SN8 Double Wall Corrugated HDPE pipe sizes of 500 mm dia	m	2032
16.10	K130J	SN8 Double Wall Corrugated HDPE pipe sizes of 600 mm dia	m	3051
16.11	K130K	SN8 Double Wall Corrugated HDPE pipe sizes of 800 mm dia	m	5091
16.12	K130L	SN8 Double Wall Corrugated HDPE pipe sizes of 1000 mm dia	m	7568
17	K140	Supplying and installation of Class SN8 Double Wall Corrugated HDPE pipe Specials outer wall corrugated and inner wall smooth piping system in accordance with IS 16098 part 2 and conveying to work site and lowering into trenches, laying true to line and level and perfect linking at joints with the help of two "O" rings and a coupler of suitable size, including loading and unloading at both destination including jointing with all labour, all lead and lift including encasing the special around to a depth of not less than 15 cm with screened soft soil available from the excavated soil. The testing commissioning including necessary hydraulic test to the required pressure as per ISS shall be done (the contractor shall have to make his own arrangement for procuring water for testing)		
17.1	K140A	100 ID COUPLER - fitting for 100mm dia pipes	each	121

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
17.2	K140B	135 ID COUPLER - fitting for 135mm dia pipes	each	170
17.3	K140C	150 ID COUPLER - fitting for 150mm dia pipes	each	199
17.4	K140D	170 ID COUPLER - fitting for 170mm dia pipes	each	228
17.5	K140E	200 ID COUPLER - fitting for 200mm dia pipes	each	384
17.6	K140F	250 ID COUPLER - fitting for 250mm dia pipes	each	522
17.7	K140G	300 ID COUPLER - fitting for 300mm dia pipes	each	605
17.8	K140H	400 ID COUPLER - fitting for 400mm dia pipes	each	735
17.9	K140I	500 ID COUPLER - fitting for 500mm dia pipes	each	866
17.10	K140J	600 ID COUPLER - fitting for 600mm dia pipes	each	1012
17.11	K140K	800 ID COUPLER - fitting for 800mm dia pipes	each	1503
17.12	K140L	1000 ID COUPLER - fitting for 1000mm dia pipes	each	1925
17.13	K140M	100 ID TEE - fitting for 100mm dia pipes	each	742
17.14	K140N	135 ID TEE - fitting for 135mm dia pipes	each	801
17.15	K140O	150 ID TEE - fitting for 150mm dia pipes	each	861
17.16	K140P	170 ID TEE - fitting for 170mm dia pipes	each	952
17.17	K140Q	200 ID TEE - fitting for 200mm dia pipes	each	1277
17.18	K140R	250 ID TEE - fitting for 250mm dia pipes	each	1750
17.19	K140S	300 ID TEE - fitting for 300mm dia pipes	each	1893
17.20	K140T	100 ID BEND - fitting for 100mm dia pipes	each	185
17.21	K140U	135 ID BEND - fitting for 135mm dia pipes	each	238
17.22	K140V	150 ID BEND - fitting for 150mm dia pipes	each	293
17.23	K140W	170 ID BEND - fitting for 170mm dia pipes	each	406
17.24	K140X	200 ID BEND - fitting for 200mm dia pipes	each	610
17.25	K140Y	250 ID BEND - fitting for 250mm dia pipes	each	952
17.26	K140Z	300 ID BEND - fitting for 300mm dia pipes	each	1307
17.27	K140AA	63 MM ELECTRO FUSION COUPLER	each	141
17.28	K140AB	75 MM ELECTRO FUSION COUPLER	each	179
17.29	K140AC	90 MM ELECTRO FUSION COUPLER	each	231
17.30	K140AD	63 MM ELECTRO FUSION TEE	each	246
17.31	K140AE	75 MM ELECTRO FUSION TEE	each	358
17.32	K140AF	90 MM ELECTRO FUSION TEE	each	528
17.33	K140AG	63 MM ELECTRO FUSION ELBOW	each	247
17.34	K140AH	75 MM ELECTRO FUSION ELBOW	each	288
17.35	K140AI	90 MM ELECTRO FUSION ELBOW	each	453
17.36	K140AJ	90 X75 MM ELECTRO FUSION REDUCER	each	504
17.37	K140AK	90X63 MM ELECTRO FUSION REDUCER	each	442

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
17.38	K140AL	75X63 MM ELECTRO FUSION REDUCER	each	281
17.39	K140AM	80 MM STAINER	each	2166
17.40	K140AN	3 “M.S. FLANGE	each	200
17.41	K140AO	90 MN HDPE LNC	each	121
17.42	K140AP	½ CPV FTA	each	20
17.43	K140AQ	½ CPVE ELBOW BRASS	each	42
17.44	K140AR	63 MM COMPRESSION MTA	each	200
17.45	K140AS	75 MM COMPRESSION MTA	each	361
17.46	K140AT	90 MM COMPRESSION MTA	each	401
18	K150A	Supply and laying of warning tape / Caution tape / detector tape for HDPE pipes of 200 mm wide, 300 micron thick, blue in colour confoming to relevant ISS with latest amendments with appurtenances., complete	m	8
19	K160A	Supply and laying of Disc type Active Electronic Marker (RFID) with all lead and lift. Nos Type: Active electronic marker Output / Operating Frequency: Output efficiency : 145.7 KHz Nos RFID: The marker should have unique fixed 10 digit ID in hexadecimal mode Construction: High impact polystyrene plastic casing sealed to IP65 Size: Minimum 220mm dia x minmum 25mm thickness Weight : >=250 gms Power Source: Self generated. No batteries required for signal transmission Working : Unit should have capability to receive signal and transmit back Depth range: 1.5 meters Working Life : >= 40 years	each	2015
20	K170A	Supply and laying of Disc type Passive Electronic Marker (RFID) with all lead and lift. Nos Type: Passive electronic marker Output Operating Frequency: Output frequency: 145.7 kHz Construction: High impact polystyrene plastic casing sealed to IP65 Size: Minimum 120mm diameter x Minimum 33mm thickness Weight : >=116 grams Power Source: self generated. No batteries required for signal transmission. Working : Unit should have capability to receive signal and transmit back Depth range: 1.5 meters Working Life : >= 40 years	each	1101
21	K180A	Passive Electronic Marker Locator (for locating buried passive electronic markers) The electronic marker locator shall be used to locate electronic marker buried under ground and should have the following features: Operating frequency: a. 145.7 KHz for water b. 121.6 KHz for Sewer c. 66.35 Hz for Non potable water Depth range: minimum 5 feet Scan mode provides simultaneous detection of all marker types. User - adjustable detection Threshold Large - character LCD display Bar graph, numeric & audible signal strength indicators Speaker volume adjust Headphone jack Battery level indicator Low battery warning Adjutable time out feature prolongs battery life (and can be turned off) Weather resistant Rugged construction	each	169457
22	K190A	Providing 50 mm Dia HDPE Sleeve pipe with allied accessories at ferrule point of HSC to assist in regulating flow with allen key with appurtenances., complete.	each	262

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
23	K200A	Supply and fixing of HDPE water meter box with locking arrangement to protect the water meter of Class 'B' Multijet type of size 15 to 32 mm including HDPE box with base dia 300mm x lid dia 200mm x height 250mm with openable lid and the cover is buried below GL with lid flush with GL including earth work excavation for 600mm x 600mm and base sand filling for 100mm thick over which the cover is placed and enclosed by PCC 1:2:4 using 12-20mm BG jelly for an height of 150mm and refilling with excavated earth for balance 100mm height, disposal of excess earth with all lead and lifts with appurtenances complete as per drawing enclosed.	each	509

CHAPTER - 12
PVC PIPE WORKS

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
1	M010	Supplying PVC ringtite pipes conforming to IS 4985:2000 with latest amendments and conveying to worksite, rolling and lowering into trenches, laying true to line and level and perfect linking at joints, testing and commissioning, including loading unloading at both destinations and cuts of pipes wherever necessary including jointing of PVC pipes and specials (excluding cost of specials) with jointing of approved type, with all labour with all lead & lift including encasing the pipe alround to a depth of not less than 15 cms. with soft gravel or selected earth available from the excavation etc. complete and giving necessary hydraulic test to the required pressure as per ISS (Contractor will make his own arrangements for procuring water for testing) etc. for:		
1.1	M010A	PVC pipes 25mm dia, 10 kg/sqcm & class 5	m	47
1.2	M010B	PVC pipes 32mm dia., 10 kg/sqcm & class 5	m	64
1.3	M010C	PVC pipes 50mm dia., 6 kg/sqcm & class 5	m	96
1.4	M010D	PVC pipes 63mm dia., 6 kg/sqcm & class 3	m	153
1.5	M010E	PVC pipes 75mm dia., 6 kg/sqcm & class 3	m	210
1.6	M010F	PVC pipes 90mm dia., 6 kg/sqcm & class 3	m	281
1.7	M010G	PVC pipes 110mm dia., 6 kg/sqcm & class 3	m	394
1.8	M010H	PVC pipes 140mm dia., 6 kg/sqcm & class 3	m	567
1.9	M010I	PVC pipes 160mm dia., 6 kg/sqcm & class 3	m	599
1.10	M010J	PVC pipes 200mm dia., 6 kg/sqcm & class 3	m	1094
1.11	M010K	PVC pipes 250mm dia., 6 kg/sqcm & class 3	m	1422
1.12	M010L	PVC pipes 315mm dia., 6 kg/sqcm & class 3	m	1976
2	M020	Supplying UNPLASTICISED PVC pipes conforming to IS 16098:2013 with latest amendments ended with integral sockets with ISI mark and conveying to worksite, rolling and lowering into trenches, laying true to line and level and perfect linking at joints, testing and commissioning, including loading and unloading at both destinations and cuts of pipes wherever necessary including jointing of UPVC pipes (with cost of elastomeric sealing rings) and specials (excluding cost of specials) with jointing of approved type, with all labour, lead & lifts, including encasing the pipes alround to a depth of not less than 15 cms. with soft gravel or selected earth available from the excavation etc. complete and giving necessary hydraulic test to the required pressure as per ISS (contractor will make his own arrangements for procuring water for testing) etc. for:		
2.1	M020A	Pipes of SN 4, 75mm dia.	m	204
2.2	M020B	Pipes of SN4, 110mm dia.	m	271
2.3	M020C	For pipes SN4, 125mm dia.	m	367
2.4	M020D	Pipes of SN4, 160mm dia.	m	556
2.5	M020E	Pipes of SN4, 200mm dia.	m	809

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
2.6	M020F	Pipes of SN4, 250mm dia.	m	1251
2.7	M020G	Pipes of SN4, 315mm dia.	m	1987
2.8	M020H	Pipes of SN 8, 110mm dia.	m	330
2.9	M020I	Pipes of SN 8, 125mm dia.	m	425
2.10	M020J	Pipes of SN 8, 160mm dia.	m	677
2.11	M020K	Pipes of SN 8, 200mm dia.	m	1012
2.12	M020L	Pipes of SN 8, 250mm dia.	m	1518
2.13	M020M	Pipes of SN 8, 315mm dia.	m	2321
3	M040	Supplying UPVC FOAM CORE pipes conforming to IS 16098 P-1 2013 with latest amendments ended with integral sockets with ISI mark and conveying to worksite, rolling and lowering into trenches, laying true to line and level and perfect linking at joints, testing and commissioning, including loading and unloading at both destinations and cuts of pipes wherever necessary including jointing of UPVC pipes (with cost of elastomeric sealing rings) and specials (excluding cost of specials) with jointing of approved type, with all labour, lead & lifts, including encasing the pipes alround to a depth of not less than 15 cms. with soft gravel or selected earth available from the excavation etc. complete and giving necessary hydraulic test to the required pressure as per ISS (contractor will make his own arrangements for procuring water for testing) etc. for:		
3.1	M040A	Pipes of SN4 Ring Fit - 160mm dia.	m	492
3.2	M040B	Pipes of SN8 Ring Fit, 160mm dia.	m	562
3.3	M040C	Pipes of SN4 Self Fit - 160mm dia.	m	497
3.4	M040D	Pipes of SN4 Self Fit - 200mm dia.	m	751
3.5	M040E	Pipes of SN4 Self Fit - 250mm dia.	m	1169
3.6	M040F	Pipes of SN4 Self Fit - 315mm dia.	m	1782
3.7	M040G	Pipes of SN8 Self Fit - 160mm dia.	m	597
3.8	M040H	Pipes of SN8 Self Fit - 200mm dia.	m	868
3.9	M040I	Pipes of SN8 Self Fit - 250mm dia.	m	1345
3.10	M040J	Pipes of SN8 Self Fit - 315mm dia.	m	2134
4	M050	Providing, laying, supplying jointing materials, jointing and testing but excluding excavation and back filling etc. for Oriented Poly vinyl chloride Pipes or O-PVC Pipes of highest Orientation Class 500 IS 16647 – 2017 with homogeneous SPIGOT including supply of Elastomeric sealing ring manufactured as per ISO 16422-2014 and the elastomeric sealing ring gasket conforming to EN 681-1. The manufacturing, testing at factory, supplying, transpotation, handling, stacking, installation, jointing and testing at sites shall comply with all applicable standards (ISO 16422-2014) .		
4.1	M050A	Pipes of 110mm dia. , PN - 16 & elastromeric fittings	m	1354
4.2	M050B	Pipes of 160mm dia., PN - 16 & elastromeric fittings	m	1947

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
4.3	M050C	Pipes of 200mm dia., PN - 16 & elastromeric fittings	m	2615
4.4	M050D	Pipes of 250mm dia., PN - 16 & elastromeric fittings	m	3443
4.5	M050E	Pipes of 315mm dia., PN - 16 & elastromeric fittings	m	4489
4.6	M050F	Pipes of 400mm dia., PN - 16 & elastromeric fittings	m	6563
4.7	M050G	Pipes of 110mm dia. , PN - 25 & elastromeric fittings	m	1916
4.8	M050H	Pipes of 160mm dia. , PN - 25 & elastromeric fittings	m	2372
4.9	M050I	Pipes of 200mm dia. , PN - 25 & elastromeric fittings	m	3819
4.10	M050J	Pipes of 250mm dia. , PN - 25 & elastromeric fittings	m	4908
4.11	M050K	Pipes of 315mm dia. , PN - 25 & elastromeric fittings	m	6351
4.12	M050L	Pipes of 400mm dia. , PN - 25 & elastromeric fittings	m	9348
5	M060	Labour charges for attending to repairs to the PVC pipes by earth work excavation cutting the old pipe installation and jointing of new pipes to the existing old pipe to the depth and line, level and perfect linking at joints including encasing the pipes alround to a depth of not less than 15cms with earth available including cost of all labour,hire charge of equipment,refilling the excavated trenches compacting,finishing neatly by giving satisfactory hydraulic test etc.,complete		
5.1	M060A	For 63mm (0.075) to 315mm(0.787):	m	298
5.2	M070A	RCC hume pipe Circular pump house: Supplying precast RCC Circular Hume pipe pump house with M.S door and RCC conical roof as per specification and drawings - Internal dia Mtr. 1200 mm & height of 2.5 Mtr. With Wall thickness 65mm	each	16401
5.3	M080A	Erection and positioning of RCC Hume pipe pump house/Cistern on size stone masory platform including transportation charges and handling,finishing with all necessary tools ,plants and materials etc.,complete as directed by the Engineer in charge of the work.	each	1882
6	M090	Supply and delivery at site special moulded variety PVC couplers as per IS 7834/ 1987 and fabricated as per IG124/ 1984 with ISI mark and with its latest amendments		
6.1	M090A	25mm dia PVC couplers	each	13
6.2	M090B	32mm dia PVC couplers	each	17
6.3	M090C	40mm dia PVC couplers	each	24
6.4	M090D	50mm dia PVC couplers	each	29
6.5	M090E	63mm dia PVC couplers	each	45
6.6	M090F	75mm dia PVC couplers	each	70
6.7	M090G	90mm dia PVC couplers	each	130
6.8	M090H	110mm dia PVC couplers	each	178
6.9	M090I	140mm dia PVC couplers	each	228
6.10	M090J	160mm dia PVC couplers	each	349
6.11	M090K	180mm dia PVC couplers	each	410

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
6.12	M090L	200mm dia PVC couplers	each	493
6.13	M090M	225mm dia PVC couplers	each	565
6.14	M090N	250mm dia PVC couplers	each	687
6.15	M090O	280mm dia PVC couplers	each	877
6.16	M090P	315mm dia PVC couplers	each	1238
7	M100	Supply and delivery at site special moulded variety PVC elbows as per IS 7834/ 1987 and fabricated as per IG124/ 1984 with ISI mark with its latest amendments		
7.1	M100A	25 mm dia PVC Elbows	each	17
7.2	M100B	32 mm dia PVC Elbows	each	22
7.3	M100C	40 mm dia PVC Elbows	each	43
7.4	M100D	50 mm dia PVC Elbows	each	69
7.5	M100E	63 mm dia PVC Elbows	each	105
7.6	M100F	75 mm dia PVC Elbows	each	200
7.7	M100G	90 mm dia PVC Elbows	each	288
7.8	M100H	110 mm dia PVC Elbows	each	315
7.9	M100I	140 mm dia PVC Elbows	each	372
7.10	M100J	160 mm dia PVC Elbows	each	491
7.11	M100K	180 mm dia PVC Elbows	each	527
7.12	M100L	200 mm dia PVC Elbows	each	615
7.13	M100M	225 mm dia PVC Elbows	each	769
7.14	M100N	250 mm dia PVC Elbows	each	922
7.15	M100O	280 mm dia PVC Elbows	each	1188
7.16	M100P	315 mm dia PVC Elbows	each	1522
8	M110	Supply and delivery at site special moulded variety PVC tee as per IS 7834/ 1987 and fabricated as per IG124/ 1984 with ISI mark with its latest amendments		
8.1	M110A	25 mm dia PVC Tee	each	22
8.2	M110B	32 mm dia PVC Tee	each	33
8.3	M110C	40 mm dia PVC Tee	each	41
8.4	M110D	50 mm dia PVC Tee	each	64
8.5	M110E	63 mm dia PVC Tee	each	80
8.6	M110F	75 mm dia PVC Tee	each	122
8.7	M110G	90 mm dia PVC Tee	each	178
8.8	M110H	110 mm dia PVC Tee	each	262
8.9	M110I	140 mm dia PVC Tee	each	373
8.10	M110J	160 mm dia PVC Tee	each	486

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
8.11	M110K	180 mm dia PVC Tee	each	613
8.12	M110L	200 mm dia PVC Tee	each	722
8.13	M110M	225 mm dia PVC Tee	each	889
8.14	M110N	250 mm dia PVC Tee	each	1289
8.15	M110O	280 mm dia PVC Tee	each	1872
8.16	M110P	315 mm dia PVC Tee	each	2534
9	M120	Supply and delivery at site special moulded variety PVC bend as per IS 7834/ 1987 and fabricated as per IG124/ 1984 with ISI mark with its latest amendments		
9.1	M120A	25 mm dia PVC BEND	each	25
9.2	M120B	32 mm dia PVC BEND	each	38
9.3	M120C	40 mm dia PVC BEND	each	59
9.4	M120D	50 mm dia PVC BEND	each	93
9.5	M120E	63 mm dia PVC BEND	each	174
9.6	M120F	75 mm dia PVC BEND	each	255
9.7	M120G	90 mm dia PVC BEND	each	407
9.8	M120H	110 mm dia PVC BEND	each	513
9.9	M120I	140 mm dia PVC BEND	each	622
9.10	M120J	160 mm dia PVC BEND	each	703
9.11	M120K	180 mm dia PVC BEND	each	814
9.12	M120L	200 mm dia PVC BEND	each	978
9.13	M120M	225 mm dia PVC BEND	each	1151
9.14	M120N	250 mm dia PVC BEND	each	1522
9.15	M120O	280 mm dia PVC BEND	each	1933
9.16	M120P	315 mm dia PVC BEND	each	2672
10	M130	Supply and delivery at site special moulded variety PVC service saddles as per IS 7834/ 1987 and fabricated as per IG124/ 1984 with ISI mark with its latest amendments		
10.1	M130A	25 mm dia PVC SERVICE SADDLES	each	40
10.2	M130B	32 mm dia PVC SERVICE SADDLES	each	69
10.3	M130C	40 mm dia PVC SERVICE SADDLES	each	91
10.4	M130D	50 mm dia PVC SERVICE SADDLES	each	107
10.5	M130E	63 mm dia PVC SERVICE SADDLES	each	142
10.6	M130F	75 mm dia PVC SERVICE SADDLES	each	183
10.7	M130G	90 mm dia PVC SERVICE SADDLES	each	220
10.8	M130H	110 mm dia PVC SERVICE SADDLES	each	271
10.9	M130I	140 mm dia PVC SERVICE SADDLES	each	324
10.10	M130J	160 mm dia PVC SERVICE SADDLES	each	403

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
10.11	M130K	180 mm dia PVC SERVICE SADDLES	each	493
10.12	M130L	200 mm dia PVC SERVICE SADDLES	each	571
10.13	M130M	225 mm dia PVC SERVICE SADDLES	each	694
10.14	M130N	250 mm dia PVC SERVICE SADDLES	each	815
10.15	M130O	280 mm dia PVC SERVICE SADDLES	each	969
10.16	M130P	315 mm dia PVC SERVICE SADDLES	each	1251
11	M140	Supply and delivery at site special moulded variety PVC reducer as per IS 7834/ 1987 and fabricated as per IG124/ 1984 with ISI mark with its latest amendments		
11.1	M140A	25 mm dia PVC REDUCER	each	35
11.2	M140B	32 mm dia PVC REDUCER	each	42
11.3	M140C	40 mm dia PVC REDUCER	each	50
11.4	M140D	50 mm dia PVC REDUCER	each	62
11.5	M140E	63 mm dia PVC REDUCER	each	93
11.6	M140F	75 mm dia PVC REDUCER	each	108
11.7	M140G	90 mm dia PVC REDUCER	each	154
11.8	M140H	110 mm dia PVC REDUCER	each	272
11.9	M140I	140 mm dia PVC REDUCER	each	334
11.10	M140J	160 mm dia PVC REDUCER	each	526
11.11	M140K	180 mm dia PVC REDUCER	each	687
11.12	M140L	200 mm dia PVC REDUCER	each	825
11.13	M140M	225 mm dia PVC REDUCER	each	993
11.14	M140N	250 mm dia PVC REDUCER	each	1255
11.15	M140O	280 mm dia PVC REDUCER	each	1432
11.16	M140P	315 mm dia PVC REDUCER	each	1684
12	M150	Providing and installing at site of work P.V.C. pipes including cost of pipes and specials and labour, including lowering into trenches, laying true to line, level and perfect linking at joints leak proof including jointing of approved type with all labour charges and all lift charges, handling charges including encasing the pipe around to a depth not less than 15 cms with gravel or selected earth available from the excavation etc. complete.		
12.1	M150A	4 Kg/m2: 63mm(weight of pipe -0.465 kg)	m	121
12.2	M150B	75mm (weight of pipe -0.651 kg)	m	168
12.3	M150C	90mm(weight of pipe -0.917 kg)	m	219
12.4	M150D	110mm(weight of pipe -1.315 kg)	m	299
12.5	M150E	140mm(weight of pipe -2.131 kg)	m	401
12.6	M150F	160mm(weight of pipe -2.753 kg)	m	547

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
12.7	M150G	200mm(weight of pipe -4.256 kg)	m	801
13	M150H	6 Kg/m2: 63mm(weight of pipe -0.662 kg)	m	153
13.1	M150I	75mm(weight of pipe -0.917 kg)	m	210
13.2	M150J	90mm(weight of pipe -1.313 kg)	m	281
13.3	M150K	110mm(weight of pipe -1.894 kg)	m	394
13.4	M150L	140mm(weight of pipe -3.097 kg)	m	567
13.5	M150M	160mm(weight of pipe -3.923 kg)	m	599
13.6	M150N	200mm(weight of pipe -6.233 kg)	m	1094
14	M150O	8 Kg/m2: 63mm(weight of pipe -0.662 kg)	m	178
14.1	M150P	75mm(weight of pipe -0.917 kg)	m	252
14.2	M150Q	90mm(weight of pipe -1.313 kg)	m	338
14.3	M150R	110mm(weight of pipe -1.894 kg)	m	484
14.4	M150S	140mm(weight of pipe -3.097 kg)	m	734
14.5	M150T	160mm(weight of pipe -3.923 kg)	m	934
14.6	M150U	200mm(weight of pipe -6.233 kg)	m	1398
15	M150V	10 Kg/m2: 63mm	m	208
15.1	M150W	75mm	m	291
15.2	M150X	90mm	m	398
15.3	M150Y	110mm	m	572
15.4	M150Z	140mm	m	864
15.5	M150AA	160mm	m	1104
15.6	M150AB	200mm	m	1677
16	M160	Lowering, laying true to line and level of PVC Ringtite / PVC Pipes and cuts of pipes wherever necessary including jointing of pipes and specials with jointing of approved type, with all labour with encasing the pipe alround to a depth of not less than 15 cms. with soft gravel or selected earth available from the excavation etc. complete and giving necessary hydraulic test to the required pressure as per ISS and commissioning (Contractor will make his own arrangements for procuring water for testing) etc. for:		
16.1	M160A	25mm	m	20
16.2	M160B	32mm	m	26
16.3	M160C	50mm	m	35
16.4	M160D	63mm	m	50
16.5	M160E	75mm	m	66
16.6	M160F	90mm	m	77
16.7	M160G	110mm	m	95
16.8	M160H	140mm	m	101

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
16.9	M160I	160mm	m	107
16.10	M160J	200mm	m	120
16.11	M160K	250mm	m	133
16.12	M160L	315mm	m	160

CHAPTER - 13
GI PIPE WORKS

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
1	N005	Providing, Laying and Fixing GI pipes conforming to IS 1239:1990 with latest amendments complete with GI fittings (excluding the cost of fittings) with cuts and threads wherever necessary, including testing for water tightness, with all lead and commissioning. (contractor will make his own arrangements for procuring water for testing) **For Heavy Duty GI pipe:**		
1.1	N005A	Light Duty GI pipe of 15mm dia	m	153
1.2	N005B	Light Duty GI pipe of 20mm dia	m	189
1.3	N005C	Light Duty GI pipe of 25mm dia	m	241
1.4	N005D	Light Duty GI pipe of 32mm dia	m	286
1.5	N005E	Light Duty GI pipe of 40mm dia	m	347
1.6	N005F	Light Duty GI pipe of 50mm dia	m	424
1.7	N005G	Light Duty GI pipe of 65mm dia	m	552
1.8	N005H	Light Duty GI pipe of 80mm dia	m	657
1.9	N005I	Light Duty GI pipe of 100mm dia	m	886
2	N010	**For Medium Duty GI pipe:**		
2.1	N010A	Medium Duty GI pipe of 15mm dia	m	167
2.2	N010B	Medium Duty GI pipe of 20mm dia	m	192
2.3	N010C	Medium Duty GI pipe of 25mm dia	m	265
2.4	N010D	Medium Duty GI pipe of 32mm dia	m	313
2.5	N010E	Medium Duty GI pipe of 40mm dia	m	359
2.6	N010F	Medium Duty GI pipe of 50mm dia	m	479
2.7	N010G	Medium Duty GI pipe of 65mm dia	m	591
2.8	N010H	Medium Duty GI pipe of 80mm dia	m	754
2.9	N010I	Medium Duty GI pipe of 100mm dia	m	1028
3	N020	**For Heavy Duty GI pipe:**		
3.1	N020A	Heavy Duty GI pipe of 15mm dia	m	180
3.2	N020B	Heavy Duty GI pipe of 20mm dia	m	209
3.3	N020C	Heavy Duty GI pipe of 25mm dia	m	294
3.4	N020D	Heavy Duty GI pipe of 32mm dia	m	352
3.5	N020E	Heavy Duty GI pipe of 40mm dia	m	398
3.6	N020F	Heavy Duty GI pipe of 50mm dia	m	546
3.7	N020G	Heavy Duty GI pipe of 65mm dia	m	682
3.8	N020H	Heavy Duty GI pipe of 80mm dia	m	837
3.9	N020I	Heavy Duty GI pipe of 100mm dia	m	1173

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
4	N030	Providing and fixing GI union in existing GI pipe line, cutting and threading the pipe and making long screws including excavation, refilling the earth or cutting of wall and making good the same complete wherever required etc. for:		
4.1	N030A	15 mm nominal bore	each	264
4.2	N030B	20.88.2: 20 mm nominal bore	each	279
4.3	N030C	20.88.3: 25 mm nominal bore	each	287
4.4	N030D	20.88.4: 32 mm nominal bore	each	301
4.5	N030E	20.88.5: 40 mm nominal bore	each	341
4.6	N030F	20.88.6: 50 mm nominal bore	each	462
4.7	N030G	20.88.7: 65 mm nominal bore	each	634
4.8	N030H	20.88.8: 80 mm nominal bore	each	739
5	N070	Providing lead caulked joints to spun iron or CI pipes and specials with spun yarn and lead, including caulking and giving satisfactory hydraulic test corresponding to the required pressure etc. and excluding the cost of pig lead for:		
5.1	N070A	Spun / CI / DI pipes 80mm	each	425
5.2	N070B	Spun / CI / DI pipes 100mm	each	443
5.3	N070C	Spun / CI / DI pipes 150mm	each	669
5.4	N070D	Spun / CI / DI pipes 200mm	each	841
5.5	N070E	Spun / CI / DI pipes 250mm	each	1080
5.6	N070F	Spun / CI / DI pipes 300mm	each	1269
5.7	N070G	Spun / CI / DI pipes 350mm	each	1550
5.8	N070H	Spun / CI / DI pipes 400mm	each	1985
5.9	N070I	Spun / CI / DI pipes 450mm	each	2088
5.10	N070J	Spun / CI / DI pipes 500mm	each	2313
5.11	N070K	Spun / CI / DI pipes 600mm	each	2913
5.12	N070L	Spun / CI / DI pipes 700mm	each	3353
5.13	N070M	Spun / CI / DI pipes 750mm	each	4549
5.14	N070N	Spun / CI / DI pipes 900mm	each	6415
6	N090	Providing wrought mild steel (galvanized) 15 mm dia GI collar confirming to IS 1239-II, 1991 with latest amendments if any.		
6.1	N090A	For 15 mm dia GI collar:	each	48
6.2	N090B	For 20 mm dia GI collar:	each	81
6.3	N090C	For 25 mm dia GI collar:	each	116
6.4	N090D	For 32 mm dia GI collar:	each	144
6.5	N090E	For 40 mm dia GI collar:	each	169
6.5	N090F	For 50 mm dia GI collar:	each	219

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
6.7	N090G	For 65 mm dia GI collar:	each	256
6.8	N090H	For 80 mm dia GI collar:	each	345
6.9	N090I	For 100 mm dia GI collar:	each	414
6.10	N090J	For 125 mm dia GI collar:	each	522
6.11	N090K	For 150 mm dia GI collar:	each	570
7	N100	Supply and delivery at site wrought middle steel (galvanized) GI elbow confirming to IS 1239-II, 1991 with latest amendments if any for:		
7.1	N100A	For 15 mm dia GI elbow	each	48
7.2	N100B	For 20 mm dia GI elbow	each	81
7.3	N100C	For 25 mm dia GI elbow	each	99
7.4	N100D	For 32 mm dia GI elbow	each	131
7.5	N100E	For 40 mm dia GI elbow	each	169
7.6	N100F	For 50 mm dia GI elbow	each	219
7.7	N100G	For 65 mm dia GI elbow	each	244
7.8	N100H	For 80 mm dia GI elbow	each	342
7.9	N100I	For 100 mm dia GI elbow	each	402
7.10	N100J	For 125 mm dia GI elbow	each	474
7.11	N100K	For 150 mm dia GI elbow	each	534
8	N110	Supply and delivery at site wrought middle steel (galvanized) GI bend confirming to IS 1239-II, 1991 with latest amendments if any.		
8.1	N110A	For 15 mm dia GI BEND	each	81
8.2	N110B	For 20 mm dia GI BEND	each	100
8.3	N110C	For 25 mm dia GI BEND	each	119
8.4	N110D	For 32 mm dia GI BEND	each	169
8.5	N110E	For 40 mm dia GI BEND	each	219
8.6	N110F	For 50 mm dia GI BEND	each	294
8.7	N110G	For 65 mm dia GI BEND	each	331
8.8	N110H	For 80 mm dia GI BEND	each	402
8.9	N110I	For 100 mm dia GI BEND	each	492
8.10	N110J	For 125 mm dia GI BEND	each	558
8.11	N110K	For 150 mm dia GI BEND	each	594
9	N120	Supply and delivery at site wrought middle steel (galvanized) GI tee confirming to IS 1239-II, 1991 with latest amendments if any.		
9.1	N120A	For 15 mm dia GI TEE	each	50
9.2	N120B	For 20 mm dia GI TEE	each	88
9.3	N120C	For 25 mm dia GI TEE	each	113
9.4	N120D	For 32 mm dia GI TEE	each	144

