



**Government of Andhra Pradesh**

**COMMON SCHEDULE OF RATES  
AS PER  
A.P. REVISED STANDARD  
DATA FOR THE YEAR 2018-19  
(Effective from 1<sup>st</sup> June, 2018)**

**BOARD OF CHIEF ENGINEERS**



## MASTER INDEX

SL.No.	Description	Page No.	
		From	To
1	Part-I(Water Resources Department Work Items)	1	44
2	Part-II (Roads & Bridge Works)	1	29
3	Part-IV(Public Health Works)	1	95
5	Annexure-Latest G.O. on Seigniorage Charges	1	3

**Office of the Engineer-in-Chief(I.W)  
Currency Nagar, Ramavarappadu,Vijayawada.**

**Procs.No.ENC/IW/P&M/EE.1/DEE-2/AEE(K)/ SoR 2018-19/Vol.2 dt: 23.08.2018**

**Sub:** Schedule of Rates for the year 2018-19 with basic rates (as per A.P.Revised Standard Data )-Water Resources Dept. Works(Part-I),Road & Bridge Works(Part-2) and Drinking water supply schemes(Part-4)-approved-Printing& Communication of SoRs-Reg.

**Ref:** 1)G.O.Ms.No.49,I&CAD (PW:Reforms)Dept., dt:2.3.2009  
2)ENC(PH) Lr.No.146/T4/SoR 2018-19 dt:15.06.2018.  
3)ENC(R&B) Lr.No.SoR-II/ ENC/ DEC(R)/ EE(TEC)/ DEE 7/AEE2 /2018 dt:15.06.2018.  
4)Industrial Consumer Price Index points obtained from Commissioner, Labour Department for the months of April,2018 to September,2018  
5)Minutes of BOCEs meeting for Schedule of Rates held on 26.06.2018 ,13-07-2018, 03.08.2018, 13.08.2018 and 16.08.2018.

\*\*\*\*

The Government have approved A.P.Revised Standard Data vide ref 1<sup>st</sup> cited. The Schedule of Rates with basic rates as per A.P.Revised Standard Data for the year 2018-19 is approved based on the following:

The ENC(R&B) vide ref. 3<sup>rd</sup> cited has furnished the draft basic rates exclusive of GST for Roads & Bridge items for the year 2018-19.

The Engineer-in-Chief, Public Health Department has furnished draft basic rates exclusive of GST for Public Health works items and Public Health Materials vide ref 2<sup>nd</sup> cited.

The Chief Engineer(R&B),Building & RSW has yet to furnish the Part-III of Common SoR i.e., Buildings.

For Water Resources Department work items, the regional Superintending Engineers: SE, IC, Dowlaiswaram, SE, IC, Chittoor and SE, IC, Vijayawada have submitted the draft basic rates of materials. The SE, IC, Guntur has furnished draft rates for Mechanical and Workshop items. Accordingly, the draft rates for Water Resources Department are prepared.

The labour wages are finalized based on market rates duly keeping in view of the minimum wages calculated from the index points obtained from the Commissioner, Labour Department vide ref 4<sup>th</sup> cited for finalizing the Labour rates for SoR 2018-19.

Based on the above proposals, the draft Schedule of Rates for the parts I(WR items), Part-II(Roads & Bridge items) & Part-IV(PH items) are prepared for the SoR year 2018-19 and placed before the annual Board of Chief Engineers(BoCEs) meeting for approval. The BoCEs has reviewed and finalized the rates of above three parts during the meetings held on 26.06.2018,13-07-2018,03.08.2018 and 16.08.2018 in the conference hall of Engineer-in-chief(A.W/I.W),Vijayawada.

The procedure for the adoption of Water Resources work items, lead & lift charges (Common to all departments) is incorporated in the Annexure-A of SoR.

The approved basic rates are applicable to the datas as per A.P.Revised Standard Data approved by the Government vide G.O.1<sup>st</sup> cited.

For Roads & Bridge Works, the rates can be applied for MoRTH data as approved in the G.O. Ms. No. 2, Transport, Roads and Buildings (R-I) Dept., dt: 12.01.2015.

The lead & lift charges are common to all Engineering Departments. The detailed calculations are incorporated in the Lead & lift chapter in the WR Works (Part-I) of A.P.Revised Standard Data.

No other items other than the items communicated by this Office shall be introduced in the SoR.

The Heads of Department and Officers mentioned below are authorized to print the Schedule of Rates for the year 2018-19. Unauthorized printing & selling of the SoR is strictly prohibited.

Any discrepancies found (or) corrections required in SoR 2018-19 may be brought to the notice of undersigned for issuing corrections.

The revised rates will come into force from 1st June of 2018.

The receipt of the proceedings may be acknowledged.

**Encl: SoR 2018-19 containing Part-I(Water Resources Dept. works),Part-II(Roads & Bridge works) and Part-IV (Public Health Items)**

Sd/-K.Srinivas,dt:23.08.2018,  
Engineer-in-Chief(I.W.)  
Chairman, BOCE(SoR)

- I) Copy communicated to the Secretary to Govt., WR Dept., 4th Block, A.P.Secretariat Buildings, Vijayawada.
- II) Copy communicated to the following Heads of Departments along with Enclosures for information.
  1. Engineer-in-Chief (Admn.,NH &CRF), Roads & Buildings Department.
  2. Engineer-in-Chief (P.H.), Public Health Department.
  3. Engineer-in-Chief (P.R.), Panchayath Raj Department.
  4. Engineer-in-Chief (RWS) R W S, Department.
  5. Chief Engineer (Buildings&RSW), R&B Department.
- III) Copy of Scheduled of Rates 2018-19 with basic rates & Standard data, part-1 (WR Dept. works) communicated to the respective E-mail ids of all the Engineers-in-Chief, Chief Engineers and Regional Superintending Engineers of Irrigation circles of Vijayawada, Guntur, Dowlaiswaram and Chittoor of Water Resources Department for taking necessary action

Sd/-K.Srinivas,dt:23.08.2018,  
Engineer-in-Chief(I.W.)  
Chairman, BOCE(SoR)

**Important – Read The following**

**ANNEXURE- A**

**1)** The SPIU(Irrigation), Centre for Good Governance (CGG), Hyderabad has developed software package linking the basic input data of Irrigation with approved data of Water Resources work items.

**2)** The lead and lift charges are common to all Engineering Departments. The detailed calculations are incorporated in the Lead &Lift charges chapter in the Water Resources Department works (Part-1) of A.P. Revised standard data.