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
9.5	N120E	For 40 mm dia GI TEE	each	156
9.6	N120F	For 50 mm dia GI TEE	each	244
9.7	N120G	For 65 mm dia GI TEE	each	306
9.8	N120H	For 80 mm dia GI TEE	each	356
9.9	N120I	For 100 mm dia GI TEE	each	498
10.1	N120J	For 125 mm dia GI TEE	each	636
10.11	N120K	For 150 mm dia GI TEE	each	750
11	N130	Supply and delivery at site wrought middle steel (galvanized) GI socket confirming to IS 1239-II, 1991 with latest amendments if any.		
11.1	N130A	For 15 mm dia GI socket	each	44
11.2	N130B	For 20 mm dia GI socket	each	69
11.3	N130C	For 25 mm dia GI socket	each	94
11.4	N130D	For 32 mm dia GI socket	each	119
11.5	N130E	For 40 mm dia GI socket	each	181
11.6	N130F	For 50 mm dia GI socket	each	244
11.7	N130G	For 65 mm dia GI socket	each	306
11.8	N130H	For 80 mm dia GI socket	each	372
11.9	N130I	For 100 mm dia GI socket	each	462
11.10	N130J	For 125 mm dia GI socket	each	504
11.11	N130K	For 150 mm dia GI socket	each	600
12	N140	Supply and delivery at site wrought middle steel (galvanized) GI plugs confirming to IS 1239-II, 1991 with latest amendments if any.		
12.1	N140A	For 15 mm dia GI Plugs	each	44
12.2	N140B	For 20 mm dia GI Plugs	each	56
12.3	N140C	For 25 mm dia GI Plugs	each	81
12.4	N140D	For 32 mm dia GI Plugs	each	106
12.5	N140E	For 40 mm dia GI Plugs	each	144
12.6	N140F	For 50 mm dia GI Plugs	each	163
12.7	N140G	For 65 mm dia GI Plugs	each	194
12.8	N140H	For 80 mm dia GI Plugs	each	210
12.9	N140I	For 100 mm dia GI Plugs	each	294
12.10	N140J	For 125 mm dia GI Plugs	each	354
12.11	N140K	For 150 mm dia GI Plugs	each	402
13	N150	Supply and delivery at site wrought middle steel (galvanized) GI union confirming to IS 1239-II, 1991 with latest amendments if any.		
13.1	N150A	For 15 mm dia GI Union	each	69
13.2	N150B	For 20 mm dia GI Union	each	106

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
13.3	N150C	For 25 mm dia GI Union	each	131
13.4	N150D	For 32 mm dia GI Union	each	156
13.5	N150E	For 40 mm dia GI Union	each	194
13.6	N150F	For 50 mm dia GI Union	each	219
13.7	N150G	For 65 mm dia GI Union	each	288
13.8	N150H	For 80 mm dia GI Union	each	474
13.9	N150I	For 100 mm dia GI Union	each	510
13.10	N150J	For 125 mm dia GI Union	each	546
13.11	N150K	For 150 mm dia GI Union	each	642
14	N160	Supply and delivery at site wrought middle steel (galvanized) GI back nut/ check nut confirming to IS 1239-II, 1991 with latest amendments if any.		
14.1	N160A	For 15 mm dia GI Back nut/ check nut	each	56
14.2	N160B	For 20 mm dia GI Back nut/ check nut	each	81
14.3	N160C	For 25 mm dia GI Back nut/ check nut	each	119
14.4	N160D	For 32 mm dia GI Back nut/ check nut	each	144
14.5	N160E	For 40 mm dia GI Back nut/ check nut	each	169
14.6	N160F	For 50 mm dia GI Back nut/ check nut	each	219
14.7	N160G	For 65 mm dia GI Back nut/ check nut	each	244
14.8	N160H	For 80 mm dia GI Back nut/ check nut	each	348
14.9	N160I	For 100 mm dia GI Back nut/ check nut	each	648
14.10	N160J	For 125 mm dia GI Back nut/ check nut	each	678
14.11	N160K	For 150 mm dia GI Back nut/ check nut	each	708
15	N170	Supply and delivery at site wrought middle steel (galvanized) GI hexagonal nipple confirming to IS 1239-II, 1991 with latest amendments if any.		
15.1	N170A	For 15 mm dia GI hexagonal nipple	each	69
15.2	N170B	For 20 mm dia GI hexagonal nipple	each	81
15.3	N170C	For 25 mm dia GI hexagonal nipple	each	106
15.4	N170D	For 32 mm dia GI hexagonal nipple	each	131
15.5	N170E	For 40 mm dia GI hexagonal nipple	each	150
15.6	N170F	For 50 mm dia GI hexagonal nipple	each	175
15.7	N170G	For 65 mm dia GI hexagonal nipple	each	206
15.8	N170H	For 80 mm dia GI hexagonal nipple	each	222
15.9	N170I	For 100 mm dia GI hexagonal nipple	each	282
15.10	N170J	For 125 mm dia GI hexagonal nipple	each	312
15.11	N170K	For 150 mm dia GI hexagonal nipple	each	354

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
16	N180	Supply and delivery at site GM (copper alloy) gate valves confirming to Class-I as per IS 778 with latest amendments, 1 No. screwed in bonnet inside screw, rising spring spindle integral seat screwed females ends confirming to IS 554/ 1990 body hydraulically tested 1.5HP seat standard tested 1 HP with IS mark.		
16.1	N180A	For 15 mm dia GM (Copper alloy) Gate valves	each	645
16.2	N180B	For 20 mm dia GM (Copper alloy) Gate valves	each	888
16.3	N180C	For 25 mm dia GM (Copper alloy) Gate valves	each	1169
16.4	N180D	For 32 mm dia GM (Copper alloy) Gate valves	each	1338
16.5	N180E	For 40 mm dia GM (Copper alloy) Gate valves	each	1500
16.6	N180F	For 50 mm dia GM (Copper alloy) Gate valves	each	1688
16.7	N180G	For 65 mm dia GM (Copper alloy) Gate valves	each	1869
16.8	N180H	For 80 mm dia GM (Copper alloy) Gate valves	each	1902
16.9	N180I	For 100 mm dia GM (Copper alloy) Gate valves	each	1962
16.10	N180J	For 125 mm dia GM (Copper alloy) Gate valves	each	2130
16.11	N180K	For 150 mm dia GM (Copper alloy) Gate valves	each	2622
17	N190	Providing GM (copper alloy) reflex valves/ globe valves confirming to Class-I and as per IS 778/1990 with latest amendments, 1 No. and with ISI mark screwed female ends confirming to IS 554/ 1990 horizontal body hydraulically tested for 1.50 HP and seat hydraulically tested 1 HP.		
17.1	N190A	For 15 mm dia GM (Copper alloy) Globe valves	each	406
17.2	N190B	For 20 mm dia GM (Copper alloy) Globe valves	each	481
17.3	N190C	For 25 mm dia GM (Copper alloy) Globe valves	each	538
17.4	N190D	For 32 mm dia GM (Copper alloy) Globe valves	each	606
17.5	N190E	For 40 mm dia GM (Copper alloy) Globe valves	each	719
17.6	N190F	For 50 mm dia GM (Copper alloy) Globe valves	each	794
17.7	N190G	For 65 mm dia GM (Copper alloy) Globe valves	each	856
17.8	N190H	For 80 mm dia GM (Copper alloy) Globe valves	each	894
17.9	N190I	For 100 mm dia GM (Copper alloy) Gate valves	each	1038
17.10	N190J	For 125 mm dia GM (Copper alloy) Globe valves	each	1122
17.11	N190K	For 150 mm dia GM (Copper alloy) Gate valves	each	1290
18	N200	Providing GM (copper alloy) wheel valves/ check valve confirming to IS 778/1990 Class-I with latest amendments No. 1 and with ISI mark screwed in bonnet integral seat inside, screw, rising spindle screwed female ends confirming to IS 554/ 1990 body hudraulically tested 1.50 HP seat hydraulically tested 1.00 HP.		
18.1	N200A	For 15 mm dia GM (Copper alloy) wheel valves/ check valve	each	569
18.2	N200B	For 20 mm dia GM (Copper alloy) wheel valves/ check valve	each	688
18.3	N200C	For 25 mm dia GM (Copper alloy) wheel valves/ check valve	each	906

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
18.4	N200D	For 32 mm dia GM (Copper alloy) wheel valves/ check valve	each	1038
18.5	N200E	For 40 mm dia GM (Copper alloy) wheel valves/ check valve	each	1138
18.6	N200F	For 50 mm dia GM (Copper alloy) wheel valves/ check valve	each	1281
18.7	N200G	For 65 mm dia GM (Copper alloy) wheel valves/ check valve	each	1438
18.8	N200H	For 80 mm dia GM (Copper alloy) wheel valves/ check valve	each	1542
18.9	N200I	For 100 mm dia GM (Copper alloy) wheel valves/ check valve	each	1698
18.10	N200J	For 125 mm dia GM (Copper alloy) wheel valves/ check valve	each	1854
18.11	N190K	For 150 mm dia GM (Copper alloy) wheel valves/ check valve	each	2016
19	N210	Providing GM ferrules as per IS 2692 and with ISI mark rouby body hydraulically tested 2.00 HP of size 8 mm to 50 mm.		
19.1	N210A	For 15 mm dia GM ferrules	each	300
19.2	N210B	For 20 mm dia GM ferrules	each	431
19.3	N210C	For 25 mm dia GM ferrules	each	488
20	N220	Providing GM gland cocks tested against hydraulic pressure of 20 Kg/m² with ISI mark.		
20.1	N220A	For 15 mm dia GM gland cocks	each	294
20.2	N220B	For 20 mm dia GM gland cocks	each	419
20.3	N220C	For 25 mm dia GM gland cocks	each	513
20.4	N220D	For 32 mm dia GM gland cocks	each	594
20.5	N220E	For 40 mm dia GM gland cocks	each	719
20.6	N220F	For 50 mm dia GM gland cocks	each	788
21	N230	Lowering, Laying and Jointing GI pipes conforming to IS 1239:1990 with latest amendments complete with GI fittings (excluding the cost of fittings) with cuts and threads wherever necessary, including testing for water tightness, with all lead and commissioning. (contractor will make his own arrangements for procuring water for testing) for:		
21.1	N230A	15mm dia	m	78
21.2	N230B	20mm dia	m	78
21.3	N230C	25mm dia	m	89
21.4	N230D	32mm dia	m	92
21.5	N230E	40mm dia	m	104
21.6	N230F	50mm dia	m	128
21.7	N230G	65mm dia	m	145
21.8	N230H	80mm dia	m	167
21.9	N230I	100mm dia	m	191

CHAPTER - 14
BORE WELLS AND HAND PUMPS

NOTE:

1. The rates for various items of works given in this chapter are based on average rates. The market rates may vary from place to place in the state depending upon the local conditions.
2. Tube wells drilled shall be perfectly vertical. The rates for drilling are inclusive of the verticality test required to be conducted. All the relevant Indian standards specifications of the B.I.S. shall also be applicable.
3. The rates for drilling provided are inclusive of depreciation charges of all the machinery, tools & plants required for drilling operation, transportation of drilling machine, erection of machine at site, removal of machine from site after completion, cost of water, cost of drilling mud, fuel, labour and all other unforeseen items for drilling work and clearance of site after completion of work.
4. For locating the proper site for tube well construction within the selected habitation, if resistivity survey is required then the resistivity survey shall be carried out by a well qualified and experienced geo hydrologist using his own suitable resistivity meter.
5. In the ordinary tube wells the casing pipe of specified diameter shall be lowered up to a minimum depth of 9 meters below ground level. If the collapsible strata in overburden continues beyond 9 meters depth then the casing pipe shall be lowered up to rock level and embedded in rock to a depth of 0.15 meter. The casing pipe shall also be extended above ground level to a height of about 0.3 meter.
6. The rates for drilling work are inclusive of the collection of samples of soil/rock cuttings not less than 250 grams from different strata to be collected at every 3 meter depth for initial 15 meters depth and at each 6 meters depth after 15 meter and at the change of strata also and depositing the same with the Engineer in charge, duly marked and packed in bags.
7. The rates are inclusive of the preparation and submission of strata chart of the tube well constructed in the pro forma/Format.
8. It shall be the responsibility of the contractor to collect the water sample from completed tube well and send it to departmental laboratory for chemical and bacteriological analysis. The water sample for chemical analysis shall be collected in 2 liters plastic bottle and samples for bacteriological analysis shall be collected in 300 ml sterilized bottle as per the direction of Engineer in charge.
9. All risks of accidents and Jamming and breaking of drilling tools etc. shall be contractor's liability. No extra charges shall be payable to the contractor on this account.
10. Contractor shall also make arrangements of first aid facilities for any accident. All care and precautions shall be taken and it shall be ensured that there shall be no accidents while drilling the borehole. Proper precautions & Safety measures shall be taken for workmen at site.
11. During any operation carried out for construction of tube well, if any tool, pipe etc. falls down in the tube well then the contractor shall carry out the necessary fishing operation at his own cost. The contractor shall use his own equipment for such operation.
12. The Engineer's incharge & Geologist can take proper decision incase failed borewells or borewell with less yield to use as recharge shaft at later stage.in such cases the casing shall be retained.The tube shall be fitted Imeediately the tube well shall be fitted with MS cap securely and a concrete block of 0.45m X 0.45m X 0.45m with M15 cement concrete would be constructed on it to prevent any accident or damage to the tube well and also to use the bore at any later stage for recharging or for any other purpose.The Engineer incharge of work and Geologist shall take proper decision to retain or removal of casing pipe.
13. The Lowering and fixing of casing pipe in ordinary tube well and lowering of casing assembly shall be done in the presence of authorised representative of the Engineer in Charge of work. The casing pipe to be lowered and fixed in8 intertrappean formation shall be jointed by welding only.

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE

14. In case of ordinary tubewells (other than gravel packed tubewells) where power pump is to be installed, the yield test of tube well shall be conducted by suitable capacity single phase or three phase submersible pumping set to be operated by generator set or by taking temporary electric connection at site. It shall be the responsibility of the contractor to arrange for suitable capacity submersible pumping set, generator set, or temporary electrical connection, suitable measuring equipments for measuring the discharge and draw down of the tube well. The rates for item of yield test given in this schedule of rates include all such arrangements. The maximum duration of yield test shall be ten hours.

15. The tube well shall be disinfected after completion of yield test using bleaching powder solution as per the direction of Engineer in charge.

16. The installation of hand pump over the tube well shall be carried out as per IS specifications (IS15500 PART 1 to 8– 2004). All the parts of pump coming in contact with the water shall be thoroughly cleaned and usted with bleaching powder. The hand pump after installation shall be tested for its proper installation by operating it continuously at least for four hour and measuring the rate of discharge from hand pump. The rates for the item of installation of hand pump and yield test by hand pump.

17. For use of UPVC Column pipe 7 treated appertures refer item no of schedule of rates.

18. If the tube well is found dry or abondoned due to any reason. The contractor shall be fully responsible to fill up the abandoned bore hole with hard soil including compaction and watering so as to make top surface as good as original soil immediately and before shifting the drilling machine to prevent any accident. No payment would be made to thE contractor on account of this.

19. In the case of gravel packed tube well it shall be ensured by the contractor that the slotted pipes or screened pipes shall be lowered in the tube well at the locations of water bearing aquifers as per design. The contractor shall also ensure that joints of the pipes in casing assembly are rigid and water tight and a bail plug is properly fixed in the bottom of casing assembly.

20. The following Indian standard shall be referred to:-

i. I.S.2800 (Part-I) :1991 (Reaffirmed 2001)- Code of practice for construction & testing of tube wells/ Bore wells.

ii. I.S. 2800(Part-II):1979 (Reaffirmed 1999)- Code of practice for construction & testing of tube wells/ Bore wells.

iii. I.S. 11189-1985(Reaffirmed 1999): Methods of tube well development.

iv. I.S.1239 (Part-I) 1990 Mild steel tubes, tubular & other wrought steel fittings-specifications.

v. I.S. 12818: 1992 Un plasticized PVC screen and casing pipes for bore/tube well-specification

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
1	O010	Sinking of Borewell of 165mm dia clear using super fast hydraulic rig of capacity 300 PSIG & above 1100 CMF & above in all strata including over burdern upto 20 m. Fixing of casing pipes, collars and cap with necessary cutting, threading and welding including transportation of rig and supporting vehicle, crew charges and cost of consumables etc., complete including yield testing at the final depth with a minimum working of compressor for one hour (Excluding cost of casing pipes, collars, cap etc., complete)		
1.1	O010A	Borewell depth of 0 to 50 m	m	290
1.2	O010B	Borewell depth of 50 to 100 m	m	364
1.3	O010C	Borewell depth of 100 to 150 m	m	387
1.4	O010D	Borewell depth of 150 to 200 m	m	449
1.5	O010E	Borewell depth of 200 to 250 m	m	527
1.6	O010F	Borewell depth of 250 to 300 m	m	558
1.7	O010G	Borewell depth of 300 to 350 m	m	620
1.8	O010H	Borewell depth of 350 to 400 m	m	697
1.9	O010I	Borewell depth of 400 to 450 m	m	930
2	O020	Sinking borewell of 150mm dia. clear, using super fast hydraulic rig of capacity 250 PSIG & above 900 CMF and above, in all strata of earth, including over burden upto 20M, fixing of casing pipes, collars and cap with ncessary cutting, threading and welding including transportation of rig and supporting vehicles, crew charges, cost of consumables, cost of yield test at the final depth with a minimum working of compressor for one hour etc. complete. The cost excludes the cost of casing pipes, collars and caps etc.) for:		
2.1	O020A	Borewell depth of 0 to 50 m	m	247
2.2	O020B	Borewell depth of 50 to 100 m	m	309
2.3	O020C	Borewell depth of 100 to 150 m	m	329
2.4	O020D	Borewell depth of 150 to 200 m	m	381
2.5	O020E	Borewell depth of 200 to 250 m	m	447
2.6	O020F	Borewell depth of 250 to 300 m	m	473
2.7	O020G	Borewell depth above 300 m	m	526
3	O030A	Positioning of the rig for retrival of failed borewells, raising mast and aligning the hammer and drill rods moounded on the rotary head of the rig concentric with borewell of 140-149 mm dia. to be retrived (wherever further geo-physical investigation has revealed that the existing aquifer / aquifers have not been tapped to the full depth) including selection of the suitable bit for deepening etc. The cost is for the work of each bore well.	each	3016
4	O040A	Geophysical investigation at site for sinking borewells for supplying drinking water to the habitation either through the Hand Pump MWS or P.W.S.S, by vertical electrical sounding by adopting Venner or	each	5141

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
		Schlumbergers's method, including reconnaissance survey of geological formation. Geophysical investigation of existing ground water in the vicinity, its quality, quantity and acceptability of the users, indicating the location of the site, recommended depth of casing pipe required to seal the top unconsolidated formation including an extra depth of 1.0 metre in consolidated formation for proper seating of casing pipe, depth of drilling required to cover full depth of aquifer proposed to be tapped, probable yield and other information required including transportation of instruments and accessories to work site, engaging technical personal and labour required etc. NOTE: 1) Additional rate on item 1&2 is allowed for drilling in over burden and fixing Casing pipes beyond 20 M (for fixing Casing pipes only) a) Above 20 M and upto 30 M - 15%, b) Above 30 M - 30% (Measurement of overburden is restricted to the depth of casing pipe fixed excluding initial depth of 20M and projection above ground level). 2) A sum of Rs. 100/- is to be deducted for Dry Borewell towards yield test.		
5	O050A	Cleaning of borewells including yield testing of borewell either using slow or fast rigs for not more than 2 hours at the final depth with a minimum working of 2 hours continuously with air compressor or suitable pump as per specification, including the cost of transportation charges, crew charges, cost of consumables etc. complete	each	18393
6	O060A	Re-drilling of filled-up borewell, including yield test at final depth.	m	349
7	O070A	Logging / scanning of borewell at any depth continuously with the help of Logger unit including the cost of transportation charges, crew charges, stationery charges and cost of consumables etc.	each	3625
8	O080A	Hydrofracturing of 146 to 152 mm dia. borewell by using hydrofracturing unit using single packer with minimum of two fractures including transporation of unit, supporting vehicles, crew charges, cost of consumables and yield testing of borewell one hour at once before fracturing and the other after fracturing. The work to be within a radius of 50 kms and including supplying necessary water for fracturing etc. complete.	each	25019
9	O090A	Yield testing of borewells at final depth with a minimum of 10 hours continuously with the help of pump testing unit including the cost of transportation charges, crew charges and cost of consumables.	m^2	15636
10	O100A	Providing and construction of platform in CC 1:2:4 proportion using hard granite or basalt or trap jelly of 20mm and down size for India Mark-II hand pump as per approved drawing enclosed to the S.R (UNICEF standard), including machine mixing, laying, tamping, curing and smooth finishing of exposed faces in CM 1:3 with necessary moulds, including earth work excavation with all leads of materials etc. complete	each	3918
11	O110A	Providing and construction of platform in M15 Cement Concrete using hard granite or basalt or trap jelly of 20mm and down size for India Mark-III (VLOM) hand pump as per approved drawing enclosed to the S.R accordiing to IS 13056 - 1991 (UNICEF standard), including machine mixing, laying, tamping, curing and smooth finishing of exposed faces in CM 1:3 with necessary moulds, including earth work excavation with all leads of materials etc. complete	each	7177

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
12	O120A	Erecting and commissioning of new hand pump including fixing of GI pipes, fixing of hand pump to the borewell and giving satisfactory test etc.complete.	each	384
13	O120B	Erecting and commissioning of new hand pump India Mark III (VLOM), including fixing of GI pipes, fixing of hand pump to the borewell and giving satisfactory test etc.complete.	each	480
14	O130A	Repair Top Head Assembly of Hand Pumps by removing the top head assembly, replacing the wornout parts such as handle, axle, chain bearings. Reassembling after greasing in position and giving satisfactory test. etc. complete excluding the cost of parts required for replacement.	each	221
15	O130B	Dismantling India Mark III hand pump from position, releasing plunger rods, valves, piston. Overhauling the components, replace the wornout parts and re-erecting in position etc. with cutting, threading wherever necessary, adjusting the rod and giving satisfactory test etc. The replaced materials to be returned to the departmental store. The cost exclude the cost of parts required for replacement)	each	222
16	O130C	Dismantling India Mark III hand pump from position, releasing GI pipes, rods, pump, cylinder and strainer. Overhauling the components, replace the wornout parts and re-erecting in position etc. with cutting, threading wherever necessary, adjusting the rod and giving satisfactory test etc. The replaced materials to be returned to the departmental store. The cost exclude the cost of parts required for replacement)	each	410
17	O130D	Providing and greasing the chain of hand pump (both India Mark-II and India Mark-III) by removing the top head cover, cleaning wanter tank and head assembly, removing all dirt inside and outside the hand pump body and refixing the top head cover by fixing the bolts and nuts including replacing the bolts and nuts with new ones wherever necssary etc. complete (excluding the cost of spares).	each	55
18	O130E	Labour charges for repairing of existing hand pump (both India Mark II and India Makr III) above the ground level including replacing of worn out parts such as top head, inspection cover, handle, handle axis, handle bearing, chain with coupling water tank and extension or raiser pipe with plunger rod as may be required including re-assembling the pump in position and giving satisfactory water discharge test and returning of released materials to the stores etc. complete excluding the cost of spares.	each	150
19	O130F	Labour charges for repairing of existing hand pump (both India Mark II and India Makr III) below the ground level after dismantling the hand pump head assembly, water tank riser assembly, plunger rods, pump cylinder, replacing of worn out parts in the pumpset cylinder, including overhauling of cylinder, cutting the GI pipes and rods and threading the same, re-assembling the pump including greasing and giving satisfactory water discharge test and returning of released materials to the stores etc. complete excluding the cost of spares.	each	409
20	O130G	Scraping of old paints, stains etc. and provide painting with anti-corrosive pint over a cost primer etc. with approved brand of paint and primer etc. including the cost of all materials, labour, transportation and numbering etc. as directed by the departmental officials.	each	170

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
21	O140A	Dismantling of hand pump from position, releasing of GI pipes, plunger rods, pump cylinder and strainer and returning the released items to departmental stores.	each	162
22	O140B	Dismantling the existing platform of hand pumps of all types and remove the debris as directed.	each	107
23	O140C	Fishing out power pump from the borewell including the cost of labour, materials, with all lead and lifts etc. complete.	each	4488
24	O150A	Labour charges for Lifting of non functioning submersible pump set along with cable and GI pipes (Each length = 6m)). for 50 mm	job	185
25	O150B	Labour charges for Lifting of non functioning submersible pump set along with cable and GI pipes (Each length = 6m)). for 32 mm	job	151
26	O150C	Lifting of struck up submersible pump set. Upto 300 ft	job	6269
27	O150D	Lifting of struck up submersible pump set. Above 300 ft	job	12079
28	O150E	Labour charges for Erection of new / repaired submersible pump set along with GI pipes (32mm / 50mm), cable (New submersible pump set if required will be supplied by the department free of cost and released pump set should be handed over to department) including transportation (Each length = 6 m)	job	151
29	O150F	Labour charges for lowering additional GI pipes of dia 32 / 50 mm dia including transportation charges (New GI pipe required will be supplied by the department free of cost & released GI pipes should be handed over to the department (Labour charges only). Upto 3 mtr lengths	job	1725
30	O150G	Labour charges for lowering additional GI pipes of dia 32 / 50 mm dia including transportation charges (New GI pipe required will be supplied by the department free of cost & released GI pipes should be handed over to the department (Labour charges only). Above 3 mtr lengths	job	577
31	O150H	Repair of existing energized Borewell outdoor MS panel board by welding the damaged broken panel board doors body sheet, angle iron, frame door hinges, cement concrete to panel board legs, embossing (letters & RR No.) etc., complete	job	1619
32	O160A	Supply of ISI mark 175mm nominal bore,plain and steel casing pipe grade of steel Fe 410 of wall thickness conforming to IS 4270-2001 and latest ammendments, electrical resistance welded steel tubes, material and conforming to IS 1387-1993 and manufactured by basic open hearth electric or basic oxygen process in random length of 5-7m both ends.threaded conforming to IS 554-1985 one end fixed with socket conforming to IS 4270-2001 and the other end with screwed pipes all shall be responsibaly free from defects. The tubes shall be responsible straight end should be with ISI marking weighing 25.10kg/m.prices include Collar-Medium duty.	m	1933
33	O170A	Providing and fixing MS casing collars as per IS 1239 (part-II) 1982 with all latest amendments if any for any dia. The thickness of plate used for covering one end shall be 3mm (minimum). The dimensions of caps and colars shall be strictly as per IS 1239 (Part-II) 1982 with all amendments	each	150

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
34	O180A	Providing and laying at site of work MS casing caps as per IS 1239 (part-II) 1982 with all latest amendments if any for any dia. The thickness of plate used for covering one end shall be 3mm (minimum). The dimensions of caps and colars shall be strictly as per IS 1239 (Part-II) 1982 with all amendments including cost of material and labour charges for fixing, if any etc. complete with all lead and lifts and as directed by the Engineer in charge	each	164

CHAPTER - 15
SUBMERSIBLE PUMPSETS AND REPLACEMENT OF PARTS

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
1	P010	Rewinding of submergible pumpset with copper winding wires of appropriate guage, as per specifications and / or directions of the departmental officials, including all materials, labour, equipment and testing. for all types of submergible pumpsets etc.(with guarantee period not less than 6 months) for		
1.1	P010A	For all types of submergible pumpsets upto 3.0 H.P.	each	2710
1.2	P010B	For all types of submergible pumpsets above 3 HP and upto 5.0 H.P.	each	2934
1.3	P010C	For all types of submergible pumpsets above 5.0 HP and upto 5.5H.P.	each	3116
1.4	P010D	For all types of submergible pumpsets above 5.5 HP and upto 6.0H.P.	each	3296
1.5	P010E	For all types of submergible pumpsets above 6.0 HP and upto 6.5H.P.	each	3479
1.6	P010F	For all types of submergible pumpsets above 6.5 HP and upto 7.0H.P.	each	3659
1.7	P010G	For all types of submergible pumpsets above 7.0 HP and upto 7.5H.P.	each	3839
1.8	P010H	For all types of submergible pumpsets above 7.5 HP and upto 8.0H.P.	each	4019
1.9	P010I	For all types of submergible pumpsets above 8.0 HP and upto 8.5H.P.	each	4201
1.10	P010J	For all types of submergible pumpsets above 8.5 HP and upto 9.0H.P.	each	4382
1.11	P010K	For all types of submergible pumpsets above 9.0 HP and upto 9.5H.P.	each	4562
1.12	P010L	For all types of submergible pumpsets above 9.5 HP and upto 10.0H.P.	each	4744
1.13	P010M	For all types of submergible pumpsets above 10 HP and upto 11 H.P.	each	5157
1.14	P010N	For all types of submergible pumpsets above 11 HP and upto 12 H.P.	each	5570
1.15	P010O	For all types of submergible pumpsets above 12 HP and upto 13 H.P.	each	5983
1.16	P010P	For all types of submergible pumpsets above 13 HP and upto 14 H.P.	each	6397
1.17	P010Q	For all types of submergible pumpsets above 14 HP and upto 15 H.P.	each	6811
1.18	P010R	For all types of submergible pumpsets 15HP to 20 HP	each	8930
2	P020	Replace the components of submergible pump sets, requiring replacements decided by the departmental officials, with respective make of damaged ones, including all materials, labour, equipments and testing etc.(with gurantee of period not less than 1 year) for:		
2.1	P020A	The bowls of same type and make	each	654
2.2	P020B	The Intermediate piece (IP) with IP leaded bronze brush.	each	738
2.3	P020C	The Oil Seal.	each	169
2.4	P020D	The Oil Seal.and steel bush	each	169
2.5	P020E	The Guide Vane	each	380
2.6	P020F	The Impeller (Shell moulded with aluminium and bronze.)	each	580
2.7	P020G	The discharge outlet (DO) bearing DO steel bush DO bearing.	each	685
2.8	P020H	The steel bearing bush (DO steel bush)	each	211
2.9	P020I	The allen screw	each	685

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
2.10	P020J	The pump shaft made out of stainless steel counterless ground with key way (upto 8 stages). Extra for each stage @ Rs.40/-.	each	1213
2.11	P020K	The pump key (stainless steel)	each	264
2.12	P020L	The pump coupling (stainless steel)	each	1213
2.13	P020M	The Non Return Valve (NRV) assembly complete with rubber 'O' ring.	each	580
2.14	P020N	The cable guard	each	865
2.15	P020O	The strainer	each	316
2.16	P020P	The brass filter	each	474
2.17	P020Q	The Labour Charges for overhauling of the pump set.	each	654
3	P030	Replace the components of motor parts of submergible pump sets, items requiring replacements decided by the departmental officials, with respective make of damaged ones, including all materials, labour, equipments and testing etc and wtih guarantee / warranty for one year for:		
3.1	P030A	The STATOR of motor 3 to 4 H.P	each	5272
3.2	P030B	The STATOR of motor 4 to 5 H.P	each	5588
3.3	P030C	The ROTOR of motor upto 3.0 H.P	each	6063
3.4	P030D	The ROTOR of motor 3 to 4 H.P	each	4217
3.5	P030E	The ROTOR motor 4 to 5 H.P	each	4376
3.6	P030F	The ROTOR motor 4 to 5 H.P	each	4850
3.7	P030G	The upper flange	each	369
3.8	P030H	The lower flange	each	422
3.9	P030I	upper/ lower housing	each	633
3.10	P030J	The Lock Ring	each	127
3.11	P030K	The Carbon Housing	each	791
3.12	P030L	The Carbon Housing (Thrust bearing block assembly complete with segment bearing pad.	each	949
3.13	P030M	The Carbon Housing (Top carbond / ferrodo padding)	each	981
3.14	P030N	The Stud and Nuts	each	95
3.15	P030O	The Gun Metal bearing, centrifugally cast Aluminium Bronze bearing brush	each	474
3.16	P030P	The Circlips	each	63
3.17	P030Q	The Motor base with pin	each	485
3.18	P030R	The Transportation of pumping machineries	each	843
3.19	P030S	The Re-errection charges of pumping machineries including overhauling and painting	each	1423
3.20	P030T	The lifting of submergible pumpset from well.	each	1054
3.21	P030U	The Labour charges only for overhauling	each	1792

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
3.22	P030V	Supplying of Thermosetting Plastic i.e., Fibere Glass reinforced polyster sheet moulding compound(SMC) pump house with SMC door & canopy etc..., component as directed by the departmental offers	each	13050
4	P040	Providing, supplying to work site,Single Phase Submersible Pump Sets of 100mm dia (4 inch) suitable for bore well confirming to IS 8034-2000 specifications,with testing of as per instructions of engineer incharge of work and latest amendments.		
4.1	P040A	0.50 HP/0.37kW - 5 STG(stage)	each	10250
4.2	P040B	0.50 HP/0.37kW - 7 STG(stage)	each	10613
5	P050	For 0.75 HP/0.55KW		
5.1	P050A	5 STG	each	12398
5.2	P050B	6 STG	each	12650
5.3	P050C	7 STG	each	13087
5.4	P050B	10 STG	each	13350
5.5	P050E	13 STG	each	13692
6	P060	1.00 HP/0.75KW		
6.1	P060A	7 STG	each	13475
6.2	P060B	10 STG	each	13890
6.3	P060C	12 STG	each	14650
6.4	P060D	13 STG	each	15050
6.5	P050E	18 STG	each	15370
7	P070	1.50 HP/1.1KW		
7.1	P070A	7 STG	each	14350
7.2	P070B	10 STG	each	14810
7.3	P070C	12 STG	each	15645
7.4	P070D	14 STG	each	15987
7.5	P070E	15 STG	each	16541
7.6	P070F	18 STG	each	17350
7.7	P070G	20 STG	each	18050
7.8	P070H	26 STG	each	19456
8	P080	2.00 HP/1.5KW		
8.1	P080A	6 STG	each	17850
8.2	P080B	10 STG	each	18222
8.3	P080C	12 STG	each	18853
8.4	P080D	14 STG	each	19358
8.5	P080E	15 STG	each	19925
8.6	P080F	16 STG	each	20358
8.7	P080G	18 STG	each	20892

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
8.8	P080H	20 STG	each	21748
8.9	P080I	25 STG	each	22350
8.10	P080J	30 STG	each	22982
8.11	P080K	35 STG	each	23450
9	P090	3.00 HP/2.2KW		
9.1	P090A	9 STG	each	21568
9.2	P090B	15 STG	each	22015
9.3	P090C	20 STG	each	22658
9.4	P090D	21 STG	each	23250
9.5	P090E	23 STG	each	23987
9.6	P090F	30 STG	each	24365
9.7	P090G	35 STG	each	24892
9.8	P090H	40 STG	each	25756
9.9	P090I	50 STG	each	27890
10	P100	5.00 HP/3.7KW		
10.1	P100A	25 STG	each	27025
10.2	P100B	30 STG	each	28520
10.3	P100C	35 STG	each	29753
10.4	P100D	50 STG	each	30597
11	P110	Providing,supplying to work site, Submersible Pump Set of 150mm dia suitable for bore well and confirming to IS 8034-2000;3Phase, SS Bowl & Impeller with Low volt Motor as per specifications,as per necessary ammendments and instructions of engineer incharge of work. For 3 HP		
11.1	P110A	3.00 HP - 300 LPM @ 26 m = 2 STG Outlet Dia - 2.50”	each	25865
11.2	P110B	3.00 HP - 155 LPM @ 42 m = 3 STG Outlet Dia - 2.00”	each	27654
11.3	P110C	3.00 HP - 135 LPM @ 56 m = 4 STG Outlet Dia - 2.00”	each	28258
11.4	P110D	3.00 HP - 120 LPM @ 55 m = 5 STG Outlet Dia - 2.00”	each	29953
11.5	P110E	3.00 HP - 90 LPM @ 66 m = 6 STG Outlet Dia - 2.00”	each	31451
12	P120	For 4.00 HP		
12.1	P120A	4.00 HP - 360 LPM @ 30 m = 2 STG Outlet Dia - 3.00”	each	27159
12.2	P120B	4.00 HP - 245 LPM @ 42 m = 3 STG Outlet Dia - 2.50”	each	29560
12.3	P120C	4.00 HP - 155 LPM @ 56 m = 4 STG Outlet Dia - 2.00”	each	30789
12.4	P120D	4.00 HP - 135 LPM @ 70 m = 5 STG Outlet Dia - 2.00”	each	32619
12.5	P120E	4.00 HP - 120 LPM @ 77 m = 7 STG Outlet Dia - 2.00”	each	34015
12.6	P120F	4.00 HP - 90 LPM @ 88 m = 8 STG Outlet Dia - 2.00”	each	34999
13	P130	For 5.00 HP		
13.1	P130A	5.00 HP - 300 LPM @ 39 m = 3 STG Outlet Dia - 2.50”	each	26874

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
13.2	P130B	5.00 HP - 245 LPM @ 56 m = 4 STG Outlet Dia - 2.50”	each	34780
13.3	P130C	5.00 HP - 155 LPM @ 70 m = 5 STG Outlet Dia - 2.00”	each	31225
13.4	P130D	5.00 HP - 135 LPM @ 84 m = 6 STG Outlet Dia - 2.00”	each	33658
13.5	P130E	5.00 HP - 120 LPM @ 88 m = 8 STG Outlet Dia - 2.00”	each	34780
13.6	P130F	5.00 HP - 90 LPM @ 110 m = 10 STG Outlet Dia - 2.00”	each	35950
14	P140	For 6.50 HP		
14.1	P140A	6.50 HP - 360 LPM @ 45 m = 3 STG Outlet Dia - 3.00”	each	27890
14.2	P140B	6.50 HP - 300 LPM @ 52 m = 4 STG Outlet Dia - 2.50”	each	29150
14.3	P140C	6.50 HP - 245 LPM @ 70 m = 5 STG Outlet Dia - 2.50”	each	30870
14.4	P140D	6.50 HP - 155 LPM @ 84 m = 6 STG Outlet Dia - 2.00”	each	32753
14.5	P140E	6.50 HP - 135 LPM @ 110 m = 8 STG Outlet Dia - 2.00”	each	34501
14.6	P140F	6.50 HP - 120 LPM @ 112 m = 10 STG Outlet Dia - 2.00”	each	36590
14.7	P140G	6.50 HP - 90 LPM @ 132 m = 12 STG Outlet Dia - 2.00”	each	39789
15	P150	For 7.50 HP		
15.1	P150A	7.50 HP - 360 LPM @ 60 m = 4 STG Outlet Dia - 3.00”	each	31648
15.2	P150B	7.50 HP - 300 LPM @ 65 m = 5 STG Outlet Dia - 2.50”	each	33150
15.3	P150C	7.50 HP - 245 LPM @ 84 m = 6 STG Outlet Dia - 2.50”	each	35220
15.4	P150D	7.50 HP - 155 LPM @ 112 m = 8 STG Outlet Dia - 2.00”	each	36987
15.5	P150E	7.50 HP - 135 LPM @ 140 m = 10 STG Outlet Dia - 2.00”	each	39025
15.6	P150F	7.50 HP - 120 LPM @ 132 m = 12 STG Outlet Dia - 2.00”	each	41986
15.7	P150G	7.50 HP - 90 LPM @ 165 m = 15 STG Outlet Dia - 2.00”	each	44012
16	P160	For 10.00 HP		
16.1	P160A	10.00 HP - 360 LPM @ 75 m = 5 STG Outlet Dia - 3.00”	each	41025
16.2	P160B	10.00 HP - 300 LPM @ 91 m = 7 STG Outlet Dia - 2.50”	each	43582
16.3	P160C	10.00 HP - 245 LPM @ 112 m = 8 STG Outlet Dia - 2.50”	each	45913
16.4	P160D	10.00 HP - 155 LPM @ 140 m = 10 STG Outlet Dia - 2.00”	each	48258
16.5	P160E	10.00 HP - 135 LPM @ 168 m = 12 STG Outlet Dia - 2.00”	each	50223
16.6	P160F	10.00 HP - 120 LPM @ 176 m = 16 STG Outlet Dia - 2.00”	each	52780
16.7	P160G	10.00 HP - 90 LPM @ 220 m = 20 STG Outlet Dia - 2.00”	each	55860
17	P170	For 12.50 HP		
17.1	P170A	12.50 HP - 360 LPM @ 90 m = 6 STG Outlet Dia - 3.00”	each	45690
17.2	P170B	12.50 HP - 300 LPM @ 104 m = 8 STG Outlet Dia - 2.50”	each	48950
17.3	P170C	12.50 HP - 245 LPM @ 140 m = 10 STG Outlet Dia - 2.50”	each	52020
17.4	P170D	12.50 HP - 155 LPM @ 168 m = 12 STG Outlet Dia - 2.00”	each	55654
17.5	P170E	12.50 HP - 135 LPM @ 210 m = 15 STG Outlet Dia - 2.00”	each	58850
17.6	P170F	12.50 HP - 120 LPM @ 220 m = 20 STG Outlet Dia - 2.00”	each	62350

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
17.7	P170G	12.50 HP - 90 LPM @ 264 m = 24 STG Outlet Dia - 2.00”	each	65123
18	P180	For 15.00 HP		
18.1	P180A	15.00 HP - 360 LPM @ 120 m = 8 STG Outlet Dia - 3.00”	each	50369
18.2	P180B	15.00 HP - 300 LPM @ 130 m = 10 STG Outlet Dia - 2.50”	each	53369
18.3	P180C	15.00 HP - 245 LPM @ 168 m = 12 STG Outlet Dia - 2.50”	each	57159
18.4	P180D	15.00 HP - 155 LPM @ 210 m = 15 STG Outlet Dia - 2.00”	each	60258
18.5	P180E	15.00 HP - 135 LPM @ 253 m = 19 STG Outlet Dia - 2.00”	each	64896
18.6	P180F	15.00 HP - 120 LPM @ 266 m = 23 STG Outlet Dia - 2.00”	each	69258
19	P190	For 17.50 HP		
19.1	P190A	17.50 HP - 360 LPM @ 135 m = 9 STG Outlet Dia - 3.00”	each	57456
19.2	P190B	17.50 HP - 300 LPM @ 156 m = 12 STG Outlet Dia - 2.50”	each	62590
19.3	P190C	17.50 HP - 245 LPM @ 196 m = 14 STG Outlet Dia - 2.50”	each	65450
19.4	P190D	17.50 HP - 155 LPM @ 252 m = 18 STG Outlet Dia - 2.00”	each	68413
19.5	P190E	17.50 HP - 135 LPM @ 286 m = 22 STG Outlet Dia - 2.00”	each	73250
19.6	P190F	17.50 HP - 120 LPM @ 308 m = 26 STG Outlet Dia - 2.00”	each	78963
20	P200	For 20.00 HP		
20.1	P200A	20.00 HP - 360 LPM @ 150 m = 10 STG Outlet Dia - 3.00”	each	62580
20.2	P200B	20.00 HP - 300 LPM @ 169 m = 13 STG Outlet Dia - 2.50”	each	65800
20.3	P200C	20.00 HP - 245 LPM @ 224 m = 16 STG Outlet Dia - 2.50”	each	70154
20.4	P200D	20.00 HP - 155 LPM @ 280 m = 20 STG Outlet Dia - 2.00”	each	74520
20.5	P200E	20.00 HP - 135 LPM @ 350 m = 25 STG Outlet Dia - 2.00”	each	79894
21	P220	For 25.00 HP		
21.1	P220A	25.00 HP - 360 LPM @ 195 m = 13 STG Outlet Dia - 3.00”	each	75158
21.2	P220B	25.00 HP - 300 LPM @ 221 m = 17 STG Outlet Dia - 2.50”	each	80456
21.3	P220C	25.00 HP - 245 LPM @ 280 m = 20 STG Outlet Dia - 2.50”	each	89753
21.4	P220D	25.00 HP - 155 LPM @ 280 m = 20 STG Outlet Dia - 2.00”	each	95850
21.5	P220E	25.00 HP - 135 LPM @ 420 m = 30 STG Outlet Dia - 2.00”	each	98489
22	P230	Supply and delivery at site Brand new best make PVC insulated cable of Flat 3 core (sheathed) of nominal cross sectional area as per IS 694-1990 with ISI Mark and as per its latest amendments.		
22.1	P230A	1x3x1.5 m^2	m	75
22.2	P230B	1x3x2.5 m^2	m	98
22.3	P230C	1x3x4 m^2	m	165
22.4	P230D	1x3x6 m^2	m	210
22.5	P230E	1x3x10 m^2	m	290
26	P240	Supply and delivery at site of brand new best make pressure gauge bourdon type as per IS 778/1984 with ISI Mark and as per its latest amendments.		

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
26.1	P240A	Size 63 mm	each	450
26.2	P240B	Size 80 mm	each	575
26.3	P240C	Size 100 mm	each	650
27	P250	Supply and delivery at site of brand new best make gate valve as per IS 778/1984 with ISI Mark and as per its latest amendments		
27.1	P250A	Size 50 mm	each	1250
27.2	P250B	Size 65 mm	each	1550
27.3	P250C	Size 80 mm	each	1750
28	P260	Supply and delivery at site of brand new best make non-return valve as per IS 778/1984 with ISI Mark and as per its latest amendments		
28.1	P260A	Size 50 mm	each	1275
28.2	P260B	Size 65 mm	each	1490
28.3	P260C	Size 80 mm	each	1740
29	P270	Supply, installing,testing and commissioning COMMON control panel consisting of the following INCOMING:1 No set of Phase indicating lamps with SFU of suitable rating 1 No, Analog Ammeter, 1 No Analog Voltmeter 1ni with Phase selector switch, Isolating switch OUTGOING for Main Electrical Pump: 1 No. MCB 1 No. DOL of S/D Starter suitable for respective HP 1 No. Electrcal Protection Like single Phase preventor, under voltage over Volage, under current over current & dry run protection suitable for the pump described above 1 no Indoor typ e NOTE: 1) DOL- Direct Online Starter 2) S-D- Star Delta Starter		
29.1	P270A	Upto 6 HP pumps	each	9500
29.2	P270B	6 to 15 HP pumps	each	14250
30	P280	for outdoor		
30.1	P280A	Upto 6 HP pumps	each	12500
30.2	P280B	6 to 15 HP pumps	each	16500
31	P290A	Supply and delivery at site best indigenous brand new power capacitor as per IS 2834/1986 with latest amendments with KPTCL authorities and erection, electrification and commissioning of the same at the location of respective pump sets.	kvar	550
32	P300A	Supply and delivery at site delivery of best indigenous brand new MCB (Miniature Circuit Breakers) of required capacity as per IS 88228/1978 and its latest amendments and with ISI Mark of 6/10/16/20/25/40 Amps with scalable box.	per 3 poles	1250
33	P310	Supply and delivery of galvanized mild steel tubes of 6mtr standard length heavy duty (C Class) as per IS 1239 (Part-I) 1990 with latest amendments with ISI Mark (one end fitted with Heavy Duty collar and other end fitted with protective cover)		
33.1	P310A	50 mm	each	3050

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
33.2	P310B	65 mm	each	3575
33.4	P310C	80 mm	each	4158
34	P320A	Supply and delivery at site 50mm(2") dia heavy duty unplasticized PVC Column pipes with heavy duty collars,rubber profile ring,vibration control profile ring,freezing and turbulence free leak proof EPDM ring with ISI mark with its latest amendments	m	575
35	P330A	Supply and delivery at site 50mm(2") dia heavy duty CI adopter set complete suitable for uPVC Column pipes for Submersible pumpsets	set	1650
36	P340A	Supply and delivery at site Accessories for Single Phase pumpset like SS Groove Nipples,SS Studs & Nuts,Screw Clips &water proof Insulation Tape etc complete with ISI mark	set	4500
37	P350A	Supply and delivery at site Stringing of heavy duty Naylone/PP rope with ISI etc complete suitable for Single phase Pumpsets.	job	40
38	P360A	Labour charges for Erection, Electrification and commissioning of Pump sets, including aligning and balancing of all items including supply and erection of two pair of supporting clamps, bore well caps, cable clips and water tight gland cable protectors, bolts, nuts, valve and gauges,tools and equipments etc., involved in the job as per specifications, with necessary tests as per specifications, with testing of as per instructions of engineer incharge of work.	job	6150
39	P370A	Labour charges for erection of indoor type panel board and meter board units with all necessary materials and labour tools and equipments including cement concrete for foundation/bed etc,complete as per specification, with testing of as per instructions of engineer incharge of work.	job	1250
40	P380A	Labour charges for erection of outdoor type panel board and meter board units with all necessary materials and labour, tools and equipments including providing cement concrete foundation bed etc., complete as per specification, with testing of as per instructions of engineer incharge of work.	job	1350
41	P390	Labour charges for providing connection using insulated sheathed steel wire cable as per IS 1554/ 1988 with latest amendments from KPTCL pole to meter board unit, with all necessary materials ,tools and equipments,as per specificationswith testing of as per instructions of engineer incharge of work. .		
41.1	P390A	3½ x 6 sqmm	m	150
41.2	P390B	3½ x 10 sqmm	m	195
41.3	P390C	3 x 10 sqmm (suitable for over head mains)	m	165
41.4	P390D	3½ x 16 sqmm	m	285
42	P400A	Providing main connection from pole PVC insulated sheathed steel wire cable in new trench as per IS 1554/ 1988 with latest amendments with ISI mark from KPTCL pole to meter board unit.	m	135

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
43	P410A	Providing main connection from pole PVC insulated sheathed steel wire cable in GI pipe as per IS 1554/ 1988 with latest amendments with ISI mark from KPTCL pole to meter board unit.	m	80
44	P420	Providing,Supplying and fixing suitable for 1.1 KV class UG cable filled with necessary bitumen/insulating compound complete with terminals, clamps,bolts,nuts and washers etc. with necessary materials and labour tools and equipments as per instructions of engineer incharge of work.		
44.1	P420A	3½x6 Sqm	each	515
44.2	P420B	3½x10 Sqm	each	650
44.3	P420C	3½x25 Sqm	each	745
45	P430A	Earthing: Supplying and fixing and wiring earth electrode for grounding circuits IC cutouts and other equipments on the meter board in the pit. The pits should be filled up with equal proportion of salt and charcoal 150mm around the pipe to complete depth. The connection from the pipe to the conduits etc. is to established through GI wire of sizes as per clause 7.3.3 of IS 732 using 12mm bolts, nuts, washers and check nuts, the pipe shall have 16 through holes of 12mm dia.	job	3750
46	P440	Supply and delivery of Centrifugal pumpset at site brand new best make and with discharge duty confirming to ISI standards and its latest amendments.		
46.1	P440A	2 HP, Size 65x50 Head 13M, Discharge 462 LPM	each	15425
46.2	P440B	2 HP, Size 50x40 Head 22M, Discharge 186 LPM	each	17470
46.3	P440C	3 HP, size 50x40 Head 30M, Discharge 198 LPM	each	19258
46.4	P440D	5 HP, size 80x65 Head 23.50M, Discharge 600 LPM	each	22500
46.5	P440E	5 HP, size 50x40 Head 46M, Discharge 174 LPM	each	25825
46.6	P440F	7.5 HP, size 100x100 Head 195M, Discharge 1200 LPM	each	28780
46.7	P440G	7.5 HP, size 80x65 Head 195M, Discharge 1200 LPM	each	31250
46.8	P440H	7.5 HP, size 65x50 Head 46M, Discharge 360 LPM	each	34780
46.9	P440I	10 HP, size 80x65 Head 34.50M, Discharge 840 LPM	each	38780
46.10	P440J	12.5 HP, size 100x100 Head 25M, Discharge 1560 LPM	each	49467
46.11	P440K	12.5 HP, size 80x65 Head 40M, Discharge 780 LPM.	each	57890
46.12	P440L	15 HP, size 80x65 Head 44M, Discharge 900 LPM	each	57890
46.13	P440M	20 HP, size 100x80 and 42M, Discharge 1320 LPM	each	68981
47	P450	Supply and delivery at site brand new best make pressure guage suitable for centrifugal pump confirming to latest IS standards.		
47.1	P450A	pressure guage 80MM	each	575
47.2	P450B	pressure guage 100MM	each	650
48	P460A	Supply and delivery at site brand new best make level guage suitable for centrifugal pump confirming to latest IS standards.	each	650

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
49	P470	Supply and delivery at site brand new best make starter/ control panel suitable for following HP centrifugal pump confirming with ISI mark and its latest amendments.		
49.1	P470A	Upto 7.5 HP centrifugal pump	each	9500
49.2	P470B	7.5 to 10 HP centrifugal pump	each	15550
49.3	P470C	10 to 120 HP centrifugal pump	each	35480
50	P480A	Supply, delivery, erection and commissioning at site lighting distribution board suitable for monoblock centrifugal pump confirming with ISI mark and its latest amendments.	each	4500
51	P490A	Supply, delivery, erection and commissioning at site ELCB suitable for monoblock centrifugal pump confirming with ISI mark and its latest amendments.	each	4250
52	P500A	Supplying and fixing LT cable of size 4 x 25 Sqm suitable for centrifugal pump sets with ISI mark and its latest amendments.	m	650
53	P510A	Supply and delivery at site brand new best make Foot valve suitable for centrifugal pump upto 10HP confirming with ISI mark and its latest amendments.	each	950
54	P520A	Supply and delivery at site brand new best make Foot valve suitable for centrifugal pump above 12.50HP confirming with ISI mark and its latest amendments.	each	1550
55	P530	Rewinding of monoblock motor with copper insulaton wire suitable gauge as per ISI specification with all necessary materials and labour,tools and equipments with guarantee period of not less than 12 months		
55.1	P530A	7.5 HP monobloc motor rewinding	job	5600
55.2	P530B	10 HP monobloc motor rewinding	job	8000
55.3	P530C	12.5 HP monobloc motor rewinding	job	10000
55.4	P530D	15 HP monobloc motor rewinding	job	10000
55.5	P530E	20 HP monobloc motor rewinding	job	14000
55.6	P530F	30 HP monobloc motor rewinding	job	23500
55.7	P530G	40 HP monobloc motor rewinding	job	27500
55.8	P530H	50 HP monobloc motor rewinding	job	47000
55.9	P530I	60 HP monobloc motor rewinding	job	51500
55.1	P530J	80 HP monobloc motor rewinding	job	60000
55.11	P530K	100HP monobloc motor rewinding	job	70000
55.12	P530L	120 HP monobloc motor rewinding	job	75000
55.13	P530M	150 HP monobloc motor rewinding	job	80000
55.14	P530N	180 HP monobloc motor rewinding	job	112000
55.15	P530O	200 HP monobloc motor rewinding	job	135000
56	P540	Supplying Ball bearing as per ISI specifiction with guarantee period of not less than 12 months		

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
56.1	P540A	Bearing cost for 7.5 HP	each	1450
56.2	P540B	Bearing cost for 10HP	each	1750
56.3	P540C	Bearing cost for 12.5 HP	each	1950
56.4	P540D	Bearing cost for 15 HP	each	2250
56.5	P540E	Bearing cost for 20 HP	each	2850
56.6	P540F	Bearing cost for 30HP	each	3850
56.7	P540G	Bearing cost for 40 HP	each	4250
56.8	P540H	Bearing cost for 50 HP	each	5650
56.9	P540I	Bearing cost for 60 HP	each	6850
56.10	P540J	Bearing cost for 80 HP	each	7250
56.11	P540K	Bearing cost for 100 HP	each	8850
56.12	P540L	Bearing cost for 120 HP	each	9050
56.13	P540M	Bearing cost for 150 HP	each	11850
56.14	P540N	Bearing cost for 180 HP	each	12050
56.15	P540L	Bearing cost for 200 HP	each	14550
57	P550	Supplying thrust bearing as per ISI specifiction with guarantee period of not less than 12 months		
57.1	P550A	Bearing cost for 30 HP	each	18510
57.2	P550B	Bearing cost for 40HP	each	21010
57.3	P550C	Bearing cost for 50 HP	each	22510
57.4	P550D	Bearing cost for 60 HP	each	24510
57.5	P550E	Bearing cost for 80 HP	each	26510
57.6	P550F	Bearing cost for 100 HP	each	26510
57.7	P550G	Bearing cost for 120 HP	each	28510
57.8	P550H	Bearing cost for 150 HP	each	32510
57.9	P550I	Bearing cost for 180 HP	each	34510
57.10	P550J	Bearing cost for 200 HP	each	36510
58	P560	Supplying terminal plate as per ISI specifiction with guarantee period of not less than 12 months		
58.1	P560A	terminal plate 7.5 to 12.5	each	260
58.2	P560B	terminal plate 15 to 30	each	660
58.3	P560C	terminal plate 40 to 60	each	960
58.4	P560D	terminal plate 80 to 120	each	1460
58.5	P560E	terminal plate 150 to 200	each	2610
59	P570	Repairs to Vertical turbine pumps as per ISI specifiction with guarantee period of not less than 12 months V- T Pump		
59.1	P570A	Phosphorous bronze bearing bush for 30 HP to 40 HP	each	7000

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
59.2	P570B	Phosphorous bronze bearing bush for 50 HP to 60 HP	each	9400
59.3	P570C	Phosphorous bronze bearing bush for 80 HP to 100 HP	each	10900
59.4	P570D	Phosphorous bronze bearing bush for 100 HP to 150 HP	each	14700
59.5	P570E	Phosphorous bronze bearing bush for 180 HP to 200 HP	each	16900
60	P580	Repairs to Vertical turbine pumps as per ISI specifiction with guarantee period of not less than 12 months V-T PUMP STAGE BUSHES		
60.1	P580A	Phosphorous bronze stage bushes for 30 to 40 HP	each	5800
60.2	P580B	Phosphorous bronze stage bushes for 50 to 60 HP	each	8400
60.3	P580C	Phosphorous bronze stage bushes for 80 to 100 HP	each	9600
60.4	P580D	Phosphorous bronze stage bushes for 100 to 150 HP	each	11200
60.5	P580E	Phosphorous bronze stage bushes for 180 to 200 HP	each	14200
61	P590	Repairs to Vertical turbine pumps as per ISI specifiction with guarantee period of not less than 12 months V-T PUMP IMPELLER AND NECK RING		
61.1	P590A	IMPELLER AND NECK RING for 30 HP to 40 HP	each	5200
61.2	P590B	IMPELLER AND NECK RING for 50 HP to 60 HP	each	6800
61.3	P590C	IMPELLER AND NECK RING for 80 HP to 100 HP	each	9000
61.4	P590D	IMPELLER AND NECK RING for 100 HP to 150 HP	each	11200
61.5	P590E	IMPELLER AND NECK RING for 180 HP to 200 HP	each	14200
62	P600	Repairs to Vertical turbine pumps as per ISI specifiction with guarantee period of not less than 12 months HORIZANTAL PUMP		
62.1	P600A	Phosphorous bronze bushes for 7.5 to 15 HP monoblock motor	each	600
62.2	P600B	Phosphorous bronze bushes for 20 HP monoblock motor	each	1400
62.3	P600C	Phosphorous bronze bushes for 40HP to 80HP monoblock motor	each	4200
62.4	P600D	Phosphorous bronze bushes for 100HP to 120HP monoblock motor	each	8400
62.5	P600E	Phosphorous bronze bushes for 150HP to 200 HP monoblock motor	each	12200
63	P610	BEARING FOR HORIZONTAL PUMP		
63.1	P610A	For 20 HP pump bearing	each	1850
63.2	P610B	For 30 HP Pump bearing	each	2480
63.4	P610C	For 40 to 80 HP pump bearing	each	3800
63.5	P610D	For 60 to 80 HP pump bearing	each	6400
63.6	P610E	For 100 to 150HP pump bearing	each	12800
63.7	P610F	For 180 to 200 HP pump bearing	each	18500
64	P620	ALL TYPES OF JACK WELL V-T PUMP DETAILS as per ISI specifiction with guarantee period of not less than 12 months -For Pump dismentaling and refitting after attending repairs.		
64.1	P620A	Up to 60 HP	each	22000
64.2	P620B	60 HP to 120 HP	each	25000

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
64.3	P620C	120 HP to 200 HP	each	30000
64.4	P620D	200 HP to 250 HP	each	35000
65	P630	For Top body bush fitting		
65.1	P630A	Up to 60 HP	each	1175
65.2	P630B	60 HP to 120 HP	each	1475
65.3	P630C	120 HP to 200 HP	each	1575
65.6	P630D	200 HP to 250 HP	each	1675
66	P640	For Bottom body bush fitting		
66.1	P640A	Up to 60 HP	each	1275
66.2	P640B	60 HP to 120 HP	each	1475
66.3	P640C	120 HP to 200 HP	each	1575
66.4	P640D	200 HP to 250 HP	each	1675
67	P650	For Pumps stage body bush fitting each		
67.1	P650A	Up to 60 HP	each	775
67.2	P650B	60 HP to 120 HP	each	925
67.3	P650C	120 HP to 200 HP	each	1025
67.4	P650D	200 HP to 250 HP	each	1125
68	P660	For Pump body necking fitting each		
68.1	P660A	Up to 60 HP	each	1075
68.2	P660B	60 HP to 120 HP	each	1275
68.3	P660C	120 HP to 200 HP	each	1425
68.4	P660D	200 HP to 250 HP	each	1525
69	P670	For Impeller breezing making	each	
69.1	P670A	Up to 60 HP	each	975
69.2	P670B	60 HP to 120 HP	each	1075
69.3	P670C	120 HP to 200 HP	each	1125
69.4	P670D	200 HP to 250 HP	each	1175
70	P680	For Pump shaft press throwble		
70.1	P680A	Up to 60 HP	each	475
70.2	P680B	60 HP to 120 HP	each	525
70.3	P680C	120 HP to 200 HP	each	575
70.4	P680D	200 HP to 250 HP	each	675
71	P690	For Pump open & fitting at work shop		
71.1	P690A	Up to 60 HP	each	4275
71.2	P690B	60 HP to 120 HP	each	4375
71.3	P690C	120 HP to 200 HP	each	4475

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
71.4	P690D	200 HP to 250 HP	each	4575
72	P700	For Connecting bush G.M new making each		
72.1	P700A	Up to 60 HP	each	1575
72.2	P700B	60 HP to 120 HP	each	1775
72.3	P700C	120 HP to 200 HP	each	2075
72.4	P700D	200 HP to 250 HP	each	2375
73	P710	For Line shaft seat welding making each		
73.1	P710A	Up to 60 HP	each	375
73.2	P710B	60 HP to 120 HP	each	425
73.4	P710C	120 HP to 200 HP	each	475
73.5	P710D	200 HP to 250 HP	each	575
74	P720	For Oil inside new Fitting & threading each		
74.1	P720A	Up to 60 HP	each	1175
74.2	P720B	60 HP to 120 HP	each	1375
74.5	P720C	120 HP to 200 HP	each	1575
74.6	P720D	200 HP to 250 HP	each	1775
75	P730	For Balancing spaider rubber guide each		
75.1	P730A	Up to 60 HP	each	1175
75.2	P730B	60 HP to 120 HP	each	1275
75.3	P730C	120 HP to 200 HP	each	1375
75.4	P730D	200 HP to 250 HP	each	1475
76	P740	For New T.T nipple making		
76.1	P740A	Up to 60 HP	each	2775
76.2	P740B	60 HP to 120 HP	each	3175
76.3	P740C	120 HP to 200 HP	each	3375
76.4	P740D	200 HP to 250 HP	each	3575
77	P750	For Pump gear box body radial bearing		
77.1	P750A	Up to 60 HP	each	11575
77.2	P750B	60 HP to 120 HP	each	14575
77.3	P750C	120 HP to 200 HP	each	16075
77.4	P750D	200 HP to 250 HP	each	18075
78	P760	For Gear box ball bearing		
78.1	P760A	Up to 60 HP	each	1375
78.2	P760B	60 HP to 120 HP	each	1475
78.3	P760C	120 HP to 200 HP	each	1725
78.4	P760D	200 HP to 250 HP	each	1975

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
79	P770	For Pumping and clean pipe painting		
79.1	P770A	Up to 60 HP	each	1575
79.2	P770B	60 HP to 120 HP	each	1775
79.3	P770C	120 HP to 200 HP	each	1975
79.4	P770D	200 HP to 250 HP	each	2075
80	P780	For Transportation charges both side		
81.1	P780A	Up to 60 HP	each	3175
80.2	P780B	60 HP to 120 HP	each	3775
80.3	P780C	120 HP to 200 HP	each	4275
80.4	P780D	200 HP to 250 HP	each	4575
81	P790	Water Treatment Plants HORIZANTAL PUMP ALL TYPES-For Pump open & refitting after repairs		
81.1	P790A	Up to 25HP	each	4500
81.2	P790B	25 HP to 100 HP	each	4800
81.3	P790C	100 HP to 150 HP	each	5300
81.4	P790D	150 HP to 250 HP	each	5700
82	P800	For Side gland bush		
82.1	P800A	Up to 25HP	each	1300
82.2	P800B	25 HP to 100 HP	each	1500
82.3	P800C	100 HP to 150 HP	each	1700
82.4	P800D	150 HP to 250 HP	each	1800
83	P810	For Impeller breezing and making		
83.1	P810A	Up to 25HP	each	1000
83.2	P810B	25 HP to 100 HP	each	1350
83.4	P810C	100 HP to 150 HP	each	1450
83.5	P810D	150 HP to 250 HP	each	1650
84	P820	For Shaft steel welding and making bearing sheet each		
84.1	P800A	Up to 25HP	each	1000
84.2	P800B	25 HP to 100 HP	each	1350
84.3	P800C	100 HP to 150 HP	each	1450
84.4	P800D	150 HP to 250 HP	each	1650
85	P830	For Shaft threading making each		
85.1	P830A	Up to 25HP	each	1115
85.2	P830B	25 HP to 100 HP	each	1415
85.3	P830C	100 HP to 150 HP	each	1715
85.4	P830D	150 HP to 250 HP	each	1915
86	P840	For Joint rope of 1kg		