**The Leads for Steel shall be from the nearest market place to the project area**

**3)** The estimate sanctioning authority shall physically verify each and every Water Resources work item data incorporated in the estimate with basic input data before sanction of the estimate. **Any lapses or arithmetic errors arising in the sanction of data's /estimate due to adoption of the software package lies entirely on the concerned estimate sanctioning authority only.**

**4)** Any discrepancies / corrections required for improper basic input data appearing in the approved data's of Water Resources work items in the software package and hard copy of SoR & Standard data's (part-1) may be brought to the notice of undersigned for issuing corrections.

Sd/-K.Srinivas,dt:23.08.2018,  
Engineer-in-Chief(I.W.)  
Chairman, BOCE(SoR)

## Index – WR Items (Part-I)

Sl. No.	Description	Page No.s	
		From	To
1	Preamble	1	4
2	Labour Rates	5	9
3	Material Rates	10	35
4	Conveyance Charges of Materials	36	40
5	Hire Charges of Machinery	41	44

**PART-I**

**(WATER RESOURCES  
DEPARTMENT WORK ITEMS)**

# **PREAMBLE**

**PREAMBLE**

**I.0 AREA ALLOWANCES:**

**A) CORPORATIONS & MUNICIPALITIES:**

- a) (i) 25% extra over the rates on labour component of works is allowed in all Municipal Corporation Limits of Andhra Pradesh except Greater Visakhapatnam and Vijayawada municipal corporations (up to a belt of 12 Kms. from Municipal Corporation limits) and other corporations as notified by the Government from time to time.  
  
(ii) 40% extra over the rates on labour component of works for Greater Visakhapatnam and Vijayawada Municipal Corporation (up to a belt of 12 Kms. from Municipal Corporation limits).  
  
(iii) 40% extra over the rates on labour component of works for Amaravati Capital City area(217 sq.km) as declared by the Govt.vide G.O.Ms.No.141,MA&UD (M2)Dept., dt:09.06.2015(This is introduced as per the Govt instructions issued in Govt.memo.No.668755/Reforms/2017 d:14.07.2017).
- b) Allow 20% extra over basic rates on labour component of works in all District Headquarters and the remaining Municipal limits (up to a belt of 12 Kms from Municipal limits).
- c) For works at Tirumala Hills in Chittoor District, 40% extra over the basic rates of labour component is allowed.
- d) For works at Horsely hills in Chittoor District, 30% extra over the basic rates of labour component is allowed.
- e) For works located inside Tirumala Temple, 20% extra over the basic rate of labour component specified for Tirumala Hills is allowed.
- f) For Works located inside T.T.D Temples of Sri Padmavathi Ammavari Temple, Tiruchanoor, Sri Govindaraja Swamy Temple at Tirupathi, Sri Kapleswara Swamy Temple, Kapilatheerthm, Tirupathi and Sri Kalyana Venkateswara Swamy Temple, Srinivasa Mangapuram , 20% extra over the basic rates of labour component for Tirupathi Municipal Corporation is allowed.

**B) JAIL COMPOUNDS:**

20% extra is allowed over labour rates for the work in the Jail compounds. Only equivalent number of Man Mazdoor shall be provided in the Jail premises and no women Mazdoor are allowed inside.

**C) INDUSTRIAL AREA:**

a. 20% over basic rates on labour component works allowed for works situated within 10Kms belt of Industrial area of, Ibrahimpattanam, Vuyyuru, Jaggaiahpetta in Krishna District, Macherla, Gurajala, Challapalli in Guntur District Garividi in Vijayanagaram District, Renigunta in Chittoor District and Yerraguntla & Mangampet in Kadapa District, Hindupur, Tadipatri, Anantapur, Guntakal, Rayalcheruvu, Yadiki of Anantapur District and Adoni, Dhone,Cement Nagar, Nandyal, Kurnool, Yemmiganur & Bethamcherla of Kurnool District, Anakapally of Vishakhapatnam District.

**D) AGENCY / TRIBAL AREAS:**

- a) 25% extra is allowed for the works located within the interior Agency / Tribal limits, i.e. for the works located within & upto 16 KMs from any all weather route inside Agency / Tribal.
- b) 40% extra is allowed for the works located within the interior Agency / Tribal limits, i.e. for the works located beyond 16 KMs from any all weather route inside Agency / Tribal.

- NOTE:**
1. No extra percentage is permissible in respect of Forest produce such as Bamboo, Rellu grass and for all materials obtained from outside the Agency / Tribal.
  2. The extra percentage under Agency / Tribal areas allowance may be allowed on the labour component and on the labour charges in the rates for conveyance of materials.
  3. The extra percentage on cost of materials in Agency / Tribal areas can be allowed on the labour component only, if they are manufactured in the Agency / Tribal areas itself except Forest produce.

**E) GHAT ROADS:**

For Ghat Roads steeper than 1 in 20, the length of the road may be taken as 1.5 times the existing length of the road for the purpose of leads only for conveyance of materials based on the certificate for the Ghat Road given by the Superintending Engineer concerned.

**Foot Note:** Under compelling circumstances, the concerned Chief Engineer can adopt the equivalent length of road as 2 ½ times of actual length.

**Note below area allowances:**

*If more than one area allowance ( such as those ) for (1) Municipalities (2) Agency / Tribal areas (3) Industrial areas are applicable for a particular situation, only the maximum out of the allowable percentages is to be allowed.*

**2.0 EXCAVATION OF TRIAL TRENCHES, TRIAL PITS AND EXCAVATION IN RESTRICTED PLACES: -**

**I) EXCAVATION OF TRIAL TRENCHES, TRIAL PITS AND EXCAVATION IN RESTRICTED PLACES: -**

**A. TRIAL TRENCHES:**

- 1) Trial trenches of not more than 2 metres in width...25% extra

**B. TRIAL PITS:**

1) Up to 2 Metres depth	...	25% extra
2) 2 Metres to 4 Metres depth	...	50% extra
3) 4 Metres to 6 Metres depth	...	75% extra
4) 6 Metres to 8 Metres depth	...	100% extra
5) 8 Metres to 9 Metres depth	...	150% extra
6) More than 9 Metres depth	...	200% extra

**II) EXCAVATION IN RESTRICTED PLACES:-**

I) Foundation of Buildings	....	75% extra
II) For pipe lines where the depth is less than 1.5 times the width	....	75% extra
III) For pipe lines where the depth is 1.5 times or more than the width	....	120% extra
IV) Silt removal in restricted areas such U. T's., Culverts and Syphons	....	120% extra
V) Excavation of field channels	....	75% extra
VI) For narrow trenches not more than 2 meters in width and depth not less than twice the width and for excavation of road boundary drains, model sections of canals	....	75% extra
VII) High berm cutting of not more than 150 mm average thickness and sectioning for roads	....	50% extra

**Note:** 1) The extra percentage is allowed over Common item for all earth works (COM-MWRK- Manual Works) for corresponding soil and Standard data items. It includes the charges for all lifts and initial lead but does not include dewatering charges if any in respect of all the items under (A) and (B) above.