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
86.1	P840A	Up to 25HP	each	565
86.2	P840B	25 HP to 100 HP	each	715
86.3	P840C	100 HP to 150 HP	each	815
86.4	P840D	150 HP to 250 HP	each	915
87	P850	For Pump shaft bend thrown		
87.1	P850A	Up to 25HP	each	815
87.2	P850B	25 HP to 100 HP	each	1015
87.3	P850C	100 HP to 150 HP	each	1215
87.4	P850D	150 HP to 250 HP	each	1515
88	P860	For Transportation		
88.1	P860A	Up to 25HP	each	2515
88.2	P860B	25 HP to 100 HP	each	2915
88.3	P860C	100 HP to 150 HP	each	3115
88.4	P860D	150 HP to 250 HP	each	3515
89	P870	For Pump shaft getting check nut each	each	
89.1	P870A	Up to 25HP	each	815
89.2	P870B	25 HP to 100 HP	each	915
89.3	P870C	100 HP to 150 HP	each	1015
89.4	P870D	150 HP to 250 HP	each	1115
90	P880	For Both coupling new set		
90.1	P880A	Up to 25HP	each	8015
90.2	P880B	25 HP to 100 HP	each	10015
90.3	P880C	100 HP to 150 HP	each	11015
90.4	P880D	150 HP to 250 HP	each	12515
91	P890	Providing and installing of solar photo voltaic (SPV) water pumping system INDUCTION MOTOR, PUMPSETS AND A SUITABLE INVERTER as per IS specification and instruction of Engineer incharge of work as per IS specification- For 3000 wp/ 3HP submersible with controller		
91.1	P890A	Total head 30 mtrs and shut off dynamic Head 45 mtr and water out put 96000 ltrs/day.	each	267000
91.2	P890B	Total head 50 mtrs and shut off dynamic Head 75 mtr and water out put 57000 ltrs/day.	each	270000
91.3	P890C	Total head 70 mtrs and shut off dynamic Head 100 mtr and water out put 39000 ltrs/day	each	273000
92	P900	For 4800 wp/ 5HP submersible with controller		
92.1	P900A	Total head 50 mtrs and shut off dynamic Head 70 mtr and water out put 91200 ltrs/day.	each	383000

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
92.2	P900B	Total head 70 mtrs and shut off dynamic Head 100 mtr and water out put 62400 ltrs/day.	each	386000
92.3	P900C	Total head 100 mtrs and shut off dynamic Head 150 mtr and water out put 40800 ltrs/day.	each	389000
93	P910	For 6750 wp/ 7.5 HP submersible with controller		
93.1	P910A	Total head 50 mtrs and shut off dynamic Head 70 mtr and water out put 128250 ltrs/day.	each	565000
93.2	P910B	Total head 70 mtrs and shut off dynamic Head 100 mtr and water out put 87750 ltrs/day.	each	568000
93.3	P910C	Total head 100 mtrs and shut off dynamic Head 150 mtr and water out put 57375 ltrs/day.	each	571000
94	P920	For 9000 wp/ 10HP submersible with controller		
94.1	P920A	Total head 50 mtrs and shut off dynamic Head 70 mtr and water out put 171000 ltrs/day.	each	714000
94.2	P920B	Total head 70 mtrs and shut off dynamic Head 100 mtr and water out put 117000 ltrs/day.	each	717000
94.3	P920C	Total head 100 mtrs and shut off dynamic Head 150 mtr and water out put 76500 ltrs/day.	each	720000

Cable Selection chart for 415 volts, 50 Hz, 3 phase motors (considering Ambient Temp. 50deegre & 3% Voltage Drop)

Cable Selection chart for 415 volts, 50 Hz, 3 phase motors (considering Ambient Temp. 50deegre & 3% Voltage Drop)

MOTOR RATING		FULL LOAD CURRENT	CABLE SIZE					
			LENGTH OF CABLE IN METERS					
kw	HP	(AMPS)	1.5	2.5	4	6	10	16
2.2	3	6.3	87	145	230	-	-	-
3.7	5	9.3	63	100	160	238	-	-
4.5	6	11.8	47	78	125	185	300	-
5.5	7.5	14.5	41	68	107	158	262	-
7.5	10	18	-	51	80	120	200	297
9.3	12.5	22.5	-	-	65	97	160	253
11	15	26	-	-	56	84	137	216
12.9	17.5	32.5	-	-	-	-	110	175
15	20	36.5	-	-	-	-	98	155
18.5	25	39	-	-	-	-	93	150
22	30	45	-	-	-	-	81	130
25.7	35	52	-	-	-	-	70	112

Cable Size Selection for 3 dia 150 mm submersibles				
Motor HP	**Start-ing**	**Cable size recommend-ed for up to 45 M cable length**	**Cable size recommend-ed for up to 75 M cable length**	**Cable size recommend-ed for up to 95 M cable length**
35	S/D	2x3x4mm^2	2x3x6mm^2	2x3x10mm^2
30	S/D	2x3x4mm^2	2x3x6mm^2	2x3x10mm^2
25	S/D	2x3x4mm^2	2x3x6mm^2	2x3x10mm^2
20	S/D	2x3x4mm^2	2x3x6mm^2	2x3x10mm^2
17.5	S/D	2x3x2.5mm^2	2x3x4mm^2	2x3x6mm^2
15	S/D	2x3x2.5mm^2	2x3x4mm^2	2x3x6mm^2
12.5	S/D	2x3x2.5mm^2	2x3x4mm^2	2x3x6mm^2
10	S/D	2x3x2.5mm^2	2x3x4mm^2	2x3x6mm^2
7.5	DOL	1x3x2.5mm^2	1x3x4mm^2	1x3x6mm^2
6	DOL	1x3x2.5mm^2	1x3x2.5mm^2	1x3x4mm^2
5	DOL	1x3x1.5xmm^2	1x3x2.5mm^2	1x3x2.5mm^2
4	DOL	1x3x1.5mm^2	1x3x2.5mm^2	1x3x2.5mm^2
3	DOL	2x3x1.5mm^2	1x3x2.5mm^2	1x3x2.5mm^2

CHAPTER - 16
BULK FLOW METERS

1. ELECTROMAGNETIC INDUCTION FLOW METERS:

1. Applications: Raw or potable water with chlorine content.
2. Conductivity : Maximum 500 MS / CM
3. Accuracy: + / - 5% flow reading.
4. Velocity Range : 0.3 m / sec. to 10 m / sec.
5. Power Supply : For the entire diameter pipes (100 mm to 300 mm) 230 Volts AC power supply with surge arrestor, inbuilt re-chargeable battery to provide backup for minimum 6 hours in the absence of grid supply.
6. Galvanic Isolation: All circuits of output and power supply to Galvanizically Isolated.
7. Tube Lighting Materials: PTFE Liner.
8. Electrode Material: SS 316 L.
9. Flow meter housing : Fully welded and corrosive resistant painted carbon / sheet steel (Housing single unit.)
10. Electrodes: 2 Measuring electrodes.
11. Display Unit: 2 or 3 line LCD display 16 characters per line with backlight to see the reading during night time. All diagonostics should be visible on the LCD screen. 1st Line - Flow rate in M3 /hr. 2nd Line - Totalizer in M3. 3rd Line - Electrode deposition / tamper status display.
12. Flange Material: CS flange
13. Type of Flange: ANSI / DIN type flange
14. Sensor Protection: IP 68
15. Transmitter Protection: IP 67.
16. Flow meter ambient Temperature: Upto 60 degree C.
17. Exact full model code and data sheet of the flow meter to be provided for each line size.
18. Data Logger: Internal / external with flow meter and data to be transmitted to server automatically for every 1 hour. Flow meter shall send 24 data message per day to remote server. Locally for every 5 minutes of interval in data logger. Per day 288 readings will be logged, per month 8640. Data of previous one year should be logged in to either internet / external data logger.

2. FLOW SENSORS:

1. Mounting: In field on pipe line (flow through flow sensor.)
2. Line Size: 100 mm to 300 mm.
3. Material Flow Tube: SS 316 / SS 304.
4. Grounding: Grounding / Earthing is required to protect flow meter from spurious signals. Earthing rings shall be provided at both flange ends. This will provide high degree of protection as compared to earthing electrode.
5. Electrodes: SS 316L.
6. Weather Protection for Flow Tube: IP 68.
7. Employ Pipe Detection (EPD): Integral part of design.
8. The sensors should be as per ISO standard lengths (ISO 13359) as applicable, so that interchangeability can be carried out. The sensors shall also have built in grounding and employ pipe detection facility.

3. FLOW TRANSMITTER / COMPUTATION:

1. Mounting: Transmitter panel mounted outside the meter chamber in proper location.
2. Type: Microprocessor based - 4 wire.
3. Protection : IP 67
4. Power Supply : For the entire diameter pipes (100 mm to 300 mm) 230 Volts, AC power supply with surge arrestor. Inbuilt chargeable battery to provide backup for minimum 6 hours backup in the absence of Gridy supply.
5. Out put: 4 - 20 M Amps, digital and pulse outputs, Status Out puts, GPRS (Should support GSM also.) Data logger out put : Through RS 485 / Ethernet.
6. Unit of Display: M3 Cubic Meter) / hour, MLD, ML (Programmable.)
7. Enclosure Material: Aluminium alloy with polyurethane quoting.
8. Flow Meter Standards: Testing and calliratin - IS / ISO 17025. Meter Standard - ISO 4068.
9. Calibration and Testing: All the flow meters to be calibrated at manufacturer work place. Calibration/ Test certificates to be provided as per IS / ISO 17025, periodical calibration facility to be provided if required.

4. PEDESTAL PANEL FOR TRANSMITTER UNIT:

1. The electronic display unit shall be installed on a removable back board. It should be an anti-corrosive material. Enclosure should be designed for IP 54, separate compartments for energy meter & converter and flow meter display unit and modem. Generated heat inside the flow meter should be dissipated and should not cause any harmful effects inside enclosure, wall or post mounting cabinet enclosure. The enclosure shall be constructed from galvanized stell which is at least 3 mm thick. The enclosure shall have a hinged access door, which shall have a facility for padlocking in the closed position. Batteries shall be easily accessible for periodic changing. For floor mounting enclosures, the enclosure shall be mounted on a concrete plinth, the surface of which shall be at least 120 cm. above the surrounding finished ground level. A cable duct shall pass through the plinth to enable the cable from the flow sensor to enter the enclosure. A table showing details of the Employer's name and the water meter's unique reference number shall be fixed to the external face of the access door. Contractors or equipment manufacturer's details shall not be fixed to the external face of the access door.
2. Transparent toughened glass of size 10 cm x 5 cm to be provided to see reading of BESCOM energy meter and flow meter separately. Panel should be provided with lock, master key, fan and filter for cooling / heat dissipation.
3. The enclosure shall be well ventilated, dust proof and vermin proof, and be suitable for robust use in a tropical climate. It shall also be suitable for:

a) the housing of the integral data logger and the temporary housing of a battery powered data logger which could periodically be used in conjunction with the water meter.

b) the permanent housing of any lightning protection system, the permanent housing of GPRS transmitter and battery pack, and any other items necessary to facilitate communication with the central server.

<u>NOTES FOR BULK FLOW METERS:</u>

1. The data rates are valid for only one year period and subject to variations in the market value.
2. The bulk meter totalizer/register shall be started immediately on installation of water meter.
3. Concerned officer shall strictly check testing and calibration certificate to ensure quality.
4. Necessary agreement shall be made by concerned officer for warranty and other conditions.
5. The bulk meter readings shall be synchronized to remote server at Cauvery Bhavan immediately.
6. Civil, mechanical and electrical charges extra to be estimated.

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
1	R010	Supply, Installation, Commissioning and Testing of GPRS + GSM based EMI flow meters on the Bulk water connections ranging from 100 mm to 300mm. The electromagnetic meters should comprise of the specifications given in the notes of this chapter. III) Providing Electromagnetic Induction AMR water meters for 100 mm to 300 mm diameter. Supply, Installation, Commissioning and Testing of GPRS + GSM based EMI flow meters on the Bulk waters connections ranging from 100 mm to 300 mm. The electromagnetic meters should comprise of following specification. Specification: 1. Specification of electromagnetic induction Flow meters Application : Raw or Potable Water with chlorine content Conductivity : Maximum 500 MS/CM Accuracy : +/- 0.5% flow reading. Velocity Range : 0 .3 m / sec to 10 m/ sec Power Supply : For the entire diameter pipes (100 mm to 300 mm) 230 Volts AC power supply with surge arrester. Inbuilt rechargeable battery to provide backup for minimum 6 hrs battery backup in the absence of Grid Supply. Galvanic Isolation : All circuits of output and power supply to Galvanizically Isolated. Tube Lining Material : PTFE liner. Electrode material : SS 316L Flow meter Housing : Fully Welded and corrosive resistant Painted Carbon / Sheet Steel. (Housing Single unit) Electrodes : 2 measuring electrodes/4 measuring electrodes Display Unit : 2 or 3 Line LCD display 16 characters per line with backlight to see the reading during night time. All diagnostics should be visible on the LCD screen 1st line : Flow Rate in M3 / hr 2nd line : Totaliser M3 3rd Line : Electrode deposition / tamper status display Flange material : CS Flange Type of Flange : ANSI/ DIN type Flange Sensor protection : IP 68 Transmitter Protection Flow meter Ambient Temperature : up to 60 º C Exact full model code and datasheet of the flow meter to be provided for each line size. Data Logger: Internal / External with flow meter and data to be transmitted to server automatically for every 1 hour. Flow meter shall send 24 data message per day to remote server. Locally for every 5 minutes of interval in data logger. Per day 288 readings will be logged, per month 8640. Data of previous 1 year should be logged in to either internal / external data logger 2. Specification for Flow Sensors : Mounting : In field on pipeline (flow through flow Sensor). Line Sizes : 100 mm to 300 mm. Material of Flow Tube : SS316 / SS304 Grounding : Grounding / Earthing is required to protect flow meter from spurious signal. Earthing rings shall be provided at both flange ends. This will provide high degree of protection as compared to earthing electrode Electrodes : SS316L Weather Protection for Flow Tube : IP68 Empty Pipe Detection (EPD) : Integral part of design with electrode. The sensors should be as per ISO Standard lengths (ISO 13359) as applicable, so that interchangeability can be carried out. The sensors shall also have built in grounding and empty pipe detection facility 3. Specification for Flow Transmitter/Computation: Mounting : Transmitter panel mounted outside the meter Chamber in proper location. Type : Microprocessor based : 4 wire Protection : IP67 Power supply : For the entire diameter pipes (100 mm to 300 mm) 230 Volts, AC power supply with surge arrester. Inbuilt techargeable battery to provde backup for minimum 6 hrs battery backup in the absence of Grid supply. Output : 4-20 m Amps, digital and pulse		

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
		outputs, Status Outputs, GPRS (Should Support GSM also). Data Logger Output : Through RS 485/ Ethernet. Unit of Display : M3 (Cubic Meter) / hr, MLD, ML (Programmable). Enclosure Material: Aluminum alloy with polyurethane quoting. Flow meter Standards : Testing & Calliratin : IS / ISO 17025 ,ISO 9140 Meter Standard : ISO 4064 Calibration and Testing: All the flow meters to be calibrated at manufacturer work place. Calibration / Test certificates to be provided as per IS / ISO 17025, periodical calibration facility to be provided if required. Specification for Padestal Panel for Transmitter Unit : 1) The electronic display unit shall be installed on a removable backboard. Itshould be an anti corrosive material. Enclosure should be designed for IP54, separate compartment for energy meter & converter and flow meter display unit & modem. Generated heat inside the flow meter should be dissipated and should not cause any harmful effects inside enclosure, wall or post mounting cabinet enclosure. The enclosure shall be constructed from galvanized steel which is at least 3 mm thick. The enclosure shall have a hinged access door, which shall have a facility for padlocking in the closed position. Batteries shall be easily accessible for periodic changing. For floor mounting enclosures, the enclosure shall be mounted on a concrete plinth, the surface of which shall be at least 120 cm above the surrounding finished ground level. A cable duct shall pass through the ;linth to enable the cable from the flow sensor to enter the enclosure. A lable showing details of the Employer's name and the water meter's unique reference number shall be fixed to the external face of theaccess door. Contractors or equipment manufacturer's details shall not be fixed to the external face of the access door. 2) Transparent toughened glassed of size 10 cm x 5 cm to be provided to see reading of BESCOM energy meter and flow meter separately. Panel should be provided with lock, master key, fan & filter for cooling / heat dissipation. 3) The enclosure shall be well-ventilated, dust-proof and vermin-proof, and be suitable for robust use in a tropical climatge. It shall also be suitable for : a) the housing of the integral data logger and the temporary housing of a battery powered data logger which could periodically be used in conjunction with the water meter. b) the permanent housing of any lightning protection system the permanent housing of GPRS transmitter and battery pack, and any other items necessary to facilitate communication with the central server. c) The permaent housing of BESCOM energy meter. The bulk meter totalizer / register shall be started immediately on installation of water meter. Concerned officer shall strictly check testing and calibration certificate to ensure quality. Necessary agreement shall be made by concerned officer for warranty and other conditions. The bulk meter reading shall be synchronized to remote server at Cauvery Bhavan immediately. Civil, Mechanical and Electrical charges extra to be estimated. 1.The bulk meter totalizer / register shall be started immediately on installation of water meter. 2. Concerned officer shall strictly check testing and calibration certificate to ensure quality. 3. Necessary agreement shall be made by concerned officer for warranty and other conditions. 4.The bulk meter reading shall be synchronized to remote server at Cauvery Bhavan immediately. 5.Civil, Mechanical and Electrical charges extra to be estimated.		

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
1.1	R010A	For Bulk Flow Meters, sensors, transmitter, panels etc. for 100mm dia.	each	110707
1.2	R010B	For Bulk Flow Meters, sensors, transmitter, panels etc. for 150mm dia.	each	139994
1.3	R010C	For Bulk Flow Meters, sensors, transmitter, panels etc. for 200mm dia.	each	186854
1.4	R010D	For Bulk Flow Meters, sensors, transmitter, panels etc. for 250mm dia.	each	257144
1.5	R010E	For Bulk Flow Meters, sensors, transmitter, panels etc. for 300mm dia.	each	292875
2	R020A	Fabrication, supply and fixing of MS saddle (16mm x 160mm x 360mm) to the existing DI pipe, the MS Saddle shall be fabricated out of 16mm thick MS plate with 8 nos of threaded plug of length 6" for fixing of sensors and necessary GI bolts and nuts. The clamps shall have 2 halves. (applicable only if the pipe is DI) for 4 sensors.	set	12652
3	R020B	Fabrication, supply and fixing of MS saddle (16mm x 160mm x 360mm) to the existing DI pipe, the MS Saddle shall be fabricated out of 16mm thick MS plate with 8 nos of threaded plug of length 6" for fixing of sensors and necessary GI bolts and nuts. The clamps shall have 2 halves. (applicable only if the pipe is DI) for 8 sensors.	set	21087
4	R030A	Dismantle, transport, re-instal and commission the bulk flow meters with the following works: (1). Removing of sensor probes from the existing pipe lines (2). Dismantling of the sensor cables from the sensor probes on feeder main / branch lines. (3). Removing of the pedestal panel along with all its accessories like totalizer unit, batteries, GSM modem and display unit from the existing location and stacking the same into baggage. (4). Transportation of the pedestal panel along with all its accessories to the new location indentified by the concerned engineer. (5). Errection of the sensor probes to the new line identified by the concerned engineer. The hot tapping method should be used while installing the sensor probes and supply, fixing of ball vale to the pipe. (6). Transmission of the data from the flow meter to the central server and integrating it to the software applications.	ls	36902
5	R040A	Supply and Laying of multi-core sensor cable from the sensor probes to the transmitter panel.	m	316
6	R050A	Supply and laying insulated cable on messenger wire using 2 single core wire for a single phase and stringing PVC insulated and PVC sheathed 650 / 1100 V class aluminium conductor of sizes supported by 3.15mm GI messanger wire with two break insulators, one at each end of the span with suspenders at intervals 0.75m. Each suspender shall be procelain reel insulator of suitable core through which insulated wire passes and this reel insulator shall be fixed to the messenger wire usiing 2mm wire suitable bent and twisted. Separate reel insulator shall be provided for each wire, the messanger wire shall be ded-ended on the clamp provided to the departmentl pole. The work shall also include, supply and fixing short pole, guy set, MS eye bolt and pole support clamp etc. for SINGLE PHASE USING 2 WIRE 10 SQMM.	m	105
7	R060A	Supply and laying of LG UT cable having aluminium conductor PVC insulated, sheathed, galvanized steel wire / steel tap armored cable with PVC over sheathing.	m	80

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
8	R080	Installation, Commissioning and Testing (for receipt of readings to the Bulk Flow Metering and Monitoring System SCADA Centre) of HART output (flow rate and Totalizer) based Electromagnetic Induction Bulk Flow Meters approved make to the feeder mains . The flow meter shall be full bore type shall be installed as per Manufacturer Recommendations. The Electromagnetic Induction Bulk Flow meters shall comply with the specifications mentioned. The maximum allowable measuring error shall be +/- 0.2 % of the volume. The meter transmitter shall convert the HART Output to produce reliable and correct output. The data to the remote server shall be transmitted with HART Protocol Remote Telemetry Device(RTU)..The Remote Telemetry Devices to Monitor the Real Time Water Flow and Totalizer by converting Output from Bulkflow meter (the Output is of HART output). The transmitter or the modem provided shall be of HART (Highway Addressable Remote Transduser) type, which shall work in the master mode to read the totalizer and flow rate including panel box. The Remote Telemetry Devices shall have atleast the following specification.All data will be read via HART protocol and transmitted to the client Server via FTP Hardware:: Power: 12V DC, Connectivity: Builtin 3G with 2G fall back connectivity, Input HART: Builtin HART Modem in Master Mode to read flow rate and totalizer value, Digital inputs to connect to Door sensor and AC relays, One Relay output to switch on Light inside the enclosure, One MicroUSB port to configure the gateway, Customized sheet metal box, Operating Temperature: -10 to +70 Deg C operating, High Gain GPRS Antennae. Software :: Linux based Operating System, Programmable via C and Node.js, ReAP Framework supporting HTTP and FTP, Option to configure 3 FTP Sites for data transfer, Option to configure 1 HTTP url for data transfer, Automatic Upgradation of Firmware and Configuration Software via Over the Air. The cost includes all materials,accessories,labour complete. Battery Operated		
8.1	R080A	for 100mm	each	159414
8.2	R080B	for 150mm	each	187551
8.3	R080C	for 200mm	each	248491
8.4	R080D	for 250mm	each	248513
8.5	R080E	for 300 mm	each	282136
8.6	R080F	for 400 mm	each	385519
8.7	R080G	for 450 mm	each	444385
8.8	R080H	for 600 mm	each	535762
8.9	R080I	for 700 mm	each	912985
8.10	R080J	for 800 mm	each	1117997
9	R090	Supply and fixing of Horizontal Mechanical Woltman type hemetically sealed water meters with copper Glass register with IP 68 protection. The meter shall be removable mechanism type manufactured as ISO 4064-1: 1993 with MID certification. The meters shall be capable of transmitting consumption data on daily basis to central server through GSM/GPRS.		

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
		The meter interface unit shall be fitted to the meter without wire. The consumption data shall be collected , stored and analysed by data logger. The data logger should provide data like flow rate, total flow, consumption analyses, reverse flow, meter tampering, daily flow distribution, leakage detection. The data logger shall also send alams on blocked meter, flow rate above limit, pressure below or above limits.		
9.1	R090A	50 mm	each	59836
9.2	R090B	80 mm	each	64522
9.3	R090C	100 mm	each	69794
9.4	R090D	150 mm	each	83873
9.5	R090E	200 mm	each	103225
9.6	R090F	250 mm	each	136049
9.7	R090G	300 mm	each	291508

CHAPTER - 17
MULTI-TRACK BULK FLOW METERS

MULTI-TRACK BULK FLOW METERS

SPECIFICATIONS FOR MULTI TRACK ULTRASONIC BULK FLOW METERS

1. MULTI TRACK ULTRASONIC BULK FLOW METERS:

1. Applications: Raw or potable water with chlorine content.
2. Accuracy: + / - 5% flow reading.
3. Velocity Range: 0.3 m / sec. to 10 m / sec.
4. Power Supply : For the entire diameter pipes (450 mm to 1800 mm) 230 Volts AC power supply with surge arrestor, inbuilt re-chargeable battery to provide backup for minimum 6 hours.
5. Power Consumption: Less than 15W. alvanic Isolation:
6. Battery Life: 5 years.
7. Display Unit: 2 or 3 line LCD display 16 characters per line with backlight to see the reading during night time. All diagonostics should be visible on the LCD screen. 1st Line - Flow rate in M3 /hr. 2nd Line - Totalizer in M3.
8. Sensor Protection: IP 68
9. Transmitter Protection: IP 67.
10. Flow meter ambient Temperature: Upto 60 degree C.
11. Data Logger: Internal / external with flow meter and data to be transmitted to server automatically for every 1 hour. Flow meter shall send 24 data message per day to remote server. Locally for every 5 minutes of interval in data logger. Per day 288 readings will be logged, per month 8640. Data of previous one year should be logged in to either internet / external data logger.

2. FLOW SENSORS:

1. Mounting: In field on pipe line flow through flow sensor.
2. Line Size: 450 mm to 1800 mm.
3. Sensor Material: SS 316 L / SS 316.
4. The sensors should be as per ISO standard lengths (ISO 13359) as applicable, so that interchangeability can be carried out. The sensors shall also have built in grounding and employ pipe detection facility.
5. Weather Protection: IP 68.

3. FLOW TRANSMITTER / COMPUTATION:

1. Mounting: Transmitter panel mounted outside the meter chamber in proper location.
2. Type: Microprocessor based - 4 wire.
3. Protection : IP 67
4. Power Supply : For the entire diameter pipes (450 mm to 1800) 230 Volts AC power supply with surge arrestor. Inbuilt rechargeable battery to provide backup for minimum 6 hours backup in the absence of Gridy supply.
5. Out put: 4 - 20 M Amps, digital and pulse outputs, Status Out puts, GPRS (Should support GSM also) Data logger out put : Through RS 485 / Ethernet.
6. Unit of Display: M3 (Cubic Meter) / hour, MLD, ML (Programmable.)
7. Enclosure Material: Aluminium alloy with polyurethane quoting.
8. Flow Meter Standards: Testing and calliratin - IS / ISO 17025. Meter Standard - ISO 4064.
9. Calibration and Testing: All the flow meters to be calibrated at manufacturer work place. Calibration/ Test certificates to be provided as per IS / ISO 17025, periodical calibration facility to be provided if required. Sampling size as per IS 2500 of the supplied quantity in each diameter shall be tested and calibrated at FCRI as per IS and ISO 17025.

4. PEDESTAL PANEL FOR TRANSMITTER UNIT:

The electronic display unit shall be installed on a removable back board. It should be an anti-corrosive material. Enclosure should be designed for IP 54, separate compartments for energy meter & converter and flow meter display unit and modem. Generated heat inside the flow meter should be dissipated and should not cause any harmful effects inside enclosure, wall or post mounting cabinet enclosure. The enclosure shall be constructed from galvanized steel which is at least 3 mm thick. The enclosure shall have a hinged access door, which shall have a facility for padlocking in the closed position. Batteries shall be easily accessible for periodic changing. For floor mounting enclosures, the enclosure shall be mounted on a concrete plinth, the surface of which shall be at least 120 cm. above the surrounding finished ground level. A cable duct shall pass through the plinth to enable the cable from the flow sensor to enter the enclosure. A table showing details of the Employer's name and the water meter's unique reference number shall be fixed to the external face of the access door. Contractors or equipment manufacturer's details shall not be fixed to the external face of the access door.

a. Transparent toughened glass of size 10 cm x 5 cm to be provided to see reading of BESCOM energy meter and flow meter separately. Panel should be provided with lock, master key, fan and filter for cooling / heat dissipation. The enclosure shall be well ventilated, dust proof and vermin proof, and be suitable for robust use in a tropical climate. It shall also be suitable for:

i) the housing of the integral data logger and the temporary housing of a battery powered data logger which could periodically be used in conjunction with the water meter.

ii) the permanent housing of any lightning protection system, the permanent housing of GPRS transmitter and battery pack, and any other items necessary to facilitate communication with the central server.

iii) The permanent housing of BESCOM energy meter.

NOTES FOR MULTI TRACK ULTRASONIC BULK FLOW METERS:

1. The data rates are valid for only one year period and subject to variations in the market rate.
2. The bulk meter totalizer/register shall be started immediately on installation of water meter.
3. Concerned officer shall strictlly check testing and calibration certificate to ensure quality.
4. Necessary agreement shall be made by concerned officer for warranty and other conditions.
5. The bulk meter readings shall be synchronized to remote server at Cauvery Bhavan within 3 days.
6. Civil, mechanical and electrical charges extra to be estimated.

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
1	S010	Supply, Installation, Commissioning and Testing (for receipt of readings to the Central Server at Cauvery Bhavan) of GPRS + GSM based Multi Track Ultrasonic Bulk Flow Meters to the inlet, outlet, feeder mains and distribution branches ranging from 450mm to 1800mm. The flow meter shall be installed using hot tapping method and existing water supply lines. The data shall by synchronized to existing software. The Ultrasonic Bulk Meters shall comply with the specifications given in the starting of this chapter.		
1.1	S010A	For Multi Track Ultrasonic Bulk Flow Meters, sensors, transmitter, panels etc. for 400 / 450mm dia.	each	384252
1.2	S010B	For Multi Track Ultrasonic Bulk Flow Meters, sensors, transmitter, panels etc. for 600mm dia.	each	430409
1.3	S010C	For Multi Track Ultrasonic Bulk Flow Meters, sensors, transmitter, panels etc. for 700mm dia.	each	462860
1.4	S010D	For Multi Track Ultrasonic Bulk Flow Meters, sensors, transmitter, panels etc. for 800mm dia.	each	513703
1.5	S010E	For Multi Track Ultrasonic Bulk Flow Meters, sensors, transmitter, panels etc. for 900mm dia.	each	517803
1.6	S010F	For Multi Track Ultrasonic Bulk Flow Meters, sensors, transmitter, panels etc. for 1000 / 1100mm dia.	each	523075
1.7	S010G	For Multi Track Ultrasonic Bulk Flow Meters, sensors, transmitter, panels etc. for 1200mm dia.	each	541481
1.8	S010H	For Multi Track Ultrasonic Bulk Flow Meters, sensors, transmitter, panels etc. for 1800mm dia.	each	624820
2	S020	Testing, calibration of existing Ultrasonic Bulk Flow Meters with portable flow meter, repair / rectification of existing Ultrasonic Bulk Flow Meters etc. with any or all of the following works:		
2.1	S020A	Supply and laying of sensor cable from flow sensor to transmitter panel.	m	316
2.2	S020B	Repair or replacement of existing panel for painting, welding, replacement of rubber gaskets, complete re-wiring, cleaning the panel with dust cleaner and providing panel lock.	each	6326
2.3	S020C	Repairing the totalizer unit	each	5272
2.4	S020D	Re-placement of (if required) GSM modem by GPRS.	each	15815
2.5	S020E	Calibration of flow meter sensors and testing for results with portable flow meter and realignment of sensors.	set	10544
2.6	S020F	Shifting of transmitter panel with all points accessories from one location to other location as per direction of Engineer in charge.	set	10544

CHAPTER - 18
SANITARY WORKS

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
1	T030	Supplying, lowering, laying, jointing, testing and commissioning of Glazed Stone Ware Pipes of following dia, conforming to IS 651:1992, IS 4127 with latest amendments, including conveying to work site, caulking with hemp dipped in tar and jointing with CM 1:1.5 using OPC, perfect linking and curing for 10 days and testing with water etc. with all lead, lifts and as per Technical Specifications. The cost to include the cost of all jointing materials, necessary survey works for laying of sewer lines etc. complete. The contractor will make own arrangements for procuring water for testing.		
1.1	T030A	100 mm dia. pipes (This is for house service connection only)	m	294
1.2	T030B	150 mm dia. pipes	m	466
1.3	T030C	200 mm dia. pipes	m	662
1.4	T030D	230 mm dia. pipes	m	801
1.5	T030E	250 mm dia. pipes	m	888
1.6	T030F	300 mm dia. pipes	m	1478
1.7	T030G	380 mm dia. pipes	m	1926
2	T040	Supplying lowering laying, jointing, testing and commissioning of following diameters glazed stone ware pipes, conforming to IS 651:1992, (with 5th revision) in all respects jointing with EPDM rubber rings (seals according to EN 681 & ASPM 425) The rubber seals joints pipe will have groves in interior of socket and exterior of the spigot. The rubber gasket shall be prefixed at the factory by the manufacturer rigidly with approved glue to have leak proof joint including conveying of pipe to work site and rolling and lowering into trenches, laying true to line, level and perfect linking at joints testing and commissoning including loading and unloading at both destinations and cuts of pipes wherever necessary including jointing of GSW pipes and specials, with rubber gaskets conforming to EN 681 and ASTM C-425 including cleaning the socket and spigot with soap solution and applying talcum powder for detecting crack, then applying glue and before inserting of rubber gaskets, jacking and fixing in perfect condition including the cost of soap solution, talcum powder and glue etc. and giving necessary hydraulic test to the required pressure of water head with all lead and lifts including costing of jointing materials and all necessary survey works for laying of sewers etc., and disposal of debris as directed etc., complete. (Contractor will make his own arrangements for procuring water for testing) with Rubber ring gasket joints		
2.1	T040A	100 mm dia. pipes (This is for house service connection only)	m	322
2.2	T040B	150 mm dia. pipes	m	511
2.3	T040C	200 mm dia. pipes	m	723
2.4	T040D	230 mm dia. pipes	m	862
2.5	T040E	250 mm dia. pipes	m	949
2.6	T040F	300 mm dia. pipes	m	1556

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
3	T050	Supplying S&S RCC SPUN / VIBRATED CAST PIPES (REINFORCED) pipes NP-3 Class conforming to IS:458-1988 with latest amentments using ordinary portland cement, for sanitary works and conveying to work site, rolling and lowering into trenches, laying true to line and level including loading and unloading at both destinations and jointing of pipes and specials, perfect linking of joints with jack to correct position including cost of jointing materials, i.e, rubber rings conforming to IS: 5382 for S&S RCC pipes, with all leads and lifts as directed and giving necessary hydraulic test as per ISS to the required pressure and commissioning etc. complete. (Contractor will make his own arrangements for procuring water for testing). Before the execution of the work, the contractor shall carry out the survey.		
3.1	T050A	RCC NP3 Class pipe of 250 mm dia.	m	1065
3.2	T050B	RCC NP3 Class pipe of 300 mm dia.	m	1115
3.3	T050C	RCC NP3 Class pipe of 350 mm dia.	m	1812
3.4	T050D	RCC NP3 Class pipe of 400 mm dia.	m	1941
3.5	T050E	RCC NP3 Class pipe of 450 mm dia.	m	2115
3.6	T050F	RCC NP3 Class pipe of 500 mm dia.	m	2492
3.7	T050G	RCC NP3 Class pipe of 600 mm dia.	m	2745
3.8	T050H	RCC NP3 Class pipe of 700 mm dia.	m	3843
3.9	T050I	RCC NP3 Class pipe of 800 mm dia.	m	4692
3.10	T050J	RCC NP3 Class pipe of 900 mm dia.	m	5220
3.11	T050K	RCC NP3 Class pipe of 1000 mm dia.	m	5820
3.12	T050L	RCC NP3 Class pipe of 1100 mm dia.	m	6809
3.13	T050M	RCC NP3 Class pipe of 1200 mm dia.	m	7209
3.14	T050N	RCC NP3 Class pipe of 1400 mm dia.	m	11416
3.15	T050O	RCC NP3 Class pipe of 1600 mm dia.	m	15090
3.16	T050P	RCC NP3 Class pipe of 1800 mm dia.	m	19499
3.17	T050Q	RCC NP3 Class pipe of 2000 mm dia.	m	31073
3.18	T050R	RCC NP3 Class pipe of 2200 mm dia.	m	40548
3.19	T050S	RCC NP3 Class pipe of 2400 mm dia.	m	49300
4	T060	Laying,Lowering and jointing of S&S RCC SPUN / VIBRATED CAST PIPES (REINFORCED) pipes NP-3 Class ,rolling and lowering into trenches, laying true to line and level at both destinations and jointing of pipes and specials, perfect linking of joints with jack to correct position including cost of jointing materials, i.e, rubber rings with all leads and lifts as directed and giving necessary hydraulic test as per ISS to the required pressure and commissioning etc. complete. (Contractor will make his own arrangements for procuring water for testing).		
4.1	T060A	250 mm dia.	m	186
4.2	T060B	300 mm dia.	m	222
4.3	T060C	350 mm dia.	m	239
4.4	T060D	400 mm dia.	m	275

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
4.5	T060E	450 mm dia.	m	296
4.6	T060F	500 mm dia.	m	318
4.7	T060G	600 mm dia.	m	343
4.8	T060H	700 mm dia.	m	358
4.9	T060I	800 mm dia.	m	511
4.10	T060J	900 mm dia.	m	565
4.11	T060K	1000 mm dia.	m	657
4.12	T060L	1100 mm dia.	m	1031
4.13	T060M	1200 mm dia.	m	828
4.14	T060N	1400 mm dia.	m	1011
4.15	T060O	1600 mm dia.	m	1208
4.16	T060P	1800 mm dia.	m	1363
4.17	T060Q	2000 mm dia.	m	1654
4.18	T060R	2200 mm dia.	m	3558
4.19	T060S	2400 mm dia.	m	4271
5	T070	Labour charges for laying and jointing glazed stone ware pipes of 0.6m length and of specified dia., of tested quality conforming to IS 651 of 1965 including caulking with hemp yarn, jointing with CM 1:2 and testing with water etc. complete for: (Rate to include cost of jointing materials and trasportation of pipes from store work site)		
5.1	T070A	Glazed Stone Ware pipe of 150mm dia and 600mm long	m	66
5.2	T070B	Glazed Stone Ware pipe of 200mm dia and 600mm long	m	89
5.3	T070C	Glazed Stone Ware pipe of 230mm dia and 600mm long	m	102
5.4	T070D	Glazed Stone Ware pipe of 300mm dia and 600mm long	m	149
5.5	T070E	Glazed Stone Ware pipe of 380mm dia and 600mm long	m	182
6	T075	Lowering laying, jointing, testing and commissioning of following diameters glazed stone ware pipes, conforming to IS 651:1992, (with 5th revision) in all respects jointing with EPDM rubber rings (seals according to EN 681 & ASPM 425) . The rubber gasket shall be fixed rigidly with approved glue to have leak proof joint including conveying of pipe to work site and rolling and lowering into trenches, laying true to line, level and perfect linking at joints testing and commissoning including loading and unloading at both destinations and cuts of pipes wherever necessary including jointing of GSW pipes and specials, with rubber gaskets conforming to EN 681 and ASTM C-425 including cleaning the socket and spigot with soap solution and applying talcum powder for detecting crack, then applying glue and before inserting of rubber gaskets, jacking and fixing in perfect condition including the cost of soap solution, talcum powder and glue etc. and giving necessary hydraulic test to the required pressure of water head with all lead and lifts including costing of jointing materials etc., complete. (Contractor will make his own arrangements for procuring water for testing) with Rubber ring gasket joints		

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
6.1	T075A	100 mm dia. pipes	m	65
6.2	T075B	150 mm dia. pipes	m	104
6.3	T075C	200 mm dia. pipes	m	121
6.4	T075D	230 mm dia. pipes	m	131
6.5	T075E	250 mm dia. pipes	m	132
6.6	T075F	300 mm dia. pipes	m	153
7	T090	Providing and fixing normal gauge polythene pipes of approved quality with special flange compression type fittings of approved make including trench excavation and refilling etc. for EXTERNAL WORKS with:		
7.1	T090A	25mm nominal bore pipes	m	54
7.2	T090B	32mm nominal bore pipes	m	71
7.3	T090C	40mm nominal bore pipes	m	88
7.4	T090D	50mm nominal bore pipes	m	139
8	T130A	Constructing brick masonry chamber of internal dimension 600x450mm and depth of 600mm (inner dimensions) with modular bricks of CD 75 in cement mortar 1:6, bed concrete 150mm thick with 1:3:6, plastering 12 mm thick with cement mortar 1:4, CC 1:2:4 coping 75mm thk for fixing CI cover & frame etc. excluding the cost of CI frame and cover.	each	4374
9	T130B	Constructing brick masonry chamber of internal dimension 600x600mm and depth of 600mm (inner dimensions) with modular bricks of CD 75 in cement mortar 1:6, bed concrete 150mm thick with 1:3:6, plastering 12 mm thick with cement mortar 1:4, CC 1:2:4 coping 75mm thk for fixing CI cover & frame etc. excluding the cost of CI frame and cover..	each	4977
10	T130C	Constructing brick masonry chamber of internal dimension 450x450mm and depth of 600mm (inner dimensions) with modular bricks of CD 75 in cement mortar 1:6, bed concrete 150mm thick with 1:3:6, plastering 12 mm thick with cement mortar 1:4, CC 1:2:4 coping 75mm thk for fixing CI cover & frame etc. excluding the cost of CI frame and cover..	each	3864
11	T130D	Constructing brick masonry chamber of internal dimension 450x300mm and depth of 600mm (inner dimensions) with modular bricks of CD 75 in cement mortar 1:6, bed concrete 150mm thick with 1:3:6, plastering 12 mm thick with cement mortar 1:4, CC 1:2:4 coping 75mm thk for fixing CI cover & frame etc. excluding the cost of CI frame and cover..	each	3240
	T130E	Constructing brick masonry chamber of internal dimension 300x230mm and depth of 600mm (inner dimensions) with modular bricks of CD 75 in cement mortar 1:6, bed concrete 150mm thick with 1:3:6, plastering 12 mm thick with cement mortar 1:4, CC 1:2:4 coping 75mm thk for fixing CI cover & frame etc. excluding the cost of CI frame and cover..	each	2532
	T130F	Constructing brick masonry chamber of internal dimension 230x150mm and depth of 600mm (inner dimensions) with modular bricks of CD 75 in cement mortar 1:6, bed concrete 150mm thick with 1:3:6, plastering 12 mm thick with cement mortar 1:4, CC 1:2:4 coping 75mm thk for fixing CI cover & frame etc. excluding the cost of CI frame and cover..	each	2042

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
12	T220A	Conveying the new CI or RCC machinehole frame and cover of 2 CMTS from divisional stores to the workspot and fixing the same in cement concrete and removing the old frame and cover and conveying back the old ones to stores.	set	337
13	T300	Providing and constructing "WIRE CUT BRICK MACHINEHOLE CHAMBERS" using Portland/Pozzolana cement, conical in shape at top, with CC 1:3:6 foundation using 40mm and down size graded metal of approved quality and with an offset of 0.15M alround the chamber. Construct Brick masonry in CM 1:4, 340 mm thick, with wirecut bricks of approved quality, plaster inside and out side with CM 1:3, 12mm thick, except for the conical surface outside where the plaster thickness shall be 20mm. Slope inside to be 1:6 in the concrete towards central drain and finished smooth. Fixing of pipes in CC 1:2:4 with graded metal of 20mm and down size. Supplying and fixing SFRC Machinehole frame and cover (Heavy Duty) conforming to IS:12592 with latest amendment, in CC 1:2:4. Supplying and fixing footsteps made of 12mm dia. steel bars (Fe-500) with 3mm thick plastic encapsulation (IS-10910). The footsteps shall be fixed 30cms apart and on CC block embeded to masonry wall. The whole works include watering, curing, barricading, danger lighting, pouring tar over MH frame and cover, cost of tar, shoring, strutting, de-watering, engraving Machinehole number with flow direction on the inner conical surface etc. as per the drawing etc. as per technical specifications and for the following diameters and depth etc. for 1.2mm diaCirc. B M.H:		
13.1	T300A	Constructing Brick Masonry Circular Machinehole 1.2 m internal dia. , 1.0 M depth & SFRC cover & frame	each	27926
13.2	T300B	Constructing Brick Masonry Circular Machinehole 1.2 m internal dia. , 1.1 M depth & SFRC cover & frame	each	28477
13.3	T300C	Constructing Brick Masonry Circular Machinehole 1.2 m internal dia. , 1.2 M depth & SFRC cover & frame	each	30254
13.4	T300D	Constructing Brick Masonry Circular Machinehole 1.2 m internal dia. , 1.3 M depth & SFRC cover & frame	each	33498
13.5	T300E	Constructing Brick Masonry Circular Machinehole 1.2 m internal dia. , 1.4M depth & SFRC cover & frame	each	35282
13.6	T300F	Constructing Brick Masonry Circular Machinehole 1.2 m internal dia. , 1.5M depth & SFRC cover & frame	each	37067
13.7	T300G	Constructing Brick Masonry Circular Machinehole 1.2 m internal dia. , 1.6M depth & SFRC cover & frame	each	40182
13.8	T300H	Constructing Brick Masonry Circular Machinehole 1.2 m internal dia. , 1.7M depth & SFRC cover & frame	each	41966
13.9	T300I	Constructing Brick Masonry Circular Machinehole 1.2 m internal dia. , 1.8M depth & SFRC cover & frame	each	43385
13.10	T300J	Constructing Brick Masonry Circular Machinehole 1.2 m internal dia. , 1.9M depth & SFRC cover & frame	each	46866

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
13.11	T300M	Constructing Brick Masonry Circular Machinehole 1.2 m internal dia. & 2.0 M depth includ. SFRC F&C	each	58411
13.12	T300N	Constructing Brick Masonry Circular Machinehole 1.2 m internal dia. & 3.0 M depth includ. SFRC F&C	each	86018
13.13	T300O	Constructing Brick Masonry Circular Machinehole 1.2 m internal dia. & 4.0 M depth includ. SFRC F&C	each	114512
13.14	T300P	Constructing Brick Masonry Circular Machinehole 1.2 m internal dia. & 5.0 M depth includ. SFRC F&C	each	141956
14	T310	**For Circ. Brk M.H. 1.5m dia:**		
14.1	T310A	Constructing Brick Masonry Circular Machinehole 1.5 m internal dia. & 1.0 M depth includ. SFRC F&C	each	37570
14.2	T310B	Constructing Brick Masonry Circular Machinehole 1.5 m internal dia. & 2.0 M depth includ. SFRC F&C	each	69693
14.3	T310C	Constructing Brick Masonry Circular Machinehole 1.5 m internal dia. & 3.0 M depth includ. SFRC F&C	each	101464
14.4	T310D	Constructing Brick Masonry Circular Machinehole 1.5 m internal dia. & 4.0 M depth includ. SFRC F&C	each	133994
14.5	T310E	Constructing Brick Masonry Circular Machinehole 1.5 m internal dia. & 5.0 M depth includ. SFRC F&C	each	165703
14.6	T310F	Constructing Brick Masonry Circular Machinehole 1.5 m internal dia. & 6.0 M depth includ. SFRC F&C	each	197785
14.7	T310G	Constructing Brick Masonry Circular Machinehole 1.5 m internal dia. & 7.0 M depth includ. SFRC F&C	each	229512
14.8	T310H	Constructing Brick Masonry Circular Machinehole 1.5 m internal dia. & 8.0 M depth includ. SFRC F&C	each	260590
15	T320	**For Circ. Brk M.H. 1.8m dia:**		
15.1	T320A	Constructing Brick Masonry Circular Machinehole 1.8 m internal dia. & 3.0 M depth includ. SFRC F&C	each	117899
15.2	T320B	Constructing Brick Masonry Circular Machinehole 1.8 m internal dia. & 4.0 M depth includ. SFRC F&C	each	153810
15.3	T320C	Constructing Brick Masonry Circular Machinehole 1.8 m internal dia. & 5.0 M depth includ. SFRC F&C	each	191477
15.4	T320D	Constructing Brick Masonry Circular Machinehole 1.8 m internal dia. & 6.0 M depth includ. SFRC F&C	each	227380
15.5	T320E	Constructing Brick Masonry Circular Machinehole 1.8 m internal dia. & 7.0 M depth includ. SFRC F&C	each	263754
15.6	T320F	Constructing Brick Masonry Circular Machinehole 1.8 m internal dia. & 8.0 M depth includ. SFRC F&C	each	299831

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
17	T330	Construction of RCC Machinehole chambers of 1:1.5:3 proportion or approved type Cast-insitu / Pre-cast RCC Machinehole chambers, constructed using form vibrators of standard type, with barricading, danger lighting and using of sight rails and boning rods wherever necessary, shoring and strutting wherever required using Ordinary Port Land Cement, using 1:1.5:3 proportion RCC with 20 mm and down graded jelly, well graded sand and steel of approved quality, 200 mm thick top concrete slab, having wall thickness and raft thickness as in approved drawings and with an offset in raft alround the chamber as in approved drawing, benching concrete with 1:6 slope towards the central drain finished smooth, including fixing and grouting of pipes, including conveying to work spot supply and fixing SFRC Machinehole cover and frame (Heavy duty) conforming to IS:12592 with latest amendments, on a bed of CC 1:2:4 supplying and fixing of minimum 3 mm thick encapsulated plastic footsteps (as per IS 10910) on 12 mm dia. Grade Fe-500 steel bar (as per IS 1786) staggered at 300 mm apart as detailed in Technical specifications, including stone grit beding wherever required, watering, curing, engraving Machinehole number with flow direction on the inner cylindrical surface etc., complete including cost of reinforcement steel and fabrication charges and also cost and conveyance of all materials, labour with all lead and lifts. The Pre-cast RCC Machinehole are for various diamters and depths as stated below and as per detailed drawings, specifications and direction of the Engineer. For 1.2m dia Machinehole:		
17.1	T330A	Constructing Pre-cast RCC Machinehole 1.2 m internal dia. , 1.0 M depth & SFRC cover & frame	each	41176
17.2	T330D	Constructing Pre-cast RCC Machinehole 1.2 m internal dia. , 1.3 M depth & SFRC cover & frame	each	46303
17.3	T330G	Constructing Pre-cast RCC Machinehole 1.2 m internal dia. , 1.6 M depth & SFRC cover & frame	each	51521
17.4	T330J	Constructing Pre-cast RCC Machinehole 1.2 m internal dia. , 1.9M depth & SFRC cover & frame	each	54991
17.5	T330K	Constructing Pre-cast RCC Machinehole 1.2 m internal dia. , 2.0M depth & SFRC cover & frame	each	57810
17.6	T330L	Constructing Pre-cast RCC Machinehole 1.2 m internal dia. ,3.0M depth & SFRC cover & frame	each	74472
18	T340	**For 1.5m dia M.H :**		
18.1	T340A	Constructing Pre-cast RCC Machinehole 1.5 m internal dia. , 1.0 M depth & SFRC cover & frame	each	51505
18.2	T340B	Constructing Pre-cast RCC Machinehole 1.5 m internal dia. , 2.0 M depth & SFRC cover & frame	each	70300
18.3	T340C	Constructing Pre-cast RCC Machinehole 1.5 m internal dia. , 3.0 M depth & SFRC cover & frame	each	89497
18.4	T340D	Constructing Pre-cast RCC Machinehole 1.5 m internal dia. , 4.0 M depth & SFRC cover & frame	each	107702
18.5	T340E	Constructing Pre-cast RCC Machinehole 1.5 m internal dia. , 5.0 M depth & SFRC cover & frame	each	131898

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
18.6	T340F	Constructing Pre-cast RCC Machinehole 1.5 m internal dia. , 6.0 M depth & SFRC cover & frame	each	151237
18.7	T340G	Constructing Pre-cast RCC Machinehole 1.5 m internal dia. , 7.0 M depth & SFRC cover & frame	each	170949
18.8	T340H	Constructing Pre-cast RCC Machinehole 1.5 m internal dia. , 8.0 M depth & SFRC cover & frame	each	189400
19	T350	**For 1.8mm dia M.H :**		
19.1	T350A	Constructing Pre-cast RCC Machinehole 1.8 m internal dia. , 1.0 M depth & SFRC cover & frame	each	69436
19.2	T350B	Constructing Pre-cast RCC Machinehole 1.8 m internal dia. , 2.0 M depth & SFRC cover & frame	each	90677
19.3	T350C	Constructing Pre-cast RCC Machinehole 1.8 m internal dia. , 3.0 M depth & SFRC cover & frame	each	109663
19.4	T350D	Constructing Pre-cast RCC Machinehole 1.8 m internal dia. , 4.0 M depth & SFRC cover & frame	each	130939
19.5	T350E	Constructing Pre-cast RCC Machinehole 1.8 m internal dia. ,5.0 M depth & SFRC cover & frame	each	151919
19.6	T350F	Constructing Pre-cast RCC Machinehole 1.8 m internal dia. ,6.0 M depth & SFRC cover & frame	each	172992
19.7	T350G	Constructing Pre-cast RCC Machinehole 1.8 m internal dia. ,7.0 M depth & SFRC cover & frame	each	194175
19.8	T350H	Constructing Pre-cast RCC Machinehole 1.8 m internal dia. ,8.0 M depth & SFRC cover & frame	each	215248
20	T360	**For 2.4mm dia M.H :**		
20.1	T360C	Constructing Pre-cast RCC Machinehole 2.4 m internal dia. , 3.0 M depth & SFRC cover & frame	each	185827
20.2	T360D	Constructing Pre-cast RCC Machinehole 2.4 m internal dia. , 4.0 M depth & SFRC cover & frame	each	223807
20.3	T360E	Constructing Pre-cast RCC Machinehole 2.4 m internal dia. , 5.0 M depth & SFRC cover & frame	each	251840
20.4	T360F	Constructing Pre-cast RCC Machinehole 2.4 m internal dia. , 6.0 M depth & SFRC cover & frame	each	301274
20.5	T360G	Constructing Pre-cast RCC Machinehole 2.4 m internal dia. , 7.0 M depth & SFRC cover & frame	each	340062
20.6	T360H	Constructing Pre-cast RCC Machinehole 2.4 m internal dia. , 8.0 M depth & SFRC cover & frame	each	378741
21	T370	**For 3.0mm dia M.H :**		
21.1	T370A	Constructing Pre-cast RCC Machinehole 3.0 m internal dia. , 4.0 M depth & SFRC cover & frame	each	284631
21.2	T370B	Constructing Pre-cast RCC Machinehole 3.0 m internal dia. , 5.0 M depth & SFRC cover & frame	each	332574

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
21.3	T370C	Constructing Pre-cast RCC Machinehole 3.0 m internal dia. , 6.0 M depth & SFRC cover & frame	each	378822
21.4	T370D	Constructing Pre-cast RCC Machinehole 3.0 m internal dia. , 7.0 M depth & SFRC cover & frame	each	425639
21.5	T370E	Constructing Pre-cast RCC Machinehole 3.0 m internal dia. , 8.0 M depth & SFRC cover & frame	each	471886
22	T380	Supplying and fixing SFRC frame and cover conforming to IS 12592 (part-I)-1988 and IS 12592 (part-II)- 1991 with latest amendment, including cutting slabs to the required size for the opening and fixing the cover in C.C. 1:2:4 and C.M. 1:3 plastering 20 mm thick to all exposed faces, curing for 10 days with all lead and lift with appurtenances. complete.		
22.1	T380A	Medium Duty	set	1766
22.2	T380B	Heavy Duty	set	2416
23	T390	Providing, supplying and fixing in position of High density poly ethylene Machinehole of 1200 mm internal diameter for all depths with top opening of 600mm, PE Machinehole chambers shall be on the basis of EN13598-2:9009 shall meet relevant BIS/ASTM standards and specifications. All chambers shall be of a solid single wall 100mm or greater thickness construction made of 100% virgin PE material without recycling or foam content. All chambers shall come with a prefabricated integrated base with apprpriate benching with a gredient of 1-2%. The Machinehole shall be seated on M10 cement concrete (1:3:6) of 200mm depth. The inlet pipes to be connected with elastomer seal for a flexible connection of pipes according to EN 681-1. The Machinehole shall have straight channel DN 200 with four extra inlets DN 200/160/110, 45o and 90o right and left and drop arrangement if required and Outlet DN 200/160/110 including steps. The Machinehole shall also be designed to receive house connection at shaft level as per requirement. In case the system is made of midular parts then triple safety (three sided lip/element) seal according to standard practices to be used to connect the parts. Machinehole shall have corrossion resistance steps vertical step distance 25 cms in order to safe guard against uplift pressure, Machinehole should have solid horizontal re-inforcement ribs of appropriate thickness and width. These ribs should be stratagically placed at regular intervals all along the outside of the shaft of the Machinehole. During installation, special care must be taken to ensure proper compaction of the excavated earth with proctar density of 95%, below and around the Machinehole, suitably anchored over concrete to take traffic load without settlement.		
23.1	T390A	HDPE Machinehole of 1200mm dia and upto 1.0 m height	each	22346
23.2	T390B	HDPE Machinehole of 1200mm dia and 1.0 m to 2.0 m height	each	31557
23.3	T390C	HDPE Machinehole of 1200mm dia and 2.0 m to 3.0 m height	each	49039
23.4	T390D	HDPE Machinehole of 1200mm dia and 3.0 m to 4.0 m height	each	73606
23.5	T390E	HDPE Machinehole of 1200mm dia and 4.0 m to 5.0 m height	each	88461
23.6	T390F	HDPE Machinehole of 1200mm dia and 5.0 m to 6.0 m height	each	102013

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
24	T440	Dismantling the damaged or collapsed Machinehole ,conical in shape, and reconstructing the same for the same dimensions, with machine made wire cut brick in CM 1:4 with ordinary portland cement etc. as per design and specifications. The existing ring, cover and CC beeding to be used. **For 1.2M dia:**		
24.1	T440A	For Machinehole of 1.2M dia and 1.0 M depth	each	14979
24.2	T440B	For Machinehole of 1.2M dia and 2.0 M depth	each	30691
24.3	T440C	For Machinehole of 1.2M dia and 3.0 M depth	each	42152
25	T450	**For 1.5M dia:**		
25.1	T450A	For Machinehole of 1.5M dia and 1.0 M depth	each	16039
25.2	T450B	For Machinehole of 1.5M dia and 2.0 M depth	each	31774
25.3	T450C	For Machinehole of 1.5M dia and 3.0 M depth	each	47136
25.4	T450D	For Machinehole of 1.5M dia and 4.0 M depth	each	62497
25.5	T450E	For Machinehole of 1.5M dia and 5.0 M depth	each	77656
25.6	T450F	For Machinehole of 1.5M dia and 6.0 M depth	each	93018
26	T460	**For 1.8M dia:**		
26.1	T460A	For Machinehole of 1.8M dia and 3.0 M depth	each	54145
26.2	T460B	For Machinehole of 1.8M dia and 4.0 M depth	each	71413
26.3	T460C	For Machinehole of 1.8M dia and 5.0 M depth	each	88831
26.4	T460D	For Machinehole of 1.8M dia and 6.0 M depth	each	106026
27	T461	'Repairs to Machinehole for different depths including removal of debris, levelling the brick masonry, construction of brick masonry upto Ground level, providing CC coping alround the MH cover, plastering both inside and outside to the brick masonry and fixing of manhole frame and cover, curing, refilling with appurtenances complete.		
27.1	T461A	Upto 0.30m depth	each	7387
27.2	T461B	Upto 0.60m depth	each	14790
27.3	T461C	Upto 0.90m depth	each	24975
28	T465	Providing and fixing DROP ARRANGEMENT with following dia. HDPE grade PE-100 pipes, conforming to PN 6 as per IS 4984-1995 with latest amendments, vertical drop pipe with MS fastenings at 300mm C/C, with suitable expander / reducure HDPE 'T' joint at top with incoming sewer with one end of Tee inside the machinehole closed with end cap and 45 degree bend at the bottom with HDPE specials and encasing the pipe outside the manhole with cement concrete 1:2:4 proportion, 150 / 200mm thick alround the HDPE pipe, including vibrating, compacting, necessary centering and form work, curing, testing etc. including cost and conveyance of all materials, labour with all lead and lifts etc. complete as per specification, drawings and as directed by the Engineer in charge etc. for:		
28.1	T465A	For 150 to 200 mm dia. incoming sewer pipe.	m	3948

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
28.2	T465B	For 250 mm dia. incoming sewer pipe.	m	6174
28.3	T465C	For 300 mm dia. incoming sewer pipe.	m	9489
28.4	T465D	For 350 mm to 500mm dia. incoming sewer pipe.	m	14761
28.5	T465E	For 600 mm to 750mm dia. incoming sewer pipe.	m	29639
28.6	T465F	For 800 mm to 900mm dia. incoming sewer pipe.	m	45689
28.7	T465G	For 1000 mm to 1100mm dia. incoming sewer pipe.	m	67947
28.8	T465H	For 1200 mm to 1400mm dia. incoming sewer pipe.	m	104849
28.9	T465I	For 1500 mm to 1800mm dia. incoming sewer pipe.	m	156395
29	T470	Providing and installing sheet piling for both sides of the trenches for following depths with mild steel sheets of not less than 6.5mm thick, stronger knife edge, recessed spreader sockets, 3 inch single or double wall shields, to be designed by the contractor to withstand all types of soils, maximum depth as per the approved design drawings, including labour charges for installing and removiing the sheet piling at various reaches of sewer line constructions, including loading, unloading, transporting to the suitable location etc. complete with all lead and lifts. (Measurement shall be taken for one side only eventhough it is provided for both sides).		
29.1	T470A	For depth upto 3.0 m	m^2	512
29.2	T470B	For depth 3.0 m to 6m	m^2	768
29.3	T470C	For depth beyond 6 M	m^2	1024
30	T475	Conducting Topographical GIS survey for the proposed Water Supply / UGD scheme to the city / town with latest total station survey equipments. The work shall include collection of field data from local body, conducting detailed survey showing the all important land marks, existing water supply lines, sewer lines, all roads, levels, nature of roads, L-section survey for transmission main/ feeders/sub-feeder/ rising main from Jack well to WTP and WTP to OHT's and distribution network inlcuding clearing the obstructions, with all survey staff required covering all the developed & newly developed layouts or L-section survey for Sub-Main/ Mains/Trunk Sewer/Rising main from wetwell to STP inlcuding clearing the obstructions, with all survey staff required covering all the developed & newly developed layouts with submission of Soft copy of drawings along with source file and Hard Copy in 3 sets for the following:		
30.1	T475A	Water Supply /Sewer work main pipes	m	10
31	T476A	Conducting block level survey work for the proposed WTP, STP etc., with latest total station survey equipments. The work shall include collection of field data from local body, conducting detailed survey showing the all important land marks, existing water supply lines, sewer lines with submission of Soft copy of drawings along with source file and Hard Copy in 3 sets	acre	500

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
32	T485	Supplying, lowering, laying, fixing, testing and commissioning of SW JUNCTION PIPES, conforming to IS: 651:1992 with latest amendments, of sizes, including conveying to work site and caulking with hemp dipped in tar cement and jointing with CM 1:1.5 with sulphate resistant cement conforming to IS - 12330 with latest revisions and amendments, perfect linking, curing and testing with water, with all lead and lifts, including cost of jointing materials etc. complete for : (Contractor will make own arrangements for procuring water for testing).		
32.1	T485A	SW junction pipes of 150 mm x 100mm dia.	each	388
32.2	T485B	SW junction pipes of 200 mm x 100mm dia.	each	527
32.3	T485C	SW junction pipes of 225 mm x 100mm dia.	each	615
34	T490	Supplying and fixing of ----mm dia or ---- inch dia. THERMOPLASTIC SEWER HOSE, constructed of polyester for intternal inner core, two braids of synthetic fibre reinforcing materials covered by polyesterurethane, minimum bend redius range - 125mm. Burst pressure shall not be less than 7500 PSI (525 bar), working pressure shall not be less than 3000 PSI (210 bar). Temparature limit 40 to 60 degree centigrade, with manufacturer's test certificate confirming the above parameters with one year guarantee from the date of supply of the hose to the jetting / jetting cum suction machine . For combined jetting / suction machine.		
34.1	T490A	For 19mm dia or 3/4" dia	m	1289
34.2	T490B	For 25mm dia or 1" dia	m	1523
35	T500A	Providing, erecting and removing casurina pole three tier BARRICADING using poles of 7.5 to 10 cms dia. and 1.5M height above ground fixed vertically at intervals of 2.0 to 2.5 M centre to centre and horizontally at 0.5M above ground level, including fixing poles in ground for a maximum depth of 0.3M and tied with coir rope firmly including cost and conveyances of all materials, labour, lead and lifts charges etc. complete. (This item is applicable for pipe works of 600mm dia and above pipes)	m	46
36	T500B	Clearing and grubbing land including uprooting rank vegetable grass, bushes, shrubs, saplings and trees upto 300mm girth by manual means, in areas of light jungle, removal of stumps, disposal of unserviceable materials, stacking of serviceable materials from road boundary etc. including cost of labour charges, all lead and lifts, etc. complete as directed by the Engineer in charge.	m^2	14
37	T500C	Providing and fixing 150mm dia. Cast Iron pipe for ventilatiing shaft 5 M high with specials and cowl and with suitable grips in CC 1:2:4 pillar using 10mm to 20mm graded hard granite, with 15 cms. thick cement concrete 1:2:4 around upto 1.22 M above the GLR and with a foundation base of 90 x 90 x 90 cms. plastered with 12mm thick CM 1:3 to all exposed faces and linking the shaft to the manholes by means of 150mm dia. GSW pipes and specials, jointing with tar dipped hemp 1:1.5 CM caulking, curing. The cost include all lead and lifts for all materials, earth work excavations and refilling in all strata, disposal of surplus earth etc. complete.	each	21087