2) The above extra percentages in respect of excavation in hard rock for restricted places are to be allowed for (2/3)rd of the cost and shall not to be allowed in respect of items involving blasting component which may be taken as 1/3 of the cost.

**3.0 SEIGNIORAGE CHARGES:**

The rates of the materials indicated in the SOR are exclusive of Seigniorage Charges. Appropriate Seigniorage Charges for relevant materials are to be added to the Unit rate of work item in the estimates as fixed by the Government in G.O.Ms.No.100 (Industries and Commerce Dept.) dt: 31.10.2015. In case of revision, the revised rates as fixed by Mines and Geology Department have to be adopted.

# LABOUR RATES

**LABOUR RATES**

<b>Sl No.</b>	<b>CATEGORY OF WORKER</b>	<b>S. Rate for 2018-19</b>
<b>1</b>	<b>2</b>	<b>3</b>
<b>I.</b>	<b>SKILLED CATEGORY:</b>	
1	Bar bender	600
2	Black smith / Tin smith / Rivetor	475
3	Blaster	550
4	Carpenter Cl- I	550
5	Electrician ( Licensed )	555
6	Fitter Cl- I	520
7	Floor Polisher / Tile Layer	475
8	Foreman	550
9	Gauge reader	460
10	Maistry / Work Inspector with Non-technical Qualification SSLC/SSC/HSC	500
11	Mason Cl- I / Brick layer Cl- I	475
12	Mechanic Cl- I	510
13	Operator Air compressor / DG set	490
14	Operator Batching plant	550
15	Operator Bus/Ambulance/ Lorry/ Tanker	550
16	Operator Concrete / Asphalt mixer	490
17	Operator Concrete / Asphalt paver	490
18	Operator Concrete pump / Placer/ ice plant	490
19	Operator Core drilling machine	550
20	Operator Crane/ Tower crane/ Cable way	550
21	Operator Drilling jumbo / Loco / Winch	490
22	Operator Grouting/ Guniting/ Shotcreting	490
23	Operator Jackhammer/Pneumatic tamper	490
24	Operator Pump / Ventilation fan	490
25	Operator Lathe/Drilling/Shearing machine	550
26	Operator Bending / Planing machine	490
27	Operator Road roller	490

Sl No.	CATEGORY OF WORKER	S. Rate for 2018-19
1	2	3
28	Operator Shovel / Scraper / Dozer	550
29	Operator Spillway / Sluice gate	490
30	Operator Crusher / Conveyor / Mucker	490
31	Operator Tipper / Dumper / Transit mixer	550
32	Operator Concrete vibrator	490
33	Operator Vibratory plain / pad foot roller	490
34	Operator Wagon drill / Drifter	550
35	Painter Cl- I	550
36	Plumber / Pipe fitter	550
37	Sarang / Khalasi	490
38	Spun pipe moulder	490
39	Stone chiseller Cl- I / Stone cutter Cl- I	490
40	Struct. steel Fabricator / Marker / Erector	595
41	Welder / Gas Cutter	490
42	Welder (X-ray quality)	550
<b>II.</b>	<b>SEMI SKILLED CATEGORY:</b>	
1	Asphalt Sprayer / Boiler attendant	440
2	Bhisti	440
3	Boatman with boat	440
4	Carpenter Cl- II / Erector shuttering	440
5	Cartman with double bullock cart	500
6	Cartman with single bullock cart	465
7	Chavali / Navagani	440
8	Crowbarman / Jumper man	440
9	Fitter Cl- II	440
10	Gang man / Head / Survey mazdoor	440
11	Gardener / Trained mali	440
12	Air compressor / DG set	440
13	Helper Batching plant	440
14	Helper Blasting	440

Sl No.	CATEGORY OF WORKER	S. Rate for 2018-19
1	2	3
15	Helper Bus/ Ambulance/ Lorry/ Tanker	440
16	Helper Bending/Shearing/Planing machine	440
17	Helper Carpenter	440
18	Helper Concrete / Asphalt mixer	440
19	Helper Concrete / Asphalt paver	440
20	Helper Core drilling machine	440
21	Helper Crane/ Tower crane/ Cable way	440
22	Helper Drilling jumbo / Loco / Winch	440
23	Helper Fitter / Fabrication/Electrician	440
24	Helper Grouting/ Guniting/ Shotcreting	440
25	Helper Jack hammer / Pneumatic tamper	440
26	Helper Laboratory / Instrumentation	440
27	Helper Road roller	440
28	Helper Shovel / Scraper / Dozer	440
29	Helper Crusher / Conveyor / Mucker	440
30	Helper Tipper / Dumper/ Transit mixer	440
31	Helper Vibrator	440
32	Helper Vibratory plain/ pad foot roller	440
33	Helper Wagon drill/ Drifter	440
34	Lineman Electric / Telephone	440
35	Mason Cl- II / Brick layer Cl-II	440
36	Mechanic Cl- II	440
37	Painter Cl- II	440
38	Patkari / Neeraganti / Sowdy	440
39	Stone Chiseller Cl- II	440
40	Stone breaker / Hammer man	440
41	Valve man / Canal sluice operator	440
<b>III.</b>	<b>UN-SKILLED CATEGORY:</b>	
1	Cement / Asphalt handling mazdoor	400
2	Civic worker	400
3	Man mazdoor	400

Sl No.	CATEGORY OF WORKER	S. Rate for 2018-19
1	2	3
4	Woman mazdoor	400
5	Watchman	400
<b>IV. OTHER CATEGORY:</b>		
1	Care-taker / conductor / Lift Attender	450
2	Cook / Mess man	450
3	Dhobi	450
4	Diploma Engineer / Surveyor	725
5	Diver with headgear	560
6	Graduate / Laboratory Assistant	560
7	Graduate Engineer/ Geologist	935
8	Horticulture Assistant / Photographer	460
9	ITI certificate holder / Tracer / Printer	560
10	Literate mazdoor	435
11	Stenographer / Computer Operator	610
12	Telephone / Wireless Operator	550
13	Typist / Job Typist	550
14	CAD operator with Diploma in Engineering/General degree with CAD certificate	750
15	Jeep Driver	545
16	Data Processing Operator	750

**Note:** - 1)The wage should not be less than the minimum wages of schedule of employment, subject to out turn. 2) 25% extra over the corresponding labour rates in respect of the work to be done during night time subject to issue of certificate accordingly by the concerned estimate sanctioning authority for providing in the data and by concerned Executive Engineer in charge of the work for payment. The night time allowance is applicable only to the works done under Greater Visakhapatnam Municipal Corporation and Vijayawada Municipal Corporation limits only.