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
38	T500D	Making bore in Machinehole without damaging the existing Machinehole, fixing the pipe of any diameter in line and level with CC 1:2:4, plastering the outer and inner surface in CM 1:3 including curing etc. The cost includes the cost of materials, labour charges, lead and lifts etc. complete as per specifications and as directed by the Engineer.	each	182
39	T500E	Installation of steel portable barricade with horizontal rail 300mm wide, 2.5 m in length fitted on a 'A' frame made with 45 x 45 x 5 mm angle iron section, 1.5 m in height, horizontal rail painted (2 coats) with yellow and white strips, 150mm wide at an angle of 45 degree 'A' frame painted wih 2 coats of yellow paint, etc. comple. (Cost is derived asuming 7 day usage for one time use and 40 time usage for life time)	m^2	17
40	T510	Providing and constructing of Machinehole chambers conical in shape at top with CC 1:3:6 foundation using 40mm and down size graded metal of approved quality and with an offset of 0.15m alround the chamber and brick masonry in C.M 1:4 plaster with bricks of approved quality and CM plaster 1:3 proportion 12mm thick inside and outside except for the conical surface outside where the thickness of plaster shall be 20 mm thick, with 1 to 6 slope in the concrete towards the central drain, finished smooth and fixing of pipes in CC 1:2:4 with graded metal of 20 mm and down size including supplying and fixing SFRC Machinehole frame and cover confoming to IS 12592(Part-I): 1988 & IS 12592(Part-II) :1991 with latest amendments in CC 1:2:4, supplying and fixing of plastic foot steps staggered at 30cms apart as directed, watering, curing,barricading, danger lighting, pouring tar over M.H. frame and cover, cost of tar, shoring, strutting, dewatering, engraving Machinehole No. on the inner and outer conical surface etc. as per the drawing with all lead and lift for various diameters and depths noted below. With Table Moulded Bricks & Medium Duty SFRC Cover & Frame: For 1.2m dia		
40.1	T510A	Constructing Table Moulded Bricks Machinehole 1.2 m internal dia. , 1.0 M depth & Medium duty SFRC cover & frame	each	21888
40.2	T510B	Constructing Table Moulded Bricks Machinehole 1.2 m internal dia. , 2.0 m depth & Medium duty SFRC cover & frame	each	42416
40.3	T510C	Constructing Table Moulded Bricks Machinehole 1.2 m internal dia. , 3.0 M depth & Medium duty SFRC cover & frame	each	65092
41	T520	Providing and constructing of Machinehole chambers conical in shape at top with CC 1:3:6 foundation using 40mm and down size graded metal of approved quality and with an offset of 0.15m alround the chamber and brick masonry in C.M 1:4 plaster with bricks of approved quality and CM plaster 1:3 proportion 12mm thick inside and outside except for the conical surface outside where the thickness of plaster shall be 20 mm thick, with 1 to 6 slope in the concrete towards the central drain, finished smooth and fixing of pipes in CC 1:2:4 with graded metal of 20 mm and down size including supplying and fixing SFRC Machinehole frame and cover confoming to IS 12592(Part-I): 1988 & IS 12592(Part-II) :1991 with latest amendments in CC 1:2:4, supplying and fixing of plastic foot steps staggered at 30cms apart as directed, watering, curing,barricading, danger lighting, pouring tar over M.H. frame and cover, cost of tar,		

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
		shoring, strutting, dewatering, engraving Machinehole No. on the inner and outer conical surface etc. as per the drawing with all lead and lift for various diameters and depths noted below. With Laterite Bricks & Medium duty Cover & frame : For 1.2m dia		
41.1	T520A	Constructing Laterite Bricks Machinehole 1.2 m internal dia. , 1.0 M depth & Medium duty SFRC cover & frame	each	18803
41.2	T520B	Constructing Laterite Bricks Machinehole 1.2 m internal dia. , 2.0 M depth & Medium duty SFRC cover & frame	each	35651
41.3	T520C	Constructing Laterite Bricks Machinehole 1.2 m internal dia. , 3.0 M depth & Medium duty SFRC cover & frame	each	53649
42	T530	**With Table Moulded Bricks & Medium Duty SFRC Cover & Frame: For 1.5m dia**		
42.1	T530A	Constructing Table Moulded Bricks Machinehole 1.5 m internal dia. , 1.0 M depth & Medium duty SFRC cover & frame	each	26261
42.2	T530B	Constructing Table Moulded Bricks Machinehole 1.5 m internal dia. , 2.0 m depth & Medium duty SFRC cover & frame	each	51222
42.3	T530C	Constructing Table Moulded Bricks Machinehole 1.5 m internal dia. , 3.0 M depth & Medium duty SFRC cover & frame	each	77227
42.4	T530D	Constructing Table Moulded Bricks Machinehole 1.5 m internal dia. , 4.0 M depth & Medium duty SFRC cover & frame	each	106615
42.5	T530E	Constructing Table Moulded Bricks Machinehole 1.5 m internal dia. , 5.0 M depth & Medium duty SFRC cover & frame	each	143501
42.6	T530F	Constructing Table Moulded Bricks Machinehole 1.5 m internal dia. , 6.0 M depth & Medium duty SFRC cover & frame	each	174912
42.7	T530G	Constructing Table Moulded Bricks Machinehole 1.5 m internal dia. 7.0 M depth & Medium duty SFRC cover & frame	each	214666
42.8	T530H	Constructing Table Moulded Bricks Machinehole 1.5 m internal dia. 8.0 M depth & Medium duty SFRC cover & frame	each	253896
43	T540	**With Laterite Bricks & Medium duty Cover & frame : For 1.5m dia**		
43.1	T540A	Constructing Laterite Bricks Machinehole 1.5 m internal dia. , 1.0 M depth & Medium duty SFRC cover & frame	each	22357
43.2	T540B	Constructing Laterite Bricks Machinehole 1.5 m internal dia. , 2.0 m depth & Medium duty SFRC cover & frame	each	42444
43.3	T540C	Constructing Laterite Bricks Machinehole 1.5 m internal dia. , 3.0 M depth & Medium duty SFRC cover & frame	each	62957
43.4	T540D	Constructing Laterite Bricks Machinehole 1.5 m internal dia. , 4.0 M depth & Medium duty SFRC cover & frame	each	85883
43.5	T540E	Constructing Laterite Bricks Machinehole 1.5 m internal dia. , 5.0 M depth & Medium duty SFRC cover & frame	each	114018
43.6	T540F	Constructing Laterite Bricks Machinehole 1.5 m internal dia. , 6.0 M depth & Medium duty SFRC cover & frame	each	137809

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
43.7	T540G	Constructing Laterite Bricks Machinehole 1.5 m internal dia. 7.0 M depth & Medium duty SFRC cover & frame	each	167213
43.8	T540H	Constructing Laterite Bricks Machinehole 1.5 m internal dia. 8.0 M depth & Medium duty SFRC cover & frame	each	196760
44	T550	**With Table Moulded Bricks & Medium Duty SFRC Cover & Frame: For 1.8m dia**		
44.1	T550A	Constructing Table Moulded Bricks Machinehole 1.8 m internal dia. , 1.0 M depth & Medium duty SFRC cover & frame	each	28353
44.2	T550B	Constructing Table Moulded Bricks Machinehole 1.8 m internal dia. , 2.0 m depth & Medium duty SFRC cover & frame	each	68219
44.3	T550C	Constructing Table Moulded Bricks Machinehole 1.8 m internal dia. , 3.0 M depth & Medium duty SFRC cover & frame	each	87018
44.4	T550D	Constructing Table Moulded Bricks Machinehole 1.8 m internal dia. , 4.0 M depth & Medium duty SFRC cover & frame	each	112916
44.5	T550E	Constructing Table Moulded Bricks Machinehole 1.8 m internal dia. , 5.0 M depth & Medium duty SFRC cover & frame	each	146223
44.6	T550F	Constructing Table Moulded Bricks Machinehole 1.8 m internal dia. , 6.0 M depth & Medium duty SFRC cover & frame	each	181860
44.7	T550G	Constructing Table Moulded Bricks Machinehole 1.8 m internal dia. 7.0 M depth & Medium duty SFRC cover & frame	each	226784
44.8	T550H	Constructing Table Moulded Bricks Machinehole 1.8 m internal dia. 8.0 M depth & Medium duty SFRC cover & frame	each	268647
45	T560	**With Laterite Bricks & Medium duty Cover & frame : For 1.8m dia**		
45.1	T560A	Constructing Laterite Bricks Machinehole 1.8 m internal dia. , 1.0 M depth & Medium duty SFRC cover & frame	each	24449
45.2	T560B	Constructing Laterite Bricks Machinehole 1.8 m internal dia. , 2.0 m depth & Medium duty SFRC cover & frame	each	50472
45.3	T560C	Constructing Laterite Bricks Machinehole 1.8 m internal dia. , 3.0 M depth & Medium duty SFRC cover & frame	each	70540
45.4	T560D	Constructing Laterite Bricks Machinehole 1.8 m internal dia. , 4.0 M depth & Medium duty SFRC cover & frame	each	91053
45.5	T560E	Constructing Laterite Bricks Machinehole 1.8 m internal dia. , 5.0 M depth & Medium duty SFRC cover & frame	each	116713
45.6	T560F	Constructing Laterite Bricks Machinehole 1.8 m internal dia. , 6.0 M depth & Medium duty SFRC cover & frame	each	143572
45.7	T560G	Constructing Laterite Bricks Machinehole 1.8 m internal dia. 7.0 M depth & Medium duty SFRC cover & frame	each	177026
45.8	T560H	Constructing Laterite Bricks Machinehole 1.8 m internal dia. 8.0 M depth & Medium duty SFRC cover & frame	each	207419
46	T570	**With Table Moulded Bricks & Heavy Duty SFRC Cover & Frame: For 1.2m dia**		

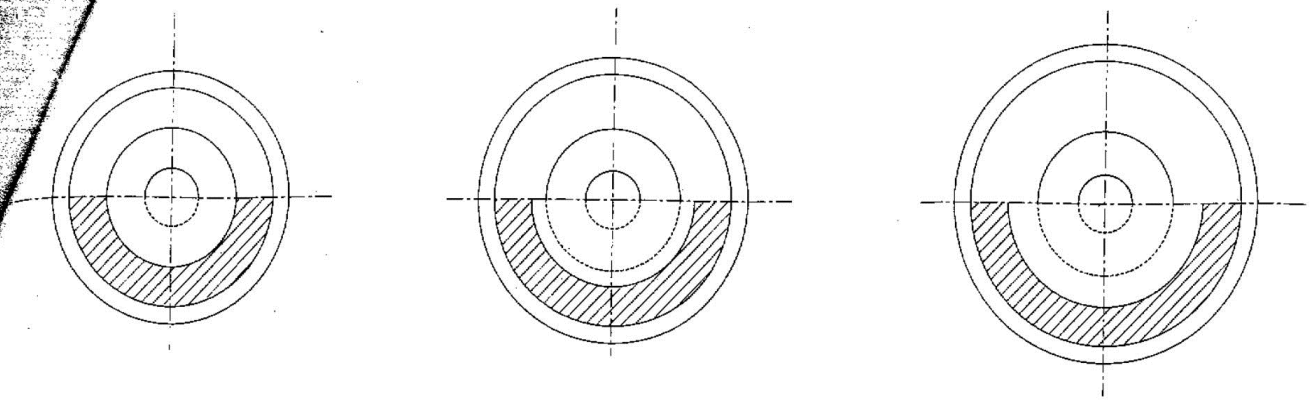
NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
46.1	T570A	Constructing Table Moulded Bricks Machinehole 1.2 m internal dia. , 1.0 M depth & Heavy duty SFRC cover & frame	each	22539
46.2	T570B	Constructing Table Moulded Bricks Machinehole 1.2 m internal dia. , 2.0 m depth & Heavy duty SFRC cover & frame	each	43066
46.3	T570C	Constructing Table Moulded Bricks Machinehole 1.2 m internal dia. , 3.0 M depth & Heavy duty SFRC cover & frame	each	65742
47	T580	**With Laterite Bricks & Heavy duty Cover & frame : For 1.2m dia**		
47.1	T580A	Constructing Laterite Bricks Machinehole 1.2 m internal dia. , 1.0 M depth & Heavy duty SFRC cover & frame	each	19453
47.2	T580B	Constructing Laterite Bricks Machinehole 1.2 m internal dia. , 2.0 M depth & Heavy duty SFRC cover & frame	each	36301
47.3	T580C	Constructing Laterite Bricks Machinehole 1.2 m internal dia. , 3.0 M depth & Heavy duty SFRC cover & frame	each	54299
48	T590	**With Table Moulded Bricks & Heavy Duty SFRC Cover & Frame: For 1.5m dia**		
48.1	T590A	Constructing Table Moulded Bricks Machinehole 1.5 m internal dia. , 1.0 M depth & Heavy duty SFRC cover & frame	each	26911
48.2	T590B	Constructing Table Moulded Bricks Machinehole 1.5 m internal dia. , 2.0 m depth & Heavy duty SFRC cover & frame	each	51872
48.3	T590C	Constructing Table Moulded Bricks Machinehole 1.5 m internal dia. , 3.0 M depth & Heavy duty SFRC cover & frame	each	77877
48.4	T590D	Constructing Table Moulded Bricks Machinehole 1.5 m internal dia. , 4.0 M depth & Heavy duty SFRC cover & frame	each	107266
48.5	T590E	Constructing Table Moulded Bricks Machinehole 1.5 m internal dia. , 5.0 M depth & Heavy duty SFRC cover & frame	each	144151
48.6	T590F	Constructing Table Moulded Bricks Machinehole 1.5 m internal dia. , 6.0 M depth & Heavy duty SFRC cover & frame	each	175562
48.7	T590G	Constructing Table Moulded Bricks Machinehole 1.5 m internal dia. 7.0 M depth & Heavy duty SFRC cover & frame	each	215316
48.8	T590H	Constructing Table Moulded Bricks Machinehole 1.5 m internal dia. 8.0 M depth & Heavy duty SFRC cover & frame	each	254546
49	T600	**With Laterite Bricks & Heavy duty Cover & frame : For 1.5m dia**		
49.1	T600A	Constructing Laterite Bricks Machinehole 1.5 m internal dia. , 1.0 M depth & Heavy duty SFRC cover & frame	each	23007
49.2	T600B	Constructing Laterite Bricks Machinehole 1.5 m internal dia. , 2.0 m depth & Heavy duty SFRC cover & frame	each	43095
49.3	T600C	Constructing Laterite Bricks Machinehole 1.5 m internal dia. , 3.0 M depth & Heavy duty SFRC cover & frame	each	63607
49.4	T600D	Constructing Laterite Bricks Machinehole 1.5 m internal dia. , 4.0 M depth & Heavy duty SFRC cover & frame	each	86533
49.5	T600E	Constructing Laterite Bricks Machinehole 1.5 m internal dia. , 5.0 M depth & Heavy duty SFRC cover & frame	each	114668

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
49.6	T600F	Constructing Laterite Bricks Machinehole 1.5 m internal dia. , 6.0 M depth & Heavy duty SFRC cover & frame	each	138459
49.7	T600G	Constructing Laterite Bricks Machinehole 1.5 m internal dia. 7.0 M depth & Heavy duty SFRC cover & frame	each	167863
49.8	T600H	Constructing Laterite Bricks Machinehole 1.5 m internal dia. 8.0 M depth & Heavy duty SFRC cover & frame	each	197410
50	T610	**With Table Moulded Bricks & Heavy Duty SFRC Cover & Frame: For 1.8m dia**		
50.1	T610A	Constructing Table Moulded Bricks Machinehole 1.8 m internal dia. , 1.0 M depth & Heavy duty SFRC cover & frame	each	29003
50.2	T610B	Constructing Table Moulded Bricks Machinehole 1.8 m internal dia. , 2.0 m depth & Heavy duty SFRC cover & frame	each	68869
50.3	T610C	Constructing Table Moulded Bricks Machinehole 1.8 m internal dia. , 3.0 M depth & Heavy duty SFRC cover & frame	each	87668
50.4	T610D	Constructing Table Moulded Bricks Machinehole 1.8 m internal dia. , 4.0 M depth & Heavy duty SFRC cover & frame	each	113567
50.5	T610E	Constructing Table Moulded Bricks Machinehole 1.8 m internal dia. , 5.0 M depth & Heavy duty SFRC cover & frame	each	146873
50.6	T610F	Constructing Table Moulded Bricks Machinehole 1.8 m internal dia. , 6.0 M depth & Heavy duty SFRC cover & frame	each	182510
50.7	T610G	Constructing Table Moulded Bricks Machinehole 1.8 m internal dia. 7.0 M depth & Heavy duty SFRC cover & frame	each	227434
50.8	T610H	Constructing Table Moulded Bricks Machinehole 1.8 m internal dia. 8.0 M depth & Heavy duty SFRC cover & frame	each	269297
51	T620	**With Laterite Bricks & Heavy duty Cover & frame : For 1.8m dia**		
51.1	T620A	Constructing Laterite Bricks Machinehole 1.8 m internal dia. , 1.0 M depth & Heavy duty SFRC cover & frame	each	25099
51.2	T620B	Constructing Laterite Bricks Machinehole 1.8 m internal dia. , 2.0 m depth & Heavy duty SFRC cover & frame	each	51123
51.3	T620C	Constructing Laterite Bricks Machinehole 1.8 m internal dia. , 3.0 M depth & Heavy duty SFRC cover & frame	each	71190
51.4	T620D	Constructing Laterite Bricks Machinehole 1.8 m internal dia. , 4.0 M depth & Heavy duty SFRC cover & frame	each	91703
51.5	T620E	Constructing Laterite Bricks Machinehole 1.8 m internal dia. , 5.0 M depth & Heavy duty SFRC cover & frame	each	117363
51.6	T620F	Constructing Laterite Bricks Machinehole 1.8 m internal dia. , 6.0 M depth & Heavy duty SFRC cover & frame	each	144222
51.7	T620G	Constructing Laterite Bricks Machinehole 1.8 m internal dia. 7.0 M depth & Heavy duty SFRC cover & frame	each	177676
51.8	T620H	Constructing Laterite Bricks Machinehole 1.8 m internal dia. 8.0 M depth & Heavy duty SFRC cover & frame	each	208069

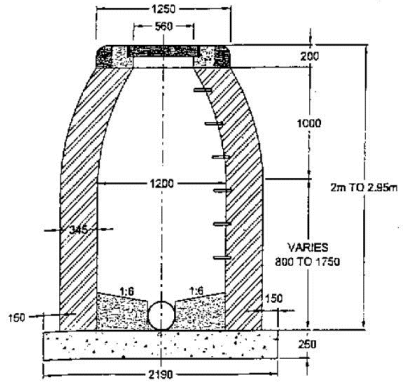
NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
52	T710A	Providing and placing RCC 1:1.5:3 with 20 mm down size granite aggregates for concerete block anular shape having 300 mm width alround the machinehole ring,200 mm thick with Fe-500 grade double reinforcement mat of 10mm dia at 100 mm c/c both ways and both face including shuttering,centreing,compacting,curing,along with cost of material,labour compelete.	each	6225
53	T720A	Providing pressure machinehole cover and frame in DI (with SS 304 Nut Bolt arrangment with steel inserts)for the machinehole in storm water drain with necessary arrangements and complete in all respects as per drawings and as directed by Engineers.	each	30375
54	T730A	Connecting the existing lateral connections to the proposed / existing Sewer Mains, including earth work excavation in all soils, lowering, laying, barricading, dewatering, jointing RCC-NP3 Class pipes refilling with excavated / borrowed earth, carting of excavated earth upto a minimum distance of 25Km away from the site, complete as directed by the Engineer. For sewer of 300mm dia to 400 mm dia of Pipe.	m	3375
55	T740	Dewatering the sewage / storm water by using reqired HP submersible pump for the diversion of storm / sewage during the execution of work. Considering for one Pump.		
55.1	T740A	5 hp pump	hr	276
55.2	T740B	10 hp pump	hr	392
55.3	T740C	20 hp pump	hr	624
55.4	T740D	40 hp pump	hr	1146
56	T750A	Providing, filling and laying of sand bags filled with sand / clay for diversion of sewage during execution of work.	each	62
57	T760	Desilting of sewerlines by mechanical (Jetting,Sucking,Grabber,Scr apper etc.,) means ,setting up the over pumping arrangements,rodding and dislodging of accumulative silt from the pipeline ,removal of silt by mechanical means to the ground including barricading, cleaning of sewers and machinhole, disposal of removed silt upto a distance of 20 Kms, necessary all complete as per the instructions of the Engineer-in-charge.		
57.1	T760A	upto 300mm dia	m	79
57.2	T760B	above 300mm upto 600mm dia	m	138
57.3	T760C	above 600mm upto 900mm dia	m	275
57.4	T760D	above 1000mm dia	m	727
58	T770A	Evaluating pipe line condition through inline Closed Circuit Television Camera(CCTV) to assess the internal condition and material accumulation,including size of sewer,invert levels and other physical attributes/cross section and identification of all defects,joints and connections.Prepare the survey reports containing the location ,size and blockages and submitting the recorded video's,images and structural conditions as per the instruction of the Engineer-in Charge.	m	436

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
59	T780	Design, Manufacture, supply, delivery on site and install STEEL Reinforced PVC liner by MSWL (Machine Wounded Spiral Liner) Lining System, Reinstatement and making good of Rehabilitated Sewer Main and end sealing of migration gap between the lines and same at the Machinehole without manual entry into sewer line, including all preparatory site work as plugging, diversion of sewer flow, traffic flow by proper barricading and night light arrangement, loosen, desilt and throughly cleaning by mechnical means for removing of all types of debris and investigation / condition assesment of de-silted sewer mains before lining work through robotic CCTV equipment having pan, tilt and zoom facility and also after rehabilitation of the lining work. Shall provide (Hard & Soft) copy of the CCTV images. Mode of measurement will be considered from centre to centre distance of the Machinehole and nothing extra shall be payable.		
59.1	T780A	600mm dia	m	31617
59.2	T780B	800mm dia	m	39670
59.3	T780C	900mm dia	m	42815
59.4	T780D	1000mm dia	m	47586
59.6	T780E	1100mm dia	m	50559
59.7	T780F	1200mm dia	m	67727
59.8	T780G	1400mm dia	m	77506
59.9	T780H	1600mm dia	m	88621
59.10	T780I	1800mm dia	m	101873
59.11	T780J	2000mm dia	m	108959
59.12	T780K	2200mm dia	m	119807
60	T800	Providing PVC-U INDIVIDUAL U.G.D House service connection (which shall be laid from inside the customer property) which includes: a) Supply of PVC-U pipe (b) providing and fixing of 315 mm dia the PE Inspection chambres with lid consisting of inlet & outlet arrangements with base, riser of min. 0.42 m depth which includes earth work, fixing in CC-1:2:4 with appurtenances., complete. (c) civil works like Earthwork excavation for the pipeline trenches for laying of PVC-U pipes for the house connections in all types of soils , disintegrated rock,soft rock, hard rock, including cutting of any road using , crossing drains, compound, Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, c.c. wood work, steel work, including T & P and scaffolding wherever necessary sorting the dismantled material, disposal of unserviceable and stacking the serviceable material with all lifts and lead , restoring the damaged portions inside or outside the property premises, refilling the portions of trenches that are dug open including linking to existing sewer network with appurtenances. complete.		
60.1	T800A	110 mm dia	each	7823

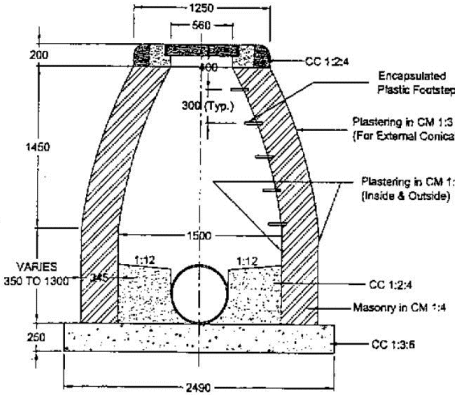
NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
61	T810	Supply and fixing of SFRC machinhole cover (Medium Duty) made as per IS to suit existing damaged machinhole cover after removing the debries from inside and outside the existing machinhole etc. with all lead and lifts.		
61.1	T810A	Medium Duty	each	841
61.2	T810B	Heavy Duty	each	1166
62	T820	Supplying to work spot rolling, lowering and placing in position RCC perforated rings in the already excavated pit including loading and unloading at both the destinations with all lead and lift with appurtenances., complete.		
62.1	T820A	900 mmx1100 mm	each	6029
62.2	T820B	1200 mmx1250 mm	each	9351
Note: The rate of any fractional increase in depth of the machinehole on decimeter basis shall be paid by adding the difference rates between the immediately preceeding and succeeding depths of machineholes on linear basis.				
For example: to calculate 2.2m depth machinehole rate = X + 0.2*(X-Y)/1.0				
Where X is rate of 2.0m depth machinehole, Y is rate o 3.0m depth machinehole.				
While calculating the rates for fractional depths, the rate of SFRC frame and cover to be deducted before calculation and then it should be added to the calculated value.				



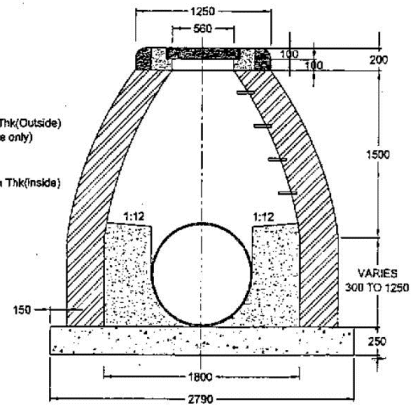
PLAN HALF AT TOP HALF AT BOTTOM



1.20 M DIA



1.50 M DIA



1.80 M DIA

MANHOLES 2m TO 2.95m DEEP

NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE SPECIFIED.
2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING.
3. FOR DETAILED SPECIFICATION, REFER BILL OF QUANTITIES & TECHNICAL SPECIFICATIONS
4. FOR RCC DETAILS OF MANHOLE FRAME & COVER, REFER DRAWING No. DHV/BWSSB/UGD/DAS/7A/STD-4.12
5. TOP OF MANHOLE COVER SHALL BE FLUSH WITH FINISHED ROAD LEVEL
6. IF THE SEWER ROUTE IS PARALLEL TO NALLA/DRAIN/LAKE ABOVE THEN THE TOP OF MANHOLES SHOULD BE ATLEAST 0.2 mTHE HFL OF THE NALLA/DRAIN/LAKE AS DIRECTED BY THE ENGINEER.
7. THE WORKING DRAWINGS ARE BEING APPROVED SUBJECTED TO THE CONDITIONS THAT THE DRAWINGS WILL BE REVISED BASED ON FIELD CONDITION AS AND WHEN THE PROBLEMS ARAISE OR NOTICED DURING THE TIME OF EXECUTION OF THE WORK

Executive Engineer
(CMC-1)

Approved By

Additional
Chief Engineer (CMC)
B.W.S.S.B

Consultant

DHV BV
Room No 408/409
BWSSB, 4th Floor
Cauvery Bhavan
K.G.Road
Bangaloe-560 009

Tel/Fax: +91 080 22485367
E-mail : dhvindia_bangalore@yahoo.co.in

Client

Bangalore Water Supply and Sewerage Board, Bangalore

Project

Greater Bangalore Sewerage and Road Restoration Components Under KMRP

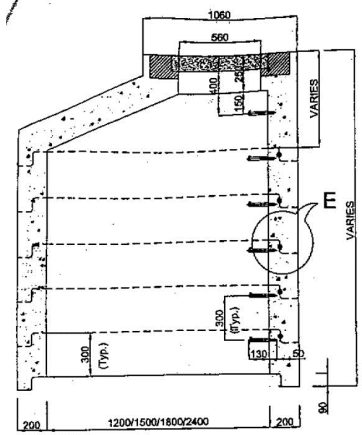
Rev	Date	Drawn	Description	Verf'd	App'd

Title

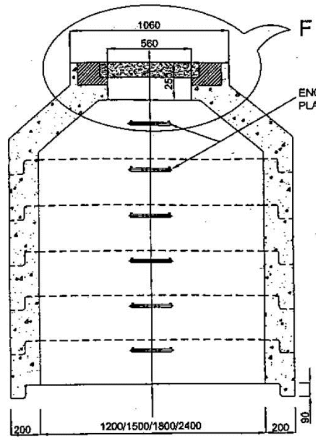
Standard Details of Brick Manholes

Drawing no.
DHV/BWSSB/UGD/DAS/7A/STD-4.3

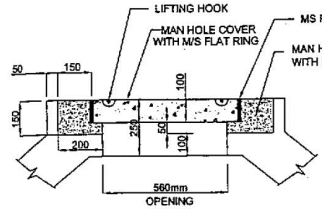
Drawn	PK	
Verified	SK	
Approved	BRN	
Scale	NTS	
Rev. 0	Status CON	



SECTION AT A-A



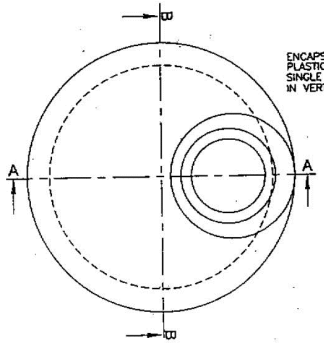
SECTION AT B-B



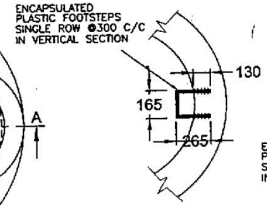
DETAILS- F
COVER & FRAME DETAILS

NOTES:-

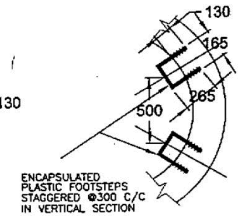
1. ALL DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE SPECIFIED.
2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING.
3. GRADE OF CONCRETE MIX SHALL BE M20 CONFORMING TO I.S 456-2000 FOR MANHOLE.
4. ONLY SULPHATE RESISTING CEMENT CONFIRMING TO IS:12330:1988 SHALL BE USED FOR ALL CONCRETING WORKS.
5. All STEEL SHOULD BE OF FE500 GRADE
6. THIS DRAWING IS ONLY TYPICAL CONSTRUCTION DRAWING, AS PER CLAUSE 7.3.2.1 OF CONTRACT DUCUMENT. THE CONTRACTOR HAS TO TAKEN PRIOR APPROVAL TO THE DESIGN, DRAWING AND PROCESS OF MANUFACTURE OF THE PRECAST MANHOLE
7. THE WORKING DRAWINGS ARE BEING APPROVED SUBJECTED TO THE CONDITIONS THAT THE DRAWINGS WILL BE REVISED BASED ON FIELD CONDITION AS AND WHEN THE PROBLEMS ARAISE OR NOTICED DURING THE TIME OF EXECUTION OF THE WORK



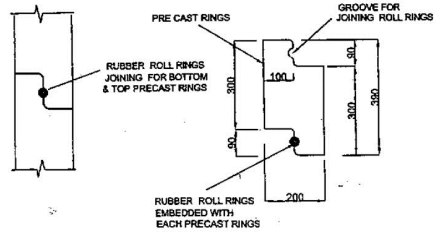
PLAN



FOOT STEP DETAILS
UP TO 2m DEEP MANHOLE



FOOT STEP DETAILS
ABOVE 2m DEEP MANHOLE



DETAILS- E
PRECAST RINGS JONING DETAILS

Approved By

Executive Engineer (DC-South)

Additional Chief Engineer(CMC) B.W.S.S.B

Consultant
DHV BV
Room No 408/409
BWSSB, 4th Floor
Cauvery Bhavan
K.G.Road
Bangaloe-560 009
Tel/Fax: +91 080 22485367
E-mail : dhvindia_bangalore@yahoo.co.in

Client: Bangalore Water Supply and Sewerage Board, Bangalore

Project: Greater Bangalore Sewerage and Road Restoration Components Under KMRP

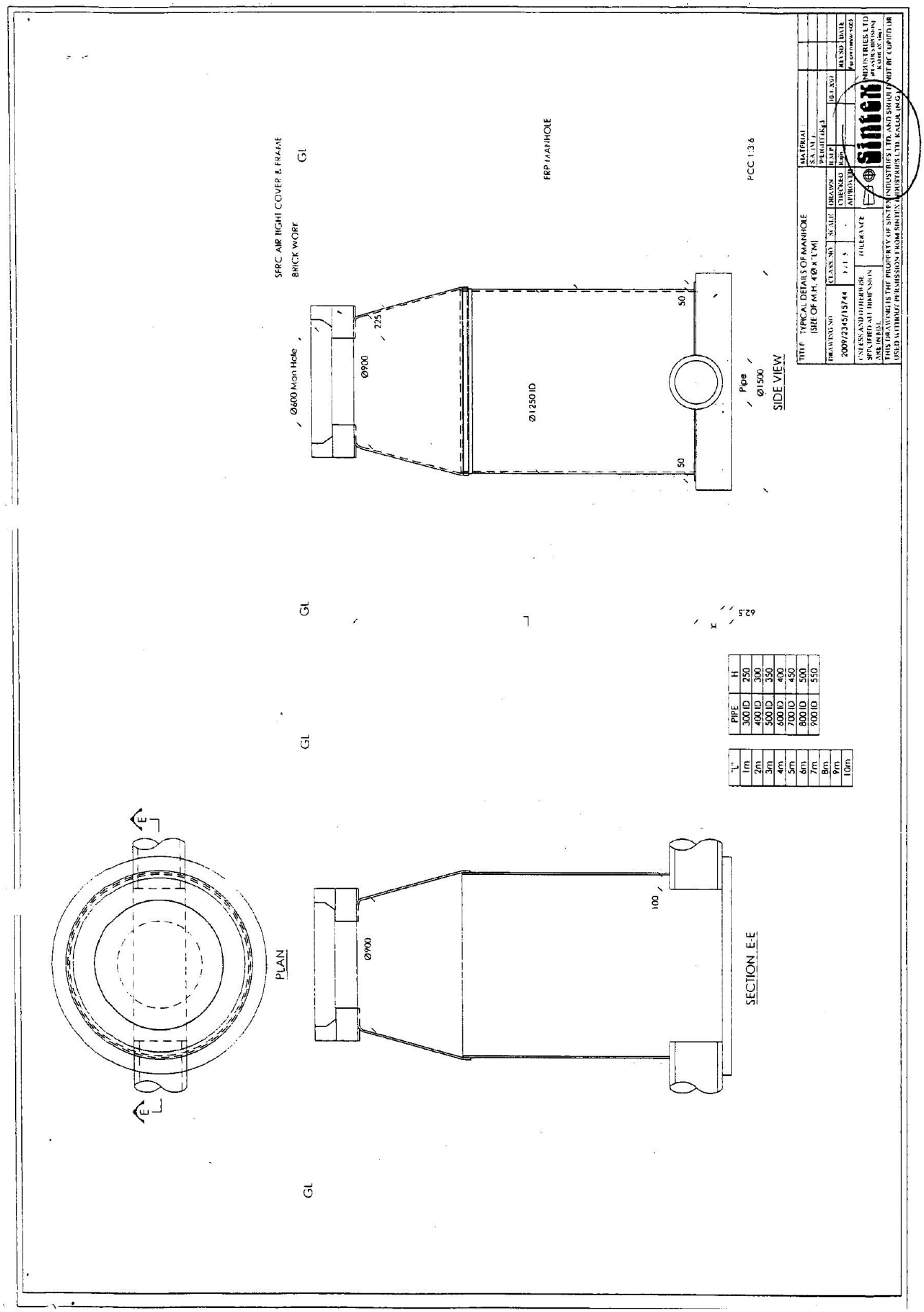
Rev	Date	Drawn	Description	Verf'd	App'd
1	7/7/10	PK	Manhole Inside Dimesion modified		

Title: Standard details of Precast RCC Manhole

Drawn	PK	
Verified	SK	
Approved	BRN	
Scale	NTS	

Drawing no.: DHV/BWSSB/UGD/BYT/26/STD-4.11

Rev.	Status
0	CON


SFRC AIR TIGHT COVER & FRAME
BRICK WORK
GL
FRP MANHOLE
PCC 1:3:6
Ø600 Man Hole
225
Ø900
Ø1250 ID
50
50
Pipe
Ø1500
SIDE VIEW
GL
GL
GL
PLAN
Ø900
100
SECTION E-E
E
E
"L"
1m
2m
3m
4m
5m
6m
7m
8m
9m
10m
PIPE
H
300 ID 250
400 ID 300
500 ID 350
600 ID 400
700 ID 450
800 ID 500
900 ID 550
TITLE: TYPICAL DETAILS OF MANHOLE (SIZE OF M.H. 4.00 x 1.7M)
MATERIAL
SAND
DRAWN
CHECKED
APPROVED
DRAWING NO
2009/2345/15744
CLASS NO
SCALE
TOLERANCE
REVISED DATE
Sintex
INDUSTRIES LTD
THIS DRAWING IS THE PROPERTY OF SINTEX INDUSTRIES LTD. AND SHOULD NOT BE COPIED OR USED WITHOUT PERMISSION FROM SINTEX INDUSTRIES LTD. KALOL (N.G.)