# **BASIC INPUT DATA FOR WATER RESOURCE WORK ITEMS**

**STATEMENT OF RATES FOR MATERIALS FOR  
THE YEAR : 2018-19  
GENERAL GUIDE LINES FOR REVISING RATES OF MATERIALS:**

- 1 Average of the prevailing market rates, ignoring freak rates, is the criteria for Fixing market rates for materials.
- 2 The rates for materials are **exclusive of GST**, duties and other local levies.
- 3 The rates for materials are **exclusive of** Seigniorage charges wherever applicable.
- 4 The rates for materials, except those for which lead charges are admissible as per the Statement of lead charges is for all leads.
5. The rates provided for useful rubble / stone chips from excavation shall be at dump yard.
6. Unless otherwise specified the rate of materials are inclusive of loading charges.

Sl No.	DESCRIPTION OF MATERIAL	UNIT	S. Rate for 2018-19
1	2	3	4
1	Acetylene gas	cum	293
2	Asphalt 80/100 Grade	Kg	39
3	Binding wire	Kg	53
4	Burnt stone slab 10 cm thick	sqm	271
5	Cement 43 Gr/53 Gr <b>Note: Rate as fixed by the Government</b>	tonne	3882
6	Chequered plate	Kg	55
7	Coarse aggregate 10-4.75 mm	cum	860
8	Coarse aggregate 20-10 mm	cum	1182
9	Coarse aggregate 40-20 mm	cum	1133
10	Coarse aggregate 80-40 mm	cum	622
	The aggregate rates mentioned above (from Sl.No.7 to Sl.No.10) are <b>exclusive of Seigniorage charges but</b> including blasting charges of Rs.70/cum and 25% machine crushing charges. However, if the metal is obtained from hand broken, the blasting and crushing charges shall be deducted. The aggregate shall be HB Stone of Granite, Dolomite, Dolerite and Trap. (Quartzite and Basalt with aggregate impact of less than 20)		
11	Coir brush	Each	39

**Part I-Basic Input data for WR Work items – Common SoR 2018-19**

<b>Sl No.</b>	<b>DESCRIPTION OF MATERIAL</b>	<b>UNIT</b>	<b>S. Rate for 2018-19</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
12	Copper sheet 16 SWG	kg	606
13	Coursed rubble stone 30 x 30 x 45 cm	Each	23
14	Coursed rubble stone 30 x 30 x 60 cm	Each	26
15	Curing Compound	Ltr	107
16	D – cord	Rm	6
17	Delay - noiseless trunk	Each	16
18	Detonating fuse coil	Rm	7
19	Detonating shock tube / Cord relays	Rm	32
20	Detonator delay type	Each	17
21	Detonator electric	Each	9
22	Detonator ordinary	Each	5
23	Empty cement bag	Each	5
24	Explosive ANFO	kg	39
25	Explosive ANFO high strength booster	kg	60
26	Explosive small dia ( Kelvex-220 or equivalent)	kg	56
27	(a)Fine aggregate/ sand(un- screened) for Concrete & Filtering items)	cum	100
	(b)Fineaggregate/Sand(unscreened)for filling		100
28	Fine aggregate /Sand (Screened) for Mortar ,Plastering items and Sand blasting items ( <b>Rs.82 is added towards screening Charges</b> )	cum	182
29	Geo-textile ( filter fabric ) 160 gsm	sqm	85
30	Geo-textile ( filter fabric ) 200 gsm	sqm	101
31	Geo-textile ( filter fabric ) 250 gsm	sqm	116
32	G I Pipe 100 mm dia B Class	Rm	675
33	G I Pipe 15 mm dia A class	Rm	80
34	G I pipe 25 mm dia A class	Rm	140
35	G I pipe 40 mm dia B class	Rm	218

**Part I-Basic Input data for WR Work items – Common SoR 2018-19**

<b>Sl No.</b>	<b>DESCRIPTION OF MATERIAL</b>	<b>UNIT</b>	<b>S. Rate for 2018-19</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
36	G I pipe 50 mm dia A class	Rm	250
37	G I Pipe 80 mm dia B Class	Rm	428
38	G.I Bolts / Nuts and Washers	kg	88
39	G.I sheet ( plain )	tonne	53333
40	Hariyala turfing sods	sqm	24
41	Hectometer stone one line dressed	Each	248
42	Hemp yarn	kg	61
43	Honne wood planks	cum	41921
44	Hume pipe with collar 150 mm dia	Rm	233
45	Hume pipe with collar 300 mm dia	Rm	508
46	J- Bolts 30 cm long	Each	31
47	Jungle wood planks	cum	17855
48	Khandki stone 15 to 20 cm height	Each	11
49	Khandki stone 20 to 25 cm height	Each	14
50	Khandki stone 25 to 30 cm height	Each	16
51	Kilometer stone one line dressed	Each	457
52	LDPE sheet ( Geo membrane ) 500 micron thick	sqm	78
53	LDPE sheet ( Geo membrane ) 750 micron thick	sqm	114
54	LDPE sheet ( Geo membrane ) 1000 micron thick	sqm	157
55	M S Bolts / Nuts / Washers	kg	68
56	Murum	cum	185
57	Oxalic acid	Ltr	68
58	Oxygen gas	cum	36
59	PVC sealing strip	Rm	38
60	PVC water stopper 310 mm wide	Rm	398
61	PVC pipe of 100 mm dia	Rm	144
62	Reinforcement steel (HYSD/TMT ) <b>Note: As per Monthly rate fixed by Sub-Committee</b>	tonne	<b>42,000(Rate for 5/2018)</b>

**Part I-Basic Input data for WR Work items – Common SoR 2018-19**

<b>Sl No.</b>	<b>DESCRIPTION OF MATERIAL</b>	<b>UNIT</b>	<b>S. Rate for 2018-19</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
63	Resin bond Cement capsule	Each	42
64	Rough stone 20 x 20 x 75 cm	Each	22
65	Shahabad stone slab	sqm	224
66	Stone chips (at dump yard/Spoil )	cum	176
67	Stone chips ( at quarry )	cum	333
68	Structural steel angle / channel / beam / bars <b>Note: As per Monthly rate fixed by Sub-Committee</b>	tonne	<b>41,300(Rate for 5/2018)</b>
69	Structural steel plate / flats <b>Note: As per Monthly rate fixed by Sub-Committee</b>	tonne	<b>41,200(Rate for 5/2018)</b>
70	Super Plasticizer (Conplast RP-264 or equivalent )	kg	43
71	Synthetic Enamel paint 1st quality	Ltr	222
72	Synthetic adhesive ( Resin + Hardener )	Kg	280
73	Tar felt joint filler board 12 mm thick	sqm	322
74	Tar felt joint filler board 20 mm thick	sqm	489
75	Through stones 20 x 20 x 30 to 45 cm	Each	21
76	Through stones 25 x 25 x 45 to 60 cm long	Each	37
77	Through stones 30 x 30 x 65 to 75 cm long	Each	56
78	Un-coursed rubble stones ( at dump yard /Spoil)	cum	148
79	Un-coursed rubble stones ( at quarry)	cum	303
80	Water proofing compound	kg	64
81	Welding electrodes 4 mm dia	Each	11
82	Wire brush	Each	36

**Part I-Basic Input data for WR Work items – Common SoR 2018-19**

<b>Sl No.</b>	<b>DESCRIPTION OF MATERIAL</b>	<b>UNIT</b>	<b>S. Rate for 2018-19</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
83	Wire mesh 20 gauge	sqm	205
84	Zinc chromate red oxide primer paint	Ltr	144
85	inorganic zinc silicate	Ltr	481
86	solvent less coal tar epoxy paint	Ltr	234
87	Zinc phosphate primer	Ltr	178
88	Allkyd based iron oxide paint	Ltr	144
89	a) Cost of hdpe (90mm dia)	Rm	195
	b) light black MS casing pipe 100 mm dia (4mm thick)	Rm	406
90	welded steel wire fabric 100X100X5 mm size	Kg	168
91	Protective Mastic	Ltr	399
92	Solventless coal tar epoxy (brown)	Ltr	256

**ADDITIONAL MATERIALS FOR G A T E S & HOISTS  
FOR THE YEAR: 2018-19**

**GUIDE LINES:**

- a. For cast steel / Alloy steel / Forged steel / Bronze, aluminum alloy components the rates shall be inclusive of cost of basic metal for these components, casting / forging charges, machining charges and applicable excise duty on finished alloy component.
- b. For other materials the rates shall be prevailing market rates.

<b>Sl No.</b>	<b>DESCRIPTION OF MATERIAL</b>	<b>UNIT</b>	<b>S. Rate for 2018-19</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
1	Alloy steel ( IS : 1570-carbon steel ) shafts	Kg	213
2	Alloy steel ( IS : 1570-stainless steel ) pins	Kg	408
3	Bolt / Nut / Washer ( hot dipped galvanized )	Kg	127
4	Bolt / Nut / Washer ( stainless steel )	Kg	331
5	Bronze/Aluminum alloy(IS:305)bearings/bushes	Kg	878
6	Cast iron blocks	Kg	77
7	Cast steel drums / gears	Kg	213
8	Cast steel pinions	Kg	204
9	Cast steel wheels / pulleys / hubs / rollers / Retainers	Kg	172
10	Chemical for de-greasing/ de-rusting/phosphate	Ltr	111
11	Coal tar epoxy paint	Ltr	172
12	Forged steel hooks / shackles	Kg	244
13	MS pipe 200 / 300 mm dia	Kg	158
14	MS pipe 32 mm dia	Rm	167
15	MS pipe 25 mm dia	Rm	135
16	Rubber bottom seal ( IS : 11855 ) (100mmX14 mm)	Rm	606
17	Rubber side seal ( music note type Teflon claded ) ( IS : 11855 ) (36ØX113mmX14mm)	Rm	1296
18	Rubber side seal ( music note type uncladed ) ( IS : 11855 ) (36ØX113mmX14mm)	Rm	939
19	Rubber side seal Z-type ( IS : 11855 ) (36ØX120mmX19mm)	Rm	1242

**Part I-Basic Input data for WR Work items – Common SoR 2018-19**

<b>Sl No.</b>	<b>DESCRIPTION OF MATERIAL</b>	<b>UNIT</b>	<b>S. Rate for 2018-19</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
20	Rubber corner seal ( Teflon claded ) ( IS : 11855 ) (36Ø)	Each	1303
21	Rubber corner seal ( un claded ) ( IS : 11855 ) (36Ø)	Each	920
22	Stainless steel plates / flats	Kg	41.20
23	Welding electrode 4 mm dia x 450 mm ( radiographic low hydrogen )	Each	14
24	Welding electrode 4 mm dia x 450 mm ( stainless steel )	Each	20
25	Wire rope 6x37 constn ( IS : 2266 )	Kg	169
26	Zinc	Kg	175
27	Zinc rich ( zinc content : 90 % ) epoxy primer	Ltr	559

**MATERIALS FOR POWER SUPPLY WORKS FOR THE YEAR : 2018-19**

<b>Sl No.</b>	<b>Description of Material</b>	<b>Unit</b>	<b>S. Rate for 2018-19</b>
1	Electric pole with fixtures	Each	For establishing Electrical Sub-Stations at the Project Sites wherever necessary, the rates approved by APTRANSCO may be followed.
2	Flood light 500 W	Each	
3	Flood light set	Each	
4	Flousscent tube light 40 W	Each	
5	Flousscent tube light set	Each	
6	HT / LT Circuit breaker with accessories	Set	
7	HT / LT Line conductor	1000 m	
8	PVC Armoured cable 10 sqmm and below	Rm	
9	PVC Armoured cable 16 sqmm	Rm	
10	PVC Armoured cable 25 sqmm	Rm	
11	PVC Armoured cable 70 sqmm	Rm	

**DETAILS OF CAPITAL COST OF MACHINERY / EQUIPMENT FOR THE  
YEAR: 2018-19**

**GUIDE LINES FOR FIXING CAPITAL COST OF MACHINERY / EQUIPMENT:**

1. The Capital cost of machinery / equipment shall be for new machinery / equipment and shall be exclusive of GST, duties, other levies.
2. The cost of transport vehicles / equipment shall be exclusive of cost of tyres and tubes.
3. The cost of drill rods / drill bits / air hose / water hose / road tax / insurance charges and Other consumable accessories shall not be included in the capital cost.
4. In cases, where the current capital cost of machinery / equipment could not be collected through enquiries, the capital cost considered for previous year may be updated on the basis of average percentage increase / decrease in the index for machinery published in the R.B.I Bulletin.