CHAPTER - 19
TRENCHLESS WORKS

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
1	U001	Excavation for ramming / jacking pits and receiving pit. The work includes cutting of asphalted / concrete surface, excavation in all types of soil and strata, dewatering, disposal of debris, refiling the trenches with consolidation, restoration of road surface to normal surface by concreting/ asphalting etc., complete.		
1.1	U001A	Size up to 5 m X 3 m - depth up to 4 m	each	165026
1.2	U001B	For additional 1 m^2 - For 4 mts depth of size 5 m X 3m	m^2	5530
1.3	U001C	size up to 5 m X 3 m - depth up to 5 m	each	192992
1.4	U001D	For additional 1 m^2 - For 5 m depth of size 5 m X 3 m	m^2	6470
1.5	U001E	size up to 5 m X 3 m - depth up to 6 m	each	220921
1.6	U001F	For additional 1 m^2 - For 6 mts depth of size 5 m X 3 m	m^2	7401
1.7	U001G	size up to 5 m X 5 m- depth up to 5 m	each	321565
1.8	U001H	For additional 1 m^2 - For 5 m depth of size 5 m X 5 m	m^2	6480
1.9	U001I	size up to 5 m X 5 m - depth up to 6 m	each	368120
1.10	U001J	For additional 1 m^2 - For 6 mts depth of size 5 m X 5 m	m^2	7430
1.11	U001K	size up to 5 m X 5 m- depth up to 7 m	each	456898
1.12	U001L	For additional 1 m^2 - For 7 m depth of size 5 m X 5 m	m^2	8241
1.13	U001M	size up to 5 m X 5 m - depth up to 8 m	each	513408
1.14	U001N	For additional 1 m^2 - For 8 m depth of size 5 m X 5 m	m^2	10637
2	U005	Installation of product pipe by manual jacking method - Manufacturing, providing, transporting, rolling, lowering, laying & jointing, testing, commissioning of ERW (Electric Resistance Welded), SAW (Submerged Arc Welded) MS pipe (Fe-410 grade) conforming to IS 3589-2001 with latest ammendments including perfect linking welding of joints to correct position including cost and conveyance of pipes and materials with all lead ,lift, cost of labour, loading and unloading of pipes for the following diameters with specified thickness of plate as noted below including bailing out of water wherever necessary for laying of carrier pipe of suitable dia including inside and outside of casing pipe painted with two coats of Anti corrossive tankmastic paint. Installation of steel pipe by Ramming / Jacking method to cross Railway track / NH /BDA /BBMP/Other roads/Existing utilities / NALA crossings, filling the gap between casing pipe and carrier pipe with quarry grit using compressor with all necessary equipments, plants etc, complete. Suitable spacers of HDP/MS or other similar material should be provided in between carrier & casing pipe to prevent carrier pipe forming metallic contact with casing pipe. Note : a. The cost of jacking is inclusive of cost M.S. casing pipe of specified thickness b. The cost of carrying pipe is separate and provision shall be made as per site requirement c. The cost of Jacking includes all leads lifts, cost of consumables, fuel charges, labour. d. The cost of jacking and receving pits shall be proposed seperatelly as per site requirement.		

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
2.1	U005A	Jacking of 600 mm dia & 10mm thick M.S. Casing Pipe.	m	27826
2.2	U005B	Jacking of 900 mm dia & 10mm thick M.S. Casing Pipe.	m	37530
2.3	U005C	Jacking of 1000 mm dia & 10mm thick M.S. Casing Pipe.	m	41384
2.4	U005D	Jacking of 600 mm dia & 12mm thick M.S. Casing Pipe.	m	30615
2.5	U005E	Jacking of 900 mm dia & 12mm thick M.S. Casing Pipe.	m	41584
2.6	U005F	Jacking of 1000 mm dia & 12mm thick M.S. Casing Pipe.	m	55171
2.7	U005G	Jacking of 1200 mm dia & 12mm thick M.S. Casing Pipe.	m	66517
2.8	U005H	Jacking of 900 mm dia & 16mm thick M.S. Casing Pipe.	m	49840
2.9	U005I	Jacking of 1000 mm dia & 16mm thick M.S. Casing Pipe.	m	63315
2.10	U005J	Jacking of 1200 mm dia & 16mm thick M.S. Casing Pipe.	m	76413
2.11	U005K	Jacking of 1600 mm dia & 16mm thick M.S. Casing Pipe.	m	105616
2.12	U005L	Jacking of 1800 mm dia & 16mm thick M.S. Casing Pipe.	m	118092
2.13	U005M	Jacking of 2000 mm dia & 16mm thick M.S. Casing Pipe.	m	142072
2.14	U005N	Jacking of 2200 mm dia & 16mm thick M.S. Casing Pipe.	m	155575
2.15	U005O	Jacking of 2400 mm dia & 16mm thick M.S. Casing Pipe.	m	169827
2.16	U005P	Jacking of 2600 mm dia & 16mm thick M.S. Casing Pipe.	m	178350
2.17	U005Q	Jacking of 2800 mm dia & 16mm thick M.S. Casing Pipe.	m	191931
2.18	U005R	Jacking of 3000 mm dia & 16mm thick M.S. Casing Pipe.	m	205585
3	U007	**For 20mm thick MS casing pipies of various dia:**		
3.1	U007A	Jacking of 1200 mm dia & 20mm thick M.S. Casing Pipe.	m	85345
3.2	U007B	Jacking of 1600 mm dia & 20mm thick M.S. Casing Pipe.	m	117454
3.3	U007C	Jacking of 1800 mm dia & 20mm thick M.S. Casing Pipe.	m	133486
3.4	U007D	Jacking of 2000 mm dia & 20mm thick M.S. Casing Pipe.	m	156714
3.5	U007E	Jacking of 2200 mm dia & 20mm thick M.S. Casing Pipe.	m	173263
3.6	U007F	Jacking of 2400 mm dia & 20mm thick M.S. Casing Pipe.	m	192107
3.7	U007G	Jacking of 2600 mm dia & 20mm thick M.S. Casing Pipe.	m	202853
3.8	U007H	Jacking of 2800 mm dia & 20mm thick M.S. Casing Pipe.	m	213570
3.9	U007I	Jacking of 3000 mm dia & 20mm thick M.S. Casing Pipe.	m	229631
4	U030	Installation of steel product pipe by HDD method including preparing and setting up the plant and equipment, preparing new pipe work materials, installing new pipe work and commissioning system or making the system ready for commissioning by HDD operation including all related civil and mechanical works like excavation, shoring / strutting etc. drilling, stringing, ramming and pulling back the new work on the design bore path alignment, proper disposal of drilling fluid and restoration of site after completion etc. for horizontal directional drilling technique suiting Indian conditions in all types of soil including the cost of sleeve / casing pipe etc. in all respects for:		
4.1	U030A	For pipes of 100mm dia and 6mm thick.	m	5695

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
4.2	U030B	For pipes of 150mm dia and 6mm thick.	m	5804
4.3	U030C	For pipes of 200mm dia and 6mm thick.	m	8298
4.4	U030D	For pipes of 250mm dia and 6mm thick.	m	8406
4.5	U030E	For pipes of 300mm dia and 6mm thick.	m	10595
4.6	U030F	For pipes of 350mm dia and 6mm thick.	m	10703
4.7	U030G	For pipes of 400mm dia and 6mm thick.	m	15005
4.8	U030H	For pipes of 450mm dia and 6mm thick.	m	15221
5	U050	Conducting ground penetrating RADAR SURVEY in a corridor of 4-6 meter width to detect burried utilities like pipes, cables etc. in such corrider. Marking of the detected utilities on the map of corridor with information of locations and depth to the top of various utilities detected. Work to be conducted using 500 Mhz and 300 Mhz antenna for the best possible resolution and penetration etc. for:		
5.1	U050A	Along the road for 6 meter wide corridor	m	35
5.2	U050B	Along the road crossings without dividers and upto 30 M width.	each	31982
5.3	U050C	Along the road crossings with dividers and upto 50 M width.	each	65135
5.4	U050D	Along the road crossings with dividers and upto 60 M width.	each	82854
5.5	U050E	Along the road crossings above 60M width for every 1 M and part thereof.	m	2197
6	U060A	Conducting Seismic Refraction survey to determine stratigraphy along proposed route i.e, soil, seathered rock, rock interfaces. Detection of faults, fractures, shear zones etc. in the investigated area. Geophone spacing 5M, test to be conducted using 24 channel signal enchancement type sesmograph 5M Geophone Spacing and for projects having a minimum length of 115.	m	404
7	U070	Installation of Product pipe by Guided Auger Boring Method including making entry and exit pits, including all related civil works like excavation, shoring / strutting, de-watering, shielded excavation through Auger Boring Process, lowering of pipe segments in the jacking pit, laying and jointing of Product pipeline through jacking process from Jacking pit including the cost of RCC NP3 S&S or as required pipes including dewatering and other works required for commissioning of the works in all types of soil including Rock complete with all lead and lift as per specifications and as directed complete for the following diameter of pipes.		
7.1	U070A	upto 300mm	m	10703
7.2	U070B	300mm to 450 mm dia	m	15968
7.3	U070B	450mm to 600 mm dia	m	27365

CHAPTER - 20
MAINTENANCE WORKS

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
1	V010A	Painting with synthetic enamel on old pipes, one or more coats, on 75 mm dia. pipes.	m	14
2	V010B	Painting with synthetic enamel on old pipes, one or more coats, on 100 mm dia. pipes.	m	16
3	V010C	Providing & fixing 455x610 mm cast iron cover with frame weight to be not less 38kgs (weight of cover 23 kgs and weight of frame 15 kgs)and necessary locking arrangements with M.S flats 32x6 mm etc & painting with two or more coats with black Japan paint etc. complete as directed by the engineer-in-charge.	each	1887
4	V010D	Cleaning of Water Storage Tank or Sump by following method: (1) Empty the Tank/ Sump and make it to near dry, (2) Apply bleaching powder uniformally (@ Tank capacity x 0.5 gms/litre) inside the Tank/ Sump and wait for one hour, (3) After one hour, clean/ rinse the Tank/ Sump with fresh water. Repeat the process (2) & (3) for two to three times, all complete, as directed by the Engineer-in-charge.	ltr	1
5	V010E	Providing & replacing damaged Cast Iron covers of size 300x 300 mm (wt 4.5 kg, for Gully trap) or 455x 610 mm (wt 23 kg, for M/H Cover) or of required size, to fit-in exactly inside the frame etc. complete. (NOTE:- CI Covers are to be replced with RCC Covers in general OR where CI Covers are usually stolen) .	kgs	52
6	V010F	Providing & replacing damaged/ dilapidated Cast Iron Frame of sizes 300x 300 mm (inside)(wt 2.7 kg for Gully trap) or 455x 610 mm (inside)(wt 15.0 kg, for Machineholes) or of required size, including removing the damaged frame & fixing new frame with CM 1:3 (1 cement: 3 coarse sand) neatly finsihed etc, all complete. .	kgs	66
7	V010G	Cleaning Seftic Tank of 50 users capacity as per details and instructions.(While cleaning septic tank all safety and precautionary measures to be taken,Standard Operating Procedure to be adopted and PEMSR Act 2013 to be strictly followed).	each	2109
8	V010H	Cleaning Seftic Tank of 100 users capacity as per details and instructions.(While cleaning septic tank all safety and precautionary measures to be taken,Standard Operating Procedure to be adopted and PEMSR Act 2013 to be strictly followed).	each	2636
9	V010I	Cleaning Seftic Tank of more than 100 users capacity as per details and instructions.(While cleaning septic tank all safety and precautionary measures to be taken,Standard Operating Procedure to be adopted and PEMSR Act 2013 to be strictly followed).	each	3163
10	V010J	Cleaning of sewer line by Rodding Equipment for upto 150 mm dia.(While cleaning septic tank all safety and precautionary measures to be taken,Standard Operating Procedure to be adopted and PEMSR Act 2013 to be strictly followed).	m	43
11	V010K	Cleaning of sewer line by Rodding Equipment for dia above 150 mm.(While cleaning septic tank all safety and precautionary measures to be taken,Standard Operating Procedure to be adopted and PEMSR Act 2013 to be strictly followed).	m	71
12	V010L	Deduct for cleaning Sewer Line by using bamboo sticks &/or pull-through-rods instead of by the Rodding Equipment.	m	7

CHAPTER - 21
ELECTRICAL WORKS

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
1	W010A	Work of rewinding of HV side upto 100KVA power transformer as specified below: a. Switch off Power supply of transformer Isolator feeder and discharge with discharge rod. b. Disconnect the input and output cables form 100 Kva transformer. c. Drain old transformer oil from transformers, and flush the winding jet force with good BDV valve transformer oil. d. Manually lead up to crane reach and load to truck to shift factory. e. After rewinding the burnt out HV windings of transformer and replace the gaskets carbonized bolts and Nuts check the necessary tests. f. Fill the new transformer oil (BWSSB Supply) & replace the silica gel breather. g. Re install transformer after received form factory. h. Switch ON power supply and check the transformer, No load and on load.	job	75178
2	W010B	Work of repair and rewinding of LV side upto 100 KVA power transformer as specified below: a. Drain out the contaminated transit oil completely from the reactor; flush the windings of the transformer with jet force of good BDV value transit oil. b. Removing the burnt out windings from all the three phases of the transformer provide new windings of LV side in all three phases. c. Clean the terminal connection with carbon tetra chloride solution. d. Fill the new transit oil (departmental supply) replace the bolts, nuts, washers and provide gasket etc., wherever necessary provide silica gel breather. e. Fix the transformer in the bet and charge the transformer and observe Performance “ON LOAD” and ensure for trueness of the transformer performance.	job	70641
3	W010C	Work of servicing, leak arresting and oil filtration upto 400 KVA power transformers as specified below: a. Removing cable connection of transformer after isolating the supply dismantling the cable connection b. Replacing the existing leakage L.V side H.T Busing Gasket, oil seal, bots and nuts etc. of the power transformer. c. Replacing the existing non-functioned damaged Dehydrating Breather by a new breather with new silica gel for the above transformer d. Arresting oil leak from exclusive vent, neutral bushing of valves, flanges, is drying arresting the leakage for L.V and HV side of power transformer and refilling of the transformer oil including cost of labour and necessary repaired materials. e. Repaint the Transformer using light grey epoxy paint of 2 coated as original. f. Filtering of oil in the transformer at the transformer center by hot process using stream line filter such that the dielectric strength of oil in the transformer conforms to ISI specification. g. Painting of entire structure of transformer yard including fencing using silver paint.	job	69540
4	W010D	Work of repairs/servicing and overhauling of on load tap changer (OLTC) of upto 66KV/6.6KV 8MVA transformer as specified below: A). Removing the supply connection of diverter switch draining out the diluted oil of OLTC chamber, removing the diverter switch one by one carefully by using tripped and chain pulley block. Dismantling the moving and fixing contacts and cleaning with good quality cleaning agents to remove the carbon deposit, replacing the worn-out compression spring micros	job	46977

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
		switch tap changing contacts, of worn gear assembly, replacing of worn out bearing oil seals, 'O' rings, gaskets, etc., in order to ensure fiction from operations of tap changing and oil leakage from diverter switch mechanism housing resistance by new one which will be supplied by departmentally, cleaning the diverter switch housing chamber to remove the carbon deposit lowering the serviced diverter switch inside the housing chamber and aligning the centre shaft by using lock nut, bolt and washers tighting of resistor conductors carefully without causing damaged to the nearby the contact refilling the good quality high BDV value insulation oil to the diverter switch housing chamber (oil will be supplied by the department adjusting the micro switch NO NC contacts and lifting liver for its proper function and covering the chamber by fixing the lid on the top and cleaning the oil gauge indicator with soap water, after drying refix the same testing the operation of tap changing system by giving upto 440 Volts supply from tap position 1 to 25 after satisfactory charging over of all 25 taps in forward and reverse direction.		
5	W010E	Work of repairs/servicing and overhauling of on load tap changer (OLTC) of upto 66KV/6.6KV 8MVA transformer as specified below: Painting of transformer including platform CTS etc., with one cost of red oxide to the rusted portion of transformer, 2 coats of M/s grey enamel paint, RYB color paint to CT caps for identification etc., Rates should quote inclusive of cleaning of the transformer of all sizes.	job	28257
6	W010F	Work of repairing of diverter switch and replacement of resistance upto 66KV/6.6KV 8MVA Transformer as specified below: Removing the supply connection of diverter switch draining out the diluted oil of OLTC chamber, removing the diverter switch one by one carefully by using tripped and chain pulley block. Dismantling the diverter switch unit, removing the worn-out resistance from the diverter switch Supply and fixing of new resistance of same capacity as original to the diverter switch without disturbing the other running equipment, cleaning the diverter switch housing chamber to remove the carbon deposit, lowering the repaired diverter switch inside the housing chamber and aligning the centre shaft by using link nut, bolt and washers tighting of resistor conductors carefully without causing damaged to the nearby the contact refilling the good quality high BDV value insulation oil to the diverter switch housing chamber (oil will be supplied by the department) adjusting he micro switch NO, NC contacts and lifting liver for its proper function and covering the chamber by fixing the lid on the top. Testing the operation of tap changing system by giving upto 440 Volts supply from tap position 1 to 25 after satisfactory charging over all 25 taps in forward and reverse direction.	job	75152
7	W010G	Works of Supply fixing and wiring of tap position indicator to RTCC panel transformer as detailed:. Tap position indicator Aux supply: -110V or 230V AC +15% 50HZ, Resistance: - 1 Kilo ohms per step, Tele-transmitter: -3Wire connection 1 to 99 position, Display: -2Digit 7 segment LED, Accuracy -Tolerance +2%, Type of mounting: -Panel mounting 90x90x70mm, Dimension: -96mm x 96mm x 70mm, Accuracy: -Class 11	each	20167

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
8	W010H	Works of Supply fixing and wiring of digital kilowatt meter to RTCC panel upto 5MVA transformer as detailed: Aux supply -606KV -110V OR 230V AC, Range - 0 to 9 KW, Burden - 4VA, Display -3.1/2 digital for nominal full seals, Voltage input -110V from P.T, Mountry -Panel type, Cut out size - 90x90mm, Ambient Emp -0.50degree C, Model - DM 3257 ACC.CL:1.0, Accuracy -Class -1.0	each	17385
9	W030A	Work of supply, erection and commissioning of indoor upto 250 Amps distribution panel as specified below: Supply, erection and commissioning of Indoor type upto 250 Amps MCCB distribution panel with outgoing copper bus bar, having, accessories like MCCB, incoming and outgoing entry bus bar, ammeter volt meter, ammeter selector switch, LED indication lamp, and with suitable M.S box with required stand unit set. Suitable for Indoor type complete as per latest IS standard specification.	each	68498
10	W030B	Work of supply and fixing of 85W, LED high way fitting to top of panel board, soft starter and breaker as specified below: Supplying High pressure high way 85W LED fitting die cast aluminum canopy with aluminum housing to control gear, finished stove enamel gray glassy white canopy interior with a pair of anodized aluminum reflectors clear acrylic bowl, gasket lining for dip inseat resistance duly wired with single or multi LEDS.	each	18560
11	W040A	Work of supply and fixing of isolator panel and capacitor panel fuses to motor. as specified below: A) Removing the damaged burnt out fuses upto 63Amps 7.2 /11 K.V isolator fuses form isolator panel for motor cleaning the fuse carriers with CTC and apply petroleum jelly for fuse contacts and rectify the faulty in the isolator panel. Supply and fixing new fuses upto 7.2/11 K.V isolator fuses to the fuse carrier and checking its working. B) Removing the damaged burnt out fuses upto 30Amps 7.2/11 K.V capacitor fuses form capacitor panel of motor cleaning the fuse carriers with CTC and apply petroleum jelly for fuse contacts and rectify the faulty in the isolator panel. Supply and fixing new fuses upto 7.2/11 K.V capacitor fuse to the fuse carrier and checking its working	each	15062
12	W040B	Work of repairing and servicing of capacitor isolator panel of motors as specified below: A) Dismantling the closing and tripping mechanism, removing the broken, closing lever, cylinder, moving contact tips, and service the entire mechanism, supplying and fixing the new closing lever full set cylinder, moving contact tips, etc., check the electrical circuit, replacement of burnt out LED Indication lamps etc., finally the panel should be tested for its running satisfactorily. B) Draining out contaminated breakdown oil completely form reactors, flushing of windings in the reactors with jet force of good BDV. Value transformer oil, cleaning of windings and flushing of carbon deposition over the windings in all the three phase of reactors, removing the terminals and cleaning the terminal bushings with carbon tetrachloride solution, checking of resistance of the windings of the correct value in all the three phases, filling the new oil with break down voltage value.	job	34231

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
13	W040C	Work of replacement of faulty control components and modification and rewiring of soft starter panel upto 1250KW/6.6KV motor as specified below: a. Disconnecting the power cables and control cables. b. Removal of faulty control components and cable disconnections. c. Supply and fixing Auxiliary contractors, upto 110Volt DC coil Supply with 2 NO, 2NC. d. Supply and fixing of Electronic Timers, 24 Volt AC Range 0 to 30 seconds. e. Supply and fixing of MCBs, 2 pole, 10A. f. Supply and fixing of suitable color LED indication Bulbs and reset Push Buttons Red in color. g. Supply and fixing of temperature Scanner. Along with RTDs 3.5 Mtr each. h. The necessary tapping/drilling work has to be done for fixing the above components and rewiring to be done etc., i. Testing the soft starter with above supplied components. j. Commissioning the soft starter and handing over the system to department.	each	69031
14	W040D	Work of supply and fixing of 40 amps star delta panel Boards upto 15Hp backwash pump motor as specified below: a. Supply and fixing of new upto 15 Hp star delta starter panel board for back wash motor with the following materials. b. Power connector upto 40 A. c. On delay, off delay automatic timer. d. Over current relay upto 20-60 amps e. Upto 10 amps MCB 3 Pole for control circuit. f. Contactor 2 No+ 2 Nc upto 25 amps g. Single phase preventer. h. On and off push button switch. i. LED indication lamps RYB motor on, off and trip. j. 0 to 600 volts meter upto 96/96 mm. k. Amps meter C.T Ratio upto 100/5A. l. Current Transformer for metering upto 100/5A. m. upto 30mmx10mm Electronic Grad Aluminum bus bar for RYB phases. n. Internal main wiring using upto 95 sq.mm Copper wire. o. Volts and ammeter selector switch.	job	33727
15	W040E	Work of overhauling and servicing and repairing of southern switch gear make breakers of motor as specified below: Lowering the breaker from the panel after isolating the supply, draw out the breaker truck from the panel, checking the fixed and moving contacts. Removing the burnt out parts from the breaker. Supply and fixing of new closing assembly, rose contact, copper poker, banana link, lifting awwembly. Checking the mechanical parts such as moving cam, lifting bar assembly, tripping mechanism and closing mechanism of the breaker and servicing the entire breaker. Check the trip and closing coil of the breaker replace the same if required. Replace the oil (Supply by departmentally). The breaker has to be checked in test position after complete servicing for proper operation and satisfaction.	job	75122
16	W040F	Work of repair and servicing of LOCB breakers of motor feeders and spare breakers as specified below: MECHANICAL PORTION: Removing the complete unit breaker mechanism from the breaker without damaging the arc chamber, wiring to be recorded before removing the breaker mechanism. Dismantling the tension spring latching unit etc., inspecting the alignment and rectify the fault in breakers for proper closing and opening cleaning all moving contact finger contact and fixed contact by C.T.C replace the oil by new oil (Oil will be supplied by the departments). ELECTRICAL PORTION: Checking of entire electrical operation of the breaker panel checking ON & OFF circuit, change over scheme replacement of closing coil, tripping coil, closing contactor wiring should	job	18325

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
		per drawing, damaged wire should be replaced by new one, all the required spare will be supplied by departmentally. The work should be carried out without disturbing other running equipment.		
17	W040G	Work of repair, overhauling & servicing of southern switch gear breakers of capacitor bank as specified below: Lowering the breaker from the panel after isolating the supply, draw out the breaker truck from the panel, checking the fixed and moving contacts and replace with new contacts wherever necessary. Repair the worn out rose contacts and poker tips. Checking the mechanical parts such as moving cam, lifting bar assembly, tripping mechanism and closing mechanism of the breaker and servicing. Check the trip and closing coil of the breaker. The breaker has to be checked in test position after complete servicing for proper operation and satisfaction	job	33727
18	W040H	Working of repairing and overhauling of upto 800amps as specified below: Complete dismantling of breaker units of upto 800 amps breaker of filter house taking out the fixed and moving contacts of all the poles, cleaning and putting back with necessary lubrication and checking of complete electrical circuit for proper closing and tripping including necessary replacement of 'V' bar contact, finger contact, contact tips, arching contact, tripping and closing coil, back housing set, with female contacts, panel fixed contact set including hylem sheet with contacts, gasket and dash pit oil etc., Testing of tripping and closing mechanism in order to ensure easy of operation of the breaker and commissioning of the system as per the standard practice without interruption of power supply.	job	67859
19	W040I	Work of repairing and overhauling of upto 400 amps LT breaker bus coupler as specified below: Complete dismantling of breaker units of 400 amps, breaker of compressor room taking out the fixed and moving contacts of al limbs, cleaning and putting back with necessary lubrication and checking of complete electrical circuit for proper closing and tripping including necessary replacement of V bar contact finger contact, contact tips of arcing, contacts of tripping and closing coil, back housing set, gasket and dash pot oil etc.. Testing and tripping and closing mechanism in order to ensure easy operation of the breaker and commissioning of the system as per the standard practice without interruption of power supply.	job	67859
20	W040J	Work of repair and rewinding of reactor provided to isolator of motor as specified below: A) Drain out the contaminated transit oil completely form the reactor; flush the windings of the reactor with jet force of good BDV value transit oil. B) Removing the burnt out from all the three phased of the reactor provide new windings in all three phases. C) Clean the terminal connection with carbon tetra chloride solution. D) Fill the new transit oil (departmental supply) replace the bolts, nuts, washers and provide gasket etc., wherever necessary provide silica jel breather. E) Fix the reactor in the isolator panel and charge the capacitor bank and observe performance "ON LOAD" and ensure for trueness of the reactor performance.	job	68591

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
21	W040K	Work of overhauling and servicing upto 1250KW, 6.6KV, motor as specified below: a. Disconnect the HT/LT, Cable and record motor details take out the motor from bed b. Check alignment and record details c. Check IR values before removing motor. d. De-couple the motor from pump & taken out from removing anchor bolts e. Dismantling motor end shields f. Removing rotor from stator, checking IR values of stator cleaning stator with thinner, and petrol, g. Removing the moisture of stator by using heaters(oven) h. Revarnishing of stator & rotor baking in oven, applying becktol red on windings on both stator & rotor i. Greasing of bearings, j. Assembling of motor k. Checking IR values of motor and recording the same l. Alignment of motors with pump, and commissioning the motor on No-Load and load trial.	job	68006
22	W040L	Cutting of the damaged portion of upto 3x150sq.mm XLPE cable Supplying one number of indoor termination kit upto 3x150 sq.mm HT XLPE cable and attending the termination work upto 3x150sq.mm HT cable of Neutral side cable by using upto 150sq.mm copper lugs, self adhesive HT tape, crimping tool, heat shrinkable termination kit and required bolts and nuts etc., and Commissioning the motor on load. The work including the cost of materials, labour charges, taxes and the rebate towards the cost of released materials etc.	job	11574
23	W040M	Supply and brazing of motor end lead cable by using H.T Copper lugs, brazing materials, gas, soldering past, etc as original for all the three phases for motor.	job	33727
24	W040N	Removing the burnt out supporting insulator from motor of main side Supply and fixing of new insulator to same place as original.	job	17406
25	W040O	Removing the burnt out copper flats form all the 3 phases of neutral side motor. Supplying. copper flats copper flats to neutral side connection. Re connect the motor end cable & cable connection using bolts nuts and washers etc as original	job	16577
26	W060	Removing & refixing the pump after repairing of existing horizontal mounting/ monoblock pump with following spares, etc. including aligning of pump with reference to motor & running the pump on load.		
26.1	W060A	Repairs of Booster Pumps Upto 5HP	job	3042
26.2	W060B	Repairs of Booster Pumps 5 HP to 10 HP	job	3682
26.3	W060C	Repairs of Booster Pumps 10 HP to 15 HP	job	5028
26.4	W060D	Repairs of Booster Pumps 15 HP to 20 HP	job	15739
26.5	W060E	Repairs of Booster Pumps 20 HP to 30 HP	job	20811
26.6	W060F	Repairs of Booster Pumps 30 HP to 40 HP	job	25823
26.7	W060G	Repairs of Booster Pumps 40 HP to 50 HP	job	33218
26.8	W060H	Repairs of Booster Pumps 50 HP to 60 HP	job	38077
26.9	W060I	Repairs of Booster Pumps 60 HP to 75 HP	job	48193
26.10	W060J	Repairs of Booster Pumps 75 HP to 100 HP	job	62638
26.11	W060K	Repairs of Booster Pumps 100 HP to 150 HP	job	71454

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
26.12	W060L	Repairs of Booster Pumps 150 HP to 200 HP	job	85912
26.13	W060M	Repairs of Booster Pumps 200 HP to 250 HP	job	99230
26.14	W060N	Repairs of Booster Pumps 250 HP to 300 HP	job	112712
26.15	W060O	Repairs of Booster Pumps 300 HP to 350 HP	job	126539
26.16	W060P	Repairs of Booster Pumps 350 HP to 400 HP	job	137405
27	W070	Removing and refixing the 230/415 v 50 hz I phase/III phase suitable capacity suitable speed horizontal foot mounted screen protected drip proof continous rated monoblock/squrrel cage induction motor with F class insulation, class H super enamelled copper wire with as per standards including transportation charges etc.,		
27.1	W070A	Repairs of Booster Motors Upto 5HP	job	4949
27.2	W070B	Repairs of Booster Motors 5 HP to 10 HP	job	6277
27.3	W070C	Repairs of Booster Motors 10 HP to 15 HP	job	9705
27.4	W070D	Repairs of Booster Motors 15 HP to 20 HP	job	16836
27.5	W070E	Repairs of Booster Motors 20 HP to 30 HP	job	25747
27.6	W070F	Repairs of Booster Motors 30 HP to 40 HP	job	30907
27.7	W070G	Repairs of Booster Motors 40 HP to 50 HP	job	36915
27.8	W070H	Repairs of Booster Motors 50 HP to 60 HP	job	44108
27.9	W070I	Repairs of Booster Motors 60 HP to 75 HP	job	54262
27.10	W070J	Repairs of Booster Motors 75 HP to 100 HP	job	70287
27.11	W070K	Repairs of Booster Motors 100 HP to 150 HP	job	96069
27.12	W070L	Repairs of Booster Motors 150 HP to 200 HP	job	117231
27.13	W070M	Repairs of Booster Motors 200 HP to 250 HP	job	142362
27.14	W070N	Repairs of Booster Motors 250 HP to 300 HP	job	164270
27.15	W070O	Repairs of Booster Motors 300 HP to 350 HP	job	192293
27.16	W070P	Repairs of Booster Motors 350 HP to 400 HP	job	224229

CHAPTER - 22
WATER TREATMENT PLANTS

NOTE FOR WATER TREATMENT PLANTS (LAMELLA CLARIFIER & OTHER COMPONENTS)

1. The selection of proper category of pressure filters shall be based on raw water quality, treatment process required, usage pattern, power supply duration etc.,
2. Regular flushing, backwashing and cleaning of installation to be carried out as per requirement.
3. The discharge quantity of output water shall be monitored & recorded on daily basis.
4. If discharge is drastically reduced, cause for low performance shall be ascertained and rectified.
5. Manufacturer certificates shall be provided for the components used. Necessary tests shall be carried out and wittenessed by the Engineer incharge of work before installation at site. and after installation.
6. All the items Equipments / Instruments shall be conforming to the BIS Standards. The items in contact with treated water shall be conforming to water quality standards as per BIS /Food grade Standards.
7. The filtered water should be conforming to (desirable) drinking water standard as per BIS code.
8. The piping and accessories used after high pressure pump i.e., from high pressure pump to product water tank shall be SS /UPVC 316 grade
9. Indian make membranes duly certifies by national agency may be used.
10. Mounting Skid of RO system to be SS 304 grade, 32/40mm

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
1	X010	Design parameter- Supply installation and commissioning of the water treatment plant capable to treat the water and make it potable at the flow rate of ..... LPH with suspended solids level less than 2000ppm, and PH value and biological impurities beyond permissible limits of potable water parameters. **NOTE :Refer the ANNEXURE : A.** for separate components of water treatment plant, Detailed Dimension and Rates as per Flow Rate mentioned in annexure		
1.1	X010A	For WTP 10000 LPH	each	2655701
1.2	X010B	For WTP 15000 LPH	each	2867646
1.3	X010C	For WTP 20000 LPH	each	3698873
1.4	X010D	For WTP 30000 LPH	each	4009000
1.5	X010E	For WTP 45000 LPH	each	4953253
1.6	X010F	For WTP 55000 LPH	each	5662950
1.7	X010G	For WTP 65000 LPH	each	6742293
1.8	X010H	For WTP 85000 LPH	each	7314240
2	X020	Design parameter- Supply installation and commissioning of the water treatment plant capable to treat the water and make it potable at the flow rate of ..... LPH with suspended solids level less than 2000ppm, and PH value and biological impurities beyond permissible limits of potable water parameters. **NOTE :Refer the ANNEXURE : B.** for separate components of water treatment plant, Detailed Dimension and Rates as per Flow Rate mentioned in annexure		

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
2.1	X020A	For WTP 110000 LPH	each	9251005
2.2	X020B	For WTP 135000 LPH	each	12157435
2.3	X020C	For WTP 150000 LPH	each	12762063
2.4	X020D	For WTP 185000 LPH	each	14876953
2.5	X020E	For WTP 200000 LPH	each	15547890
2.6	X020F	For WTP 225000 LPH	each	16487725
2.7	X020G	For WTP 250000 LPH	each	20850078
2.8	X020H	For WTP 300000 LPH	each	24193555
2.9	X020I	For WTP 325000 LPH	each	25760343
2.10	X020J	For WTP 350000 LPH	each	28536385
2.11	X020K	For WTP 375000 LPH	each	29456603
2.12	X020L	For WTP 400000 LPH	each	30632133
2.13	X020M	For WTP 425000 LPH	each	30801470
2.14	X020N	For WTP 450000 LPH	each	31609920
3	X030	Removing and replacement filter media M.G.F. Conferming to standerd specification, with all necessary labour, lead and lift materials etc complete.Rejuvation and repalcememt of filter media in MGF..... mm dia		
3.1	X030A	Filter Media as Silica in Pressure Filter-800mm dia :	kg	24
3.2	X030B	Scrubbing and painting Epoxi primer and two quots of paint inside the vessel and UV stabilised one quote primer with two quotes of enamel paint outside-800mm dia	each	23750
3.3	X030C	Replacement of all Butterfly valves, bolts and nuts and rubber liner-800mm dia	each	2850
3.4	X030D	pressure gauge-800mm dia	each	475
3.5	X030E	Filter Media as Silica and Pressure Filter-1000 mm dia	kg	24
3.6	X030F	Scrubbing and painting Epoxi primer and two quots of paint inside the vessel and UV stabilised one quote primer with two quotes of enamel paint outside-1000 mm dia	each	23750
3.7	X030G	Replacement of all Butterfly valves, bolts and nuts and rubber liner-1000 mm dia	each	2850
3.8	X030H	pressure gauge-1000 mm dia	each	380
3.9	X030I	Filter Media as Silica and Pressure Filter-1200 mm dia	kg	24
3.10	X030J	Scrubbing and painting Epoxi primer and two quots of paint inside the vessel and UV stabilised one quote primer with two quotes of enamel paint outside-1200 mm dia	each	28500
3.11	X030K	Replacement of all Butterfly valves, bolts and nuts and rubber liner-1200 mm dia	each	3800
3.12	X030L	pressure gauge-1200 mm dia	each	475

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
3.13	X030M	Filter Media as Silica and Pressure Filter-1400 mm dia	kg	24
3.14	X030N	Scrubbing and painting Epoxi primer and two quots of paint inside the vessel and UV stabilised one quote primer with two quotes of enamel paint outside-1400 mm dia	each	28500
3.15	X030O	Replacement of all Butterfly valves, bolts and nuts and rubber liner-1400 mm dia	each	3800
3.16	X030P	pressure gauge-1400 mm dia	each	475
3.17	X030Q	Filter Media as Silica and Pressure Filter-1600mm dia	kg	24
3.18	X030R	Scrubbing and painting Epoxi primer and two quots of paint inside the vessel and UV stabilised one quote primer with two quotes of enamel paint outside-1600mm dia	each	33250
3.19	X030S	Replacement of all Butterfly valves, bolts and nuts and rubber liner-1600mm dia	each	4750
3.20	X030T	pressure gauge-1600mm dia	each	475
3.21	X030U	Filter Media as Silica and Pressure Filter-1800mm dia	kg	24
3.22	X030V	Scrubbing and painting Epoxi primer and two quots of paint inside the vessel and UV stabilised one quote primer with two quotes of enamel paint outside-1800mm dia	each	33250
3.23	X030W	Replacement of all Butterfly valves, bolts and nuts and rubber liner-1800mm dia	each	4750
3.24	X030X	pressure gauge-1800mm dia	each	475
3.25	X030Y	Filter Media as Silica and Pressure Filter-2000mm dia	kg	24
3.26	X030Z	Scrubbing and painting Epoxi primer and two quots of paint inside the vessel and UV stabilised one quote primer with two quotes of enamel paint outside-2000mm dia	each	38000
3.27	X030AA	Replacement of all Butterfly valves, bolts and nuts and rubber liner-2000mm dia	each	5700
3.28	X030AB	pressure gauge-2000mm dia	each	475
3.29	X030AC	Filter Media as Silica and Pressure Filter-2200mm dia	kg	24
3.30	X030AD	Scrubbing and painting Epoxi primer and two quots of paint inside the vessel and UV stabilised one quote primer with two quotes of enamel paint outside-2200mm dia	each	42750
3.31	X030AE	Replacement of all Butterfly valves, bolts and nuts and rubber liner-2200mm dia	each	7600
3.32	X030AF	pressure gauge-2200mm dia	each	475
3.33	X030AG	Filter Media as Silica and Pressure Filter-2400mm dia	kg	24
3.34	X030AH	Scrubbing and painting Epoxi primer and two quots of paint inside the vessel and UV stabilised one quote primer with two quotes of enamel paint outside-2400mm dia	each	47500
3.35	X030AI	Replacement of all Butterfly valves, bolts and nuts and rubber liner-2400mm dia	each	7600

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
3.36	X030AJ	pressure gauge-2400mm dia	each	475
3.37	X030AK	Filter Media as Silica and Pressure Filter-2600mm dia	kg	24
3.38	X030AL	Scrubbing and painting Epoxi primer and two quots of paint inside the vessel and UV stabilised one quote primer with two quotes of enamel paint outside-2600mm dia	each	47500
3.39	X030AM	Replacement of all Butterfly valves, bolts and nuts and rubber liner-2600mm dia	each	7600
3.40	X030AN	pressure gauge-2600mm dia	each	475
3.41	X030AO	Filter Media as Silica and Pressure Filter-2800mm dia	kg	24
3.42	X030AP	Scrubbing and painting Epoxi primer and two quots of paint inside the vessel and UV stabilised one quote primer with two quotes of enamel paint outside-2800mm dia	each	57000
3.43	X030AQ	Replacement of all Butterfly valves, bolts and nuts and rubber liner-2800mm dia	each	9500
3.44	X030AR	pressure gauge-2800mm dia	each	475
3.45	X030AS	Filter Media as Silica and Pressure Filter-3000mm dia	kg	24
3.46	X030AT	Scrubbing and painting Epoxi primer and two quots of paint inside the vessel and UV stabilised one quote primer with two quotes of enamel paint outside-3000mm dia	each	57000
3.47	X030AU	Replacement of all Butterfly valves, bolts and nuts and rubber liner-3000mm dia	each	9500
3.48	X030AV	pressure gauge-3000mm dia	each	475
4	X040	Design parameter-Design , Build , Supply , Errect and commissioning of Mini water treatment Plants with Tube floculator, multi grade filter, with electrochlorinator to treet surface water.		
4.1	X040A	I Specifications Coagulant Dosing System Quantity 1Nos Tank 200Liters MOC HDPE/Eqvt II Tube Flocculation chamber staticmixer 1No. Tube Flocculater 1No. MOC of Static Mixer SS 304 MOC of Tube flocculator MSEP Flow 5m3/h Area of Tube flocculator 23Sq.m III Lamella MOC MSEP Overall size 1220 X 2000 X 1500 Size of Plate 1220 x 1030 - 15nos Clarified water storage 1 MOC MSEP Volume of tank 5 Providing, Supplying & Installation of Three Phase openwell submersible pump set (1+1) of approved make as filter feed pump with required accessories etc. complete: fuses and fuse box, starter and panel board, ELCB, MCB, electrical cables from board to motor, piping for suction and delivery and for connection to the filter unit and rubber sheet support for pump and confirming to the following specifications: Head 20 m Flow rate 5000 lph Stater and Panel Board 1 Set ELCB, MCB 1 set Pipesize for inlet and outlet 50 mm MOC of Impeller Cast Iron MOC of Delivery Casing Cast Iron MOC of Motor body Cast Iron MOC of Motor shaft Stainless Steel IV The pressure filter unit is designed for the following specification: Working pressure 1.5 Kg / Cm2 to 3.5 Kg / cm2 Filter vessel dia 600 mm HOS 1875 mm Frontal pipeline 50 mm Valves Butterfly valves Shell thickness 5 mm Dish end thickness 5 mm	each	1352325

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
		Filter media Silex Silica and Anthracite Pressure relief valve 1 no 20 mm Pressure gauge 2 nos 150 mm dial MOC of vessel MS IS 2062 with Epoxy food grade inside V Electrochlorinator Generation capacity 50 grams / Batch (8 hours) Nacl storage chamber 1 litres MOC of Naocl storage Fiber glass Length of Electrode 130 mm mesh Electrical cable 10 sq copper Dosing system Mechanically actuated diaphragm type to dose sodium hypochlorite mounted on storage tank		
4.2	X040B	Specifications I Coagulant Dosing System Type of dosing pump Differencial doasing system Capacity of vessels 300 liters Stirrer with motor 1 No MOC of stitter and shaft SS 304 MS Stand 1 no (To mount the dosing system) II Tube Flocculater staticmixer 1No. Tube Flocculater 1No. MOC of Static Mixer SS 304 MOC of Tube flocculator MSEP Flow 10m3/h Area of Tube flocculator 34Sq.m III Lamella MOC MSEP Overall size 2220 x 2000 x 1500mm Size of Plate 1220 x 1030mm Clarified water storage 1no MOC MSEP Volume of clarified storage 10Cum Providing, Supplying & Installation of Three Phase openwell submersible pump set (1+1) of approved make as filter feed pump with required accessories etc. complete: fuses and fuse box, starter and panel board, ELCB, MCB, electrical cables from board to motor, piping for suction and delivery and for connection to the filter unit and rubber sheet support for pump and confirming to the following specifications: Head 20 m Flow rate 10000 lph Stater and Panel Board 1 Set ELCB, MCB 1 set Pipesize for inlet and outlet 50 mm IV The pressure filter unit is designed for the following specification: Working pressure 1.5 Kg / Cm2 to 3.5 Kg / cm2 Filter vessel dia 800 mm HOS 1875 mm Frontal pipeline 50 mm Valves Butterfly valves Shell thickness 5 mm Dish end thickness 5 mm Filter media Silex Silica sand Pressure relief valve 1 no 20 mm Pressure gauge 2 nos MOC of vessel MS IS 2062 with Epoxy food grade inside V Electrochlorinator Generation capacity 80 grams / Batch (8 hours) Nacl storage chamber 1 litres MOC of Naocl storage Fiber glass Length of Electrode 130 mm mesh Electrical cable 10 sq copper Dosing system Mechanically actuated diaphragm type to dose sodium hypochlorite mounted on storage tank	each	2113750
4.3	X040C	Specifications I Coagulant Dosing System Type of dosing pump Differencial doasing system Capacity of vessels 300 liters Stirrer with motor 1 No MOC of stitter and shaft SS 304 MS Stand 1 no (To mount the dosing system) II Tube Flocculation chamber staticmixer 1No. Tube Flocculater 1No. MOC of Static Mixer SS 304 MOC of Tube flocculator MSEP Flow 20m3/h Area of Tube flocculator 45Sq.m III Lamella MOC MSEP Overall size 2640 x 2000 x 1500 mm Size of Plate 1220 x 1030 - 60nos Clarified water storage 1no MOC MSEP Volume of Clarified storage 20 cum Providing, Supplying & Installation of Three Phase openwell submersible pump set (1+1) of approved make as filter feed pump with required accessories etc. complete: fuses and fuse box, starter and panel board, ELCB, MCB, electrical cables from board to motor, piping for suction and delivery and for connection to the filter unit and rubber sheet support for pump and confirming to the following specifications: Head 20 m Flow rate 20000 lph Stater and Panel Board 1 Set ELCB, MCB 1 set Pipesize for inlet and outlet 50 mm MOC of	each	3291750

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
		Impeller Cast Iron MOC of Delivery Casing Cast Iron MOC of Motor body Cast Iron MOC of Motor shaft Stainless Steel IV The pressure filter unit is designed for the following specification: Working pressure 1.5 Kg / Cm2 to 3.5 Kg / cm2 Filter vessel dia 1000 mm HOS 1875 mm Frontal pipeline 50 mm Valves Butterfly valves Shell thickness 5 mm Dish end thickness 5 mm Filter media Silex Silica sand Pressure relief valve 1 no 20 mm Pressure gauge 2 nos 150 mm dial MOC of vessel MS IS 2062 with Epoxy food grade inside V Electrochlorinator Generation capacity 100 grams / Batch (8 hours) Nacl storage chamber 1 litres MOC of Naocl storage Fiber glass Length of Electrode 130 mm mesh Electrical cable 10 sq copper Dosing system Mechanically actuated diaphragm type to dose sodium hypochlorite mounted on storage tank		
5	X050	Automatic Online Hydraulically Operated Self Cleaning Multi grade Pressure Filter for the flow rate of ..... LPH (..... M.L.D) with 16 hour pumping NOTE : For Detailed Specification of Automatic hydraulic self cleaning screen filter(400 Microns), FILTRATION & Filter Media For Pressure Filter, Anthracite, Carbon . Detailed Specification and Rates fot Separate components (i.e.., Online Sensore, Filtration & Filder media) of 10000 LPH to 225000 LPH Refer Annexure-C		
5.1	X050A	For 10000 & 15000 LPH (0.16 &0.24 M.L.D)	set	883500
5.2	X050B	For 20000 LPH (0.32 M.L.D)	set	1020538
5.3	X050C	For 30000 LPH (0.48 M.L.D)	set	1269675
5.4	X050D	For 45000 LPH (0.472 M.L.D)	set	1458250
5.5	X050E	For 55000 LPH (0.88 M.L.D)	set	1654425
5.6	X050F	For 65000 LPH (1.04 M.L.D)	set	1972675
5.7	X050G	For 85000 LPH (1.36 M.L.D)	set	2294250
5.8	X050H	For 110000 LPH (1.76 M.L.D)	set	3018625
5.9	X050I	For 135000 LPH (2.16 M.L.D)	set	3189625
5.10	X050J	For 150000 LPH (2.4 M.L.D)	set	3332125
5.11	X050K	For 185000 LPH (2.96 M.L.D)	set	4155300
5.12	X050L	For 200000 LPH (3.2 M.L.D)	set	4615100
5.13	X050M	For 225000 LPH (3.6 M.L.D)	set	4641700
6	X060	Providing, Supplying & Installation of Storage System (Ground Level Storage Reservoir) using GLASS FUSED STEEL TANKS made of as per in compliance with AWWA D 103. GFS Tanks (with sealant) for intermediate balancing tank (filter feed tank) and confirming to the following specifications as per ANNEXURE : D		
6.1	X060A	Tank of capacity 20 to 50 kl	1	21
6.2	X060B	Tank of capacity 50 to 70 kl	1	20
6.3	X060C	Tank of capacity 71 to 150 kl	1	19
6.4	X060D	Tank of capacity 151 to 200 kl	1	18
6.5	X060E	Tank of capacity 201 to 300 kl	1	17
6.6	X060F	Tank of capacity 300 to 400 kl	1	15

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
6.7	X060G	Tank of capacity 500 kl	1	14
6.8	X060H	Tank of capacity 1000 kl	1	13
6.9	X060I	Tank of capacity 2000 kl	1	12
6.10	X060J	Tank of capacity 3000 kl	1	11
6.11	X060K	Tank of capacity 4000 kl	1	10
6.12	X060L	Tank of capacity 5000 kl	1	10
7	X070	Providing, Supplying & Installation of Continuous Sand Filter with Accessories / Filtering Media		
7.1	X070A	Inlet Water Quality: Parameter Unit Value TSS ppm 150max Free Oil & Grease ppm < 5 Treated Water Quality: Parameter Unit Value TSS ppm < 10 Free Oil & Grease ppm < 1 1 Flow Indicator - By Pass type & NRV- Wafer Check type at inlet of CSF Unit 2 Continuous Sand Filter with Accessories/Filtering Media (Model DS 30), Technical Data as under: Type of Filter - Continuous Backwash Filter (1920 mm Dia) Normal flow - 30 m3/h MOC of Sand Washer - SS MOC - MS EP Internal Protection - Epoxy Painting External Protection - Red Oxide Primer and enamal Filter media - Sand 3 Inter Connecting piping for a. Inlet to CSF unit - 1 meter b. CSF Backwash - 65 NB -6 Mtrs c. CSF Outlet - 100 NB-8 mtrs d. 1/2" Air Compressor piping - 30 Ft (10 mtrs) e.Fittings(as per point d) which consists of 1.Connection Nozzels 2.Rotameter - 1 No. 4 Air Compressor technical data as under Capacity - 100-125 LPM Pressure - 3.5 Kg/cm2 Normal Air Consumption - 100 N.ltr/min Maximum - 125 N.ltr/min	each	4550000
7.2	X070B	Inlet Water Quality: Parameter Unit Value TSS ppm 150max Free Oil & Grease ppm < 5 Treated Water Quality: Parameter Unit Value TSS ppm < 10 Free Oil & Grease ppm < 1 1 Flow Indicator - By Pass type & NRV- Wafer Check type at inlet of CSF Unit 2 Continuous Sand Filter with Accessories/Filtering Media (Model DS 50), Technical Data as under: Type of Filter - Continuous Backwash Filter (2550 mm dia) No. of filters - 1 W Normal flow - 50 m3/h MOC - MS EP Internal Protection - Epoxy Painting External Protection - Red Oxide Primer and enamal Filter media - Sand 3 Inter Connecting piping for a. Inlet to CSF unit - 200 NB 1 meter b. CSF Backwash- 65 NB - 6 mtrs c. CSF Outlet - 200 NB 8 mtrs d. 1/2" Air Compressor piping - 30 Ft (10 mtrs) e.Fittings(as per point d) which consists of 1.Connection Nozzels 2.Rotameter - 1 No. 4 Air Compressor technical data as under Capacity - 140-180 LPM Pressure - 3.5 Kg/cm2 Normal Air Consumption - 140 N.ltr/min Maximum - 180 N.ltr/min	each	5500000
8	X080	Supply, installation and commissioning of Chlorine Di Oxide Generator and confirming the specification as per below.Application of ClO2 Generator: 1) For disinfection ClO2 dosage required between 0.2-0.3ppm or mg/litre and for disinfection chemical has to dilute at site using RO water or DM water. 2) For removal of dissolved algea and green color from the raw water 0.68-1ppm or mg/litre dosage is required. For the capacity from 10000lph to 450000lph The Requirment of Chemicals Refer ANNEXURE-E		

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
8.1	X080A	ClO2 generator Capacity 200-1000 gm/hr Input power 230 V a/c, 50Hz Water pressure Inlet 2.5±0.5 Kg/Cm2 Outlet 2.5±0.5 Kg/Cm2 Pressure drop ~ 0.5 Kg/Cm2 Operating Temperature Minimum 25 Deg C Maximum 40 Deg C Dosing Pump for 1496 0 to 10 lph Dosing Pump for HCL 0 to 10 lph Electrical Control Panel 1 no Drive water pump Capacity 200-1000 litre/hr Head 25 m MOC CI	set	585000
9	X090	Providing, Supplying & Installation of Storage System (Ground Level Storage Reservoir) using Prefabricated Corrosion resistant Zincalume steel structures made of as per IS- 15961 for intermediate balancing tank (filter feed tank) and confirming to the following capacity . The Material of construction of walls, liner and Doom roof to be Zincalume steel, Heavy Duty PVC Food grade and Zincalume sheets in knockdown form respectively to be assembled at site as per the drawings. Heavy duty hot dipped galvanized external ladder (1 no) to be provided along with heavy duty hot dipped galvanized access hatch. The rate is inclusive of the cost of installation of tank on sand bed with bold down clamps & 4 nos of Nozzles made of Galvanized steel to be provided for Inlet, Outlet, Drain and overflow. MOC of Storage System Zincalume steel (IS 15961) MOC of wall panels Zincalume alloy coated steel MOC of Liner Heavy Duty PVC Food grade MOC of Doom roof Zincalume alloy coated High tensile steel External ladder Heavy duty hot dipped galvanized (1 no) Access hatch Heavy duty hot dipped galvanized (1 no) Bolts Galvanized flanged head High tensile steel bolts Nozzles Galvanized steel (4 nos) Butterfly valves 2 nos		
9.1	X090A	Tank of capacity 201 to 300 kl	l	11
9.2	X090B	Tank of capacity 151 to 200kl	l	12
9.3	X090C	Tank of capacity 71 to 150 kl	l	14
9.4	X090D	Tank of capacity 50 to 70kl	l	16
9.5	X090E	Tank of capacity 20 to 50kl	l	19
9.6	X090F	Tank of capacity 10 to 20kl	l	22
10	X100	Supplying insulation & commisioning of Mini Electrochlorinator which required accesories for connecting the unit system to the rising main.		
10.1	X100A	MINI Chlorinator 80gms/Batch Production capacity : 10gms/hr Total time per Batch : 8Hrs. Total volume of chlorine generation : 80 gms/ batch. Salt Required per hr. : 400 gms/batch. Electrical power required : 230V, 1phase AC 50Hz. DC power supply unit with Input 230 V AC :1 NO FRP Brain water tank :15litrs PP/PVC Chlorine storage tank :15 Liters Dosing pump Type of Dosing : Automatic Dosing Dosing flow rate :1to 30 lph Min actuating pressure :0.3kg/cm² Max working pressure :5kg/ cm² Inle/Outlet connections :¾" B.S.P Max Temoerature :50ºC Dosing externally adjustable :0.5-2% Chlorine test kit : 1 set	each	71500

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
10.2	X100B	Chlorinator 200gms/Batch Production capacity : 25 gms/hr Total time per Batch : 8Hrs. Total volume of chlorine generation : 200gms/batch. Salt Required per hr. : 800gms/batch. Electrical power required : 230V, 1phase AC 50Hz. DC power supply unit with Input 230 V AC :1 NO FRP Brain water tank :35litrs PP/PVC Chlorine storage tank :35 Liters Dosing pump Type of Dosing : Automatic Proportionate Dosing Dosing flow rate :1to 30 lph Min actuating pressure :0.3kg/cm² Max working pressure :5kg/ cm² Inle/Outlet connections :¾" B.S.P Max Temoerature :50ºC Dosing externally adjustable :0.5-2% Chlorine test kit : 1 set	each	135000
11	X110	Providing of Online sensors with Digital Display of water quality for Continuous monitoring Turbidity , pH and Free Clorine.		
11.1	X0110A	pH Indicator and Transmitter - 2 No Microprocessor Based Design Range 0 to 14.00 pH Mounting Filed Mounted Enclosure Weather proof Supply 230 VAC Max Temp 0 to 45°C Operating Pressure 0 to 6 Bar Chlorine Sensor -and Transmitter (Free Chlorine) -1 no Application Free Chlorine , Inorganic Chlorine. Range 0 to 5 ppm Operating Pressure Up to 1 Bar Operating Temp 0 to 45°C Turbidity Indicator and Transmitter -2 No Scale 0 - 1500 NTU Power Supply 24V dc Operating Temp 0 to 45°C Max . Pressure up to 1 Bar Body PVC Cable 10 meter Mounting Immersed in the Tank	set	1724250

"NOTE:
1. Anti scalant use Only NSF 60 Approved Chemicals.
2. The piping and accessories used upto RO Membrane shall be CPVC.
3. Piping from Output of Pure Water to Coin Vending Machine and smart card shall be in Stainless Steel SS 304.
4. All required electrical components shall be of relevant BIS code and IS standard.
5. Design of RO system must be done keeping in mind pollution norms of reject management and accordingly RO recoveries must be optimized
6. All the components and fixtures used should be foodgrade and drinking water compatible.
7. All the components materials of works should conform to IS relevent codes/drinking water BIS standards.
8. ಕಾಮಗಾರಿಗಳು ಅಳವಡಿಸುವ ಪ್ರಮುಖ ಅಂಶಗಳಾದ RO Membrane ಮತ್ತು High pressure pump ಗಳು ತಿಳಿಸಿರುವ ವಿಶಿಷ್ಟ ವಿವರಣೆಯಂತೆ (Detailed Specification) ಇರುವ ಬಗ್ಗೆ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು ರವರಿಂದ ದೃಢೀಕರಿಸಿಕೊಂಡು ಅಳವಡಿಸುವುದು."

CHAPTER - 23
WATER PURIFICATION PLANTS

NO	SOR CODE	DESCRIPTIONS	UNIT	RATE
1	Y010	Water purification plants: Supplying, Installation and Commissioning of automatic Water purification plant (RO+UF) with all accessories piping, product water tank on single phase power supply as per the enclosed detailed Technical Specifications including cost of material, loading and unloading and as directed by the Engineer in charge. (Ref- detailed specification enclosed seperatly). Note:- 1.The above rates mentioned are only for the preparation of estimate purpose. 2. All items are to be of BSI /NFS standards,with BSI / NFS mark . 3. Tenders to be invited for procurement. 4. No direct payment should be made under any situation or condition or on any account. 5. After commissioning of plant necessary testing to be done for the satisfactory of Engineer Incharge. Note : Refer the ANNEXURE : F for Detailed Specification of Each components		
1.1	Y010A	For 25 LPH : Cabin Type	each	29830
1.2	Y010B	For 50 LPH : Cabin Type	each	49000
1.3	Y010C	100 LPH : Cabin Type	each	105100
1.4	Y010D	For 125 LPH : Cabin Type	each	125030
1.5	Y010E	For 150 LPH : Cabin Type	each	152810
1.6	Y010F	For 250 LPH : Cabin Type	each	290000
1.7	Y010G	For 500 LPH SS : Skid Type	each	368650
1.8	Y010H	For 500 LPH FRP : Skid Type	each	343850
1.9	Y010I	For 1000 LPH SS : Skid Type	each	495350
1.10	Y010J	For 1000 LPH FRP : Skid Type	each	455350
1.11	Y010K	For 2000 LPH FRP : Skid Type	each	692875
1.12	Y010L	For 3000 LPH FRP : Skid Type	each	911400

NOTE FOR WATER PURIFICATION PLANT

1. For Antiscalant use only NSF 60 approved chemicals.
2. Low level sensor indicator to be provider for the antiscalant tank that will shut down the plant during the low level of the antiscalant.
3. Piping from output of Pure water Tank to coin vending machine/smart card shall be in stainless steel 304.
4. RO-UF system must be fully automatic or compatible for remote monitoring, control and data transmission.
5. The high pressure pump shall be fully stainless steel including impeller.
6. For detailed specifications of civil and electrical items of works refer PWD SOR.
7. All component materials of works should be food grade & conform to relevant codes of drinking water standards national / international.
8. The system shall be designed based on water quality and rating of items shall be compatible to each other.
9. The system shall have integrated pretreatment modules for removal of suspended solids along with pressure gauge.
10. The system shall have inbuilt protection to high pressure pump by way of low/high pressure switch.
11. Online rotameter shall be provided for measuring flow. Blending cartridge shall be provided to adjust taste/ TDS and

followed by UV disinfection for total safety. System should have automatic backwashing of filters.

12. The system shall be capable of working by using the semi treated water provided through Bore well / Municipal water supply.
13. Recovery of water (i.e. component of treated water) shall be in range of 40%-60%. If desired, the waste/ rejected water may be separately stored by using suitable pump. This water may be used for cleaning, gardening or toilet purpose.

In case of Stainless Steel plants

14. The sand filter and carbon filter housing with SS-304 shall with stand requisite pressure & shell thickness shall be not less than 1.5mm.
15. RO membrane housing shell thickness shall not be less than 2.00mm.
16. Pure water storage tank shell thickness shall not be less than 0.80mm.
17. Maintenance of Reverse Osmosis (RO) Plant : Besides periodical cleaning of RO membrane, the maintenance and servicing of the Reverse Osmosis (RO) Plant shall consisting of following:
    a. Micron Filter element cleaning/replacement during every servicing.
    b. Cleaning of Sand filter & Activated carbon filter.
    c. Anti scaling dosing chemical (As per requirement) replenishing.
    d. Raw water pump Checking/servicing, (if required) for optimizing power & flow.
    e. R.O. Membrane Checking/ Replacement,(if required)
    f. High pressure pump Checking/servicing, (if required) to optimize power & flow.
    g. Checking of flow rate of membrane & TDS on site
    h. Cleaning of raw water and product water tanks regularly.

    (Record for above process to be maintained at the plant).

AERIAL VIEW OF WATER TREATMENT PLANT AT T.K. HALLI

KAVERI FOURTH STAGE, 1ST PHASE WATER TREATMENT PLANT

KAVERI 3RD STAGE, WATER TREATMENT PLANT, AERATOR

Bantwala

Clarifloculator of Malavalli WSS

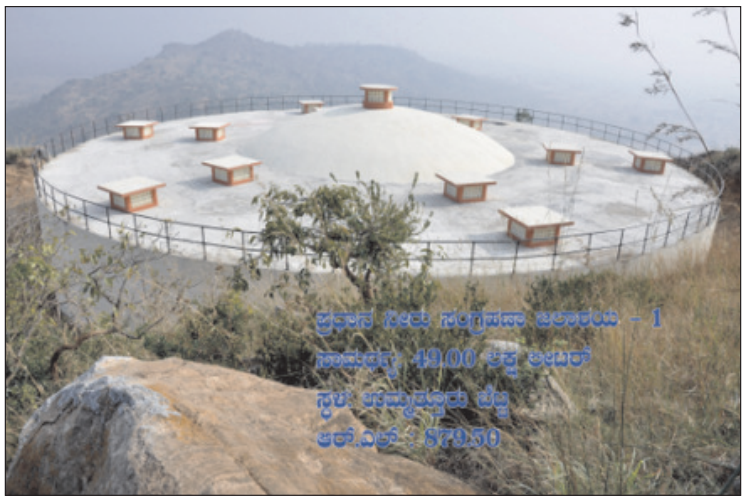
Flocculator of Arasikere WSS

Aerator – Arasikere WSS

Micro Fibre Filter House and 150LL GLSR – Arasikere WSS

JACKWELL CUM PUMPHOUSE

ಪ್ರಧಾನ ನೀರು ಸಂಗ್ರಹಣಾ ಜಲಾಶಯ –1



ಫಿಲ್ಟರ್ ಬೆಡ್ (ಶುದ್ಧೀಕರಣ ಪದರ)