<b>Sl No:</b>	<b>DESCRIPTION OF MACHINERY / EQUIPMENT</b>	<b>UNIT</b>	<b>S. Rate for 2018-19</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
1	Agitator car / Transit mixer 2 cum ( excluding tyres )	Each	17,49,210
	tyres and tubes 6 sets		69,970
2	Air compressor 5 cmm electric	Each	5,77,650
3	Air compressor 7 cmm diesel	Each	7,72,910
4	Air compressor 7 cmm electric	Each	7,03,750
5	Air compressor 8.5 cmm diesel	Each	8,82,740
6	Air compressor 8.5 cmm electric	Each	9,11,220
7	Air compressor 15 cmm electric	Each	11,14,610
8	Angle Dozer 90 hp	Each	44,54,380
9	Batching plant 0.5 cum with accessories(6 Cum/hr)	Each	9,76,300
10	Batching plant 2 x 1.00 cum with accessories ( 15 Cum/hr)	Each	34,53,670
11	Batching plant 2 x 1.50 cum with accessories ( 50 Cum/hr)	Each	52,88,310
12	Bending machine	Each	4,70,210
13	Clamp shell and hoisting ropes	Each	26,620
14	Concrete bucket 1.5 cum	Each	45,560
15	Concrete hand mixer 45/30 ltr	Each	12,610
16	Concrete mixer 300/200 ltr(diesel)	Each	1,22,040
17	Concrete mixer 300/200 ltr ( electric )	Each	1,17,970
18	Concrete mixer 600/400 ltr(diesel)	Each	2,11,530
19	Concrete mixer 600/400 ltr ( electric )	Each	2,07,460

**Part I-Basic Input data for WR Work items – Common SoR 2018-19**

<b>Sl No:</b>	<b>DESCRIPTION OF MACHINERY / EQUIPMENT</b>	<b>UNIT</b>	<b>S. Rate for 2018-19</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
20	Concrete paver 100 Sqm / hr	Each	19,20,880
21	Convey mucker ( excluding tyres )	Each	31,36,370
	tyres and tubes 6 sets		69,970
22	Core drilling machine	Each	8,94,940
23	Diesel generating set 30 KVA	Each	4,02,720
24	Diesel generating set 50 KVA	Each	5,20,690
25	Diesel Loco 45 hp	Each	17,24,800
26	Dewatering pump 5 hp diesel	Each	32,540
27	Dewatering pump 5 hp electric	Each	19,930
28	Dewatering pump 10 hp diesel	Each	48,820
29	Dewatering pump 10 hp electric	Each	44,750
30	Dewatering pump 20 hp diesel	Each	1,54,580
31	Dewatering pump 20 hp electric	Each	81,360
32	Drifter	Each	8,60,770
33	Drilling jumbo ( excluding tyres )	Each	10,59,290
	tyres and tubes 6 sets		69,970
34	Dumper 4.5 cum ( excluding tyres )	Each	11,79,700
	tyres and tubes 6 sets		69,970
35	Geophysical Ele.resistivity meter	Each	4,34,760
36	Grouting pump	Each	82,990
37	Guniting / sand blasting equipment	Each	2,48,410
38	Ice plant with accessories 30 t / day	Each	20,86,850
39	Jack hammer	Each	52,880
40	Needle vibrator 40 mm petrol	Each	16,270
41	Needle vibrator 40 mm electric	Each	17,090
42	Needle vibrator 60 mm petrol	Each	17,490
43	Needle vibrator 60 mm electric	Each	20,750
44	Planing machine 4 m stroke	Each	6,92,010
45	Plate shearing machine up to 12 mm	Each	3,77,060

**Part I-Basic Input data for WR Work items – Common SoR 2018-19**

<b>Sl No:</b>	<b>DESCRIPTION OF MACHINERY / EQUIPMENT</b>	<b>UNIT</b>	<b>S. Rate for 2018-19</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
46	Pneumatic placer 0.5 cum	Each	4,71,880
47	Pneumatic tamper	Each	69,150
48	Pug cutting machine	Each	14,200
49	Pusher leg	Each	46,130
50	Road roller diesel 10 t	Each	6,91,550
51	Shovel 0.50 cum 75 hp	Each	30,50,950
52	Shovel 0.85 cum 110 hp	Each	51,90,680
53	Stationery derrick crane 5 t	Each	5,31,270
54	Tipper 5 cum ( excluding tyres )	Each	13,22,080
	tyres and tubes 6 sets		69,970
55	Tipping tub 1.5 cum	Each	1,95,260
56	Tower crane 5 tonne	Each	60,81,550
57	Transformer 250 KVA	Each	4,24,190
58	Truck 10 t ( excluding tyres )	Each	12,00,040
	tyres and tubes 6 sets		69,970
59	Truck mounted derrick crane 5 t ( excluding tyres )	Each	15,94,630
	tyres and tubes 6 sets		69,970
60	Upright drilling machine	Each	45,560
61	Ventilation fan 20 hp	Each	2,30,670
62	Vibratory pad foot roller 8 t	Each	24,00,080
63	Wagon drill	Each	5,28,830
64	Water tanker 8000 ltr (excluding tyres)	Each	13,01,530
	tyres and tubes 6 sets		69,970
65	Welding set	Each	42,300
66	Winch 35 hp electric	Each	305100
67	Hydraulic Truck Crane 30T	Each	117,84,180
	tyres and tubes 6 sets		1,50,690
68	Hydraulic Truck Crane 16T	Each	84,53,870
	tyres and tubes 6 sets		1,50,690

**Part I-Basic Input data for WR Work items – Common SoR 2018-19**

<b>Sl No:</b>	<b>DESCRIPTION OF MACHINERY / EQUIPMENT</b>	<b>UNIT</b>	<b>S. Rate for 2018-19</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
69	Heavy Duty Airless Spray Painting Equipment	Each	3,96,840
70	Concrete Placer Pump(25 Cum/hr)(Electric)	Each	27,69,800

**ACCESSORIES TO MACHINERY / EQUIPMENT FOR THE YEAR : 2018-19**

<b>Sl No.</b>	<b>DESCRIPTION OF MATERIAL</b>	<b>UNIT</b>	<b>S Rate for 2018-19</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
1	Casing shoe bit	Each	10,480
2	Diamond core bit BX size	Each	10,580
3	Diamond core bit NX size	Each	12,700
4	Double tube core barrel	Each	13,540
5	Extension drill rod with coupling sleeve	Rm	1,880
6	Jack hammer drill rod 1.5 m	Each	3,570
7	Jack hammer drill rod 2.5 m	Each	5,550
8	Nozzle for Guniting / sand blasting gun	Each	620
9	Paving Cylinder	Each	28,030
10	Rails 30R ( 30 kg / m )	tonne	51,400
11	Reamer shell	Each	5,140
12	T.C. Cross bit 50 mm dia	Each	4,990
13	T.C. Cross bit 75 mm dia	Each	9,980
14	T.C. Cross bit 100 mm dia	Each	11,980
15	Tyres and Tubes for truck	Set	14,580
16	Wire rope 16 mm dia	Rm	260
17	Excavation of drain with Excavator	cum	37

**AGGREGATE CRUSHING & PROCESSING PLANT**

Sl No.	DESCRIPTION OF MATERIAL	UNIT	S Rate for 2018-19
1	2	3	4
1	Jaw crusher 900 x 500 mm ( 120 tph ) with 50 hp motor	Each	These items are no where being used in the Standard Data. Hence this may be deleted from SoR
2	Jaw crusher 500 x 300 mm ( 60 tph ) with 30 hp motor	Each	
3	Jaw crusher 400 x 225 mm ( 10 tph ) with 25 hp motor	Each	
4	Jaw plates 900 x 500 mm ( serreted )	Set	
5	Jaw plates 500 x 300 mm ( serreted )	Set	
6	Jaw plates 400 x 225 mm ( serreted )	Set	
7	Nylon Conveyor belt 3 ply 600 mm width	Rm	
8	Nylon Conveyor belt 3 ply 1000 mm width	Rm	

**OTHER COSTS ON MATERIAL / MACHINERY / EQUIPMENT FOR THE YEAR : 2018-19**

1. The rate provided for ' SUNDRIES' (Lump sum provision for unquantified inputs in the data rates) shall be updated on the basis of general percentage increase / decrease in the market rates or on the basis of R.B.I ' All Commodity' index.
2. The rate for structural steel fabrication shall include cost of all materials (except structural steel), machinery, labour and one coat of primer painting.
3. Demand charges and electric power charges shall be as per prevailing APEPDCL tariff.
4. Rate of interest on capital cost shall be as approved by Govt or other competent authority.

Sl No.	DESCRIPTION OF MATERIAL	UNIT	S Rate for 2018-19
1	2	3	4
1	Air hose 25 mm dia	Rm	164
2	Air hose 50 mm dia	Rm	254
3	Demand charges (HT-I : General-11 KV category) on power supply(as per APEPDCL tariff)	KVA / month	475
4	Diesel	Ltr	75.75
5	Electric power (HT-VIII Category) including tax ( 1.5 times of the Tariff of HT-I(A):General-11 KVA Category) (as per APEPDCL tariff)	Kwhr	9.50
6	Excise duty on Gates / Hoist supplies	%	0%
7	Insurance charges on machinery	% / annum	1%
8	Interest on capital cost	% / annum	11.00%

**Part I-Basic Input data for WR Work items – Common SoR 2018-19**

<b>Sl No.</b>	<b>DESCRIPTION OF MATERIAL</b>	<b>UNIT</b>	<b>S Rate for 2018-19</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
9	Lubricants	Ltr	220
10	Petrol	Ltr	84.37
11	Rivets	Kg	85
12	Road tax on transport vehicles	Rs./annum	As per RTA
13	Shalimatic sealing compound	Kg	85
14	Shutter oil	Ltr	44
15	Structural steel fabrication	Kg	28
16	Sundries ( Lump sum for un quantified inputs )	LS	31
17	Water hose ( pressure ) 20 mm dia	Rm	164
18	Steel wedges	LS	15
19	Elbows / Nipple / Plugs etc.,	LS	15
20	Soldering materials	LS	15
21	Steam circulation arrangement	LS	15
22	Fuel charges ( gas for heating )	LS	17
23	Vulcanizing materials	LS	18
24	Other accessories / controls / junctions	LS	Deleted
25	Miscellaneous fittings / switches etc	LS	Deleted
26	Anchors / supports for cables / lights	LS	Deleted
27	Civil works for foundations / pedestals / duct etc	LS	Deleted
28	Gas cutting set ( 2 No's 15 m hose and nozzle unit )	Each	12,797
29	Grease	Kg	243
30	Welding holder set ( cable / holder / gloves / mask etc )	Each	6,884
31	Use rate of ropes	LS	156

**MATERIALS FOR GATES AND HOISTS  
FOR THE YEAR : 2018-19**

<b>Sl No.</b>	<b>DESCRIPTION OF MATERIAL</b>	<b>UNIT</b>	<b>S Rate for 2018-19</b>
1	Worm reducers	Each	1,74,210
2	Electric motor 20 hp(Double Shaft)	Each	93,970
3	Electric motor 17.5 hp(Double Shaft)	Each	66,610
4	Electric motor 12.5 hp(Double Shaft)	Each	56,360
5	Electric motor 5 hp(Double Shaft)	Each	25,620
6	Electric motor 3 hp (Double Shaft)	Each	17,930
7	Electric motor 2 hp (Double Shaft)	Each	9,790
8	Floating shaft 300 mm dia	Kg	150
9	Manual operating system	Each	26,240
10	Gate position indicator	Each	1,58,460
11	Ele-magnetic brake	Each	27,330
12	Electric cable / switch / control panel etc	LS	44,460
13	Wire rope sockets	Each	4,300

**Materials other than covered under WR Work  
items For the year 2018-19  
GENERAL GUIDE LINES FOR REVISING RATES OF MATERIALS:**

1. Average of the prevailing market rates, ignoring freak rates, is the criteria for Fixing market rates for materials.
2. The rates for materials is inclusive of GST, duties and other local levies.
3. The rates for materials are **exclusive of** Seigniorage charges wherever applicable.
4. The rates for materials, except those for which lead charges are admissible as per the Statement of lead charges is for all leads.

Sl. No.	Description	Unit	S. Rate for 2018-19
1	2	3	4
M-002	Quarried stone 150 - 200 mm size for Hand Broken	Cum	140
M-003	Boulder with minimum size of 300 mm for Pitching	Cum	156
M-004	Coarse sand for filling	Cum	Rate as per item no.27(b) of material of WRD
M-005	Coarse sand for mortar	Cum	Rate as per item no.27(a) of material of WRD
M-006	Fine Sand	Cum	Rate as per item no.28 of material of WRD
M-007	Murum	Cum	Rate as per item no.56 of Material rates of WRD.
M-008	Gravel/Quarry spall	Cum	110
M-009	Granular Material or hard Murum for GSB works	Cum	Deleted
M-010	Granular Material or hard Murum for GSB works	Cum	92
M-011	Fly ash conforming to IS: 3812 ( Part II & I)	Cum	61
	For item No.M-012 to M-055 the note shall be as follows 1) The rates mentioned are <b>exclusive</b> of Seigniorage charges <b>but inclusive of</b> blasting charges of Rs.70/cum and 25% machine crushing charges. However, if the metal is obtained by hand broken, machine crushing charges shall be deducted. 2) If the material is obtained by hand broken from surface boulders/canal spoil, the blasting and crushing charges shall be deducted. 3)The material shall be HB Stone of Granite, Dolomite, Dolerite and Trap.(Quartzite and Basalt with aggregate impact of less than 20)		

**Part I - Materials not covered under WR Work items basic data– Common SoR 2018-19**

<b>Sl. No.</b>	<b>Description</b>	<b>Unit</b>	<b>S. Rate for 2018-19</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
M-012	Filter media/Filter Material as per Table 300-3 (MoRT&H Specification)	Cum	332
M-013	Close graded Granular sub-base Material 53 mm to 9.5 mm	Cum	639
M-014	Close graded Granular sub-base Material 37.5 mm to 9.5 mm	Cum	656
M-015	Close graded Granular sub-base Material 26.5 mm to 9.5 mm	Cum	680
M-016	Close graded Granular sub-base Material 9.5 mm to 4.75 mm	Cum	567
M-017	Close graded Granular sub-base Material 9.5 mm to 2.36 mm	Cum	558
M-018	Close graded Granular sub-base Material 4.75mm to 2.36 mm	Cum	489
M-019	Close graded Granular sub-base Material 4.75mm to 75 micron mm.	cum	469
M-020	Close graded Granular sub-base Material 2.36 mm	Cum	469
M-021	Stone crusher dust finer than 3mm with not more than 10% passing 0.075 sieve.	Cum	343
M-022	Coarse graded Granular sub-base Material 2.36 mm & below	Cum	420
M-023	Coarse graded Granular sub-base Material 4.75mm to 75 micron mm	cum	455
M-024	Coarse graded Granular sub-base Material 4.75 mm to 2.36 mm	Cum	455
M-025	Coarse graded Granular sub-base Material 9.5 mm to 4.75 mm	Cum	538
M-026	Coarse graded Granular sub-base Material 26.5 mm to 4.75 mm	Cum	593
M-027	Coarse graded Granular sub-base Material 26.5 mm to 9.5 mm	Cum	594
M-028	Coarse graded Granular sub-base Material 37.5 mm to 9.5 mm	Cum	656
M-029	Coarse graded Granular sub-base Material 53 mm to 26.5mm	Cum	813
M-030	Aggregates below 5.6 mm	Cum	534
M-031	Aggregates 22.4 mm to 2.36 mm	Cum	874
M-032	Aggregates 22.4 mm to 5.6 mm	Cum	994
M-033	Aggregates 45 mm to 2.8 mm	Cum	639

**Part I - Materials not covered under WR Work items basic data– Common SoR 2018-19**

<b>Sl. No.</b>	<b>Description</b>	<b>Unit</b>	<b>S. Rate for 2018-19</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
M-034	Aggregates 45 mm to 22.4 mm	Cum	Rate as per item no.9 of Material rates of WRD.
M-035	Aggregates 53 mm to 2.8 mm	Cum	874
M-036	Aggregates 53 mm to 22.4 mm	Cum	834
M-037	Aggregates 63 mm to 2.8 mm	Cum	683
M-038	Aggregates 63 mm to 45 mm	Cum	634
M-039	Aggregates 90 mm to 45 mm	Cum	Rate as per item no.10 of Material rates of WRD.
M-040	Aggregates 10 mm to 5 mm	Cum	Rate as per item no.7 of Material rates of WRD.
M-041	Aggregates 11.2 mm to 0.09 mm	Cum	674
M-042	Aggregates 13.2 mm to 0.09 mm	Cum	763
M-043	Aggregates 13.2 mm to 5.6 mm	Cum	879
M-044	Aggregates 13.2 mm to 10 mm	Cum	983
M-045	Aggregates 20 mm to 10 mm	Cum	Rate as per item no.8 of Material rates of WRD.
M-046	Aggregates 25 mm to 10 mm	Cum	1079
M-047	Aggregates 19 mm to 6 mm	Cum	994
M-048	Aggregates 37.5 mm to 19 mm	Cum	1054
M-049	Aggregates 37.5 mm to 25 mm	Cum	1094
M-050	Aggregates 6 mm nominal size	Cum	703
M-051	Aggregates 10 mm nominal size	Cum	894
M-052	Aggregates 13.2/12.5 mm nominal size	Cum	1048
M-053	Aggregates 20 mm nominal size	Cum	1303
M-054	Aggregates 25 mm nominal size	Cum	1254

**Part I - Materials not covered under WR Work items basic data – Common SoR 2018-19**

<b>Sl. No.</b>	<b>Description</b>	<b>Unit</b>	<b>S. Rate for 2018-19</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
M-055	Aggregates 40 mm nominal size	Cum	808
M-056	AC pipe 100 mm dia	Metre	Rate as per PH item
M-057	Acrylic polymer bonding coat	Litre	451
M-058	Aluminum Paint	Litre	256
M-059	Aluminum alloy plate 2mm Thick	Sqm	323
M-060	Aluminum alloy/Galvanized steel	Tonne	60,047
M-061	Aluminum sheeting fixed with encapsulated lens type reflective sheeting including 2% towards lettering, cost of angle iron, cost of drilling holes, nuts, bolts etc. and signs as applicable	Sqm	819
M-062	Aluminum studs 100 x 100 mm fitted with lens reflectors	No's	As per local market rate
M-063	Barbed wire	Kg	68
M-064	Bearing (Cost of parts)	No's	483
M-065	Bearing (Cast steel rocker bearing assembly of 250 tonne )	No's	665
M-066	Bearing (Elastomeric bearing assembly consisting of 7 internal layers of elastomer bonded to 6 nos. internal reinforcing steel laminates by the process of vulcanization,)	Cm <sup>3</sup>	As per Market Competitive rates.
M-067	Bearing (Forged steel roller bearing of 250 tonne)	No's	
M-068	Bearing (Pot type bearing assembly consisting of a metal piston supported by a disc, PTFE pads providing sliding surfaces against stainless steel mating together with cast steel assemblies/fabricated structural steel assemblies duly painted with all components	No's	
M-069	Bearing (PTFE sliding plate bearing assembly of 80 tonnes )	No's	
M-070	Bearing (Supply of sliding plate bearing of 80 tonne)	No's	
M-071	Bentonite	Kg	7.0
M-072	Binding wire	Kg	Rate as per item no.3 of Material rates of WRD.
M-073	Bitumen ( Cationic Emulsion )	Tonne	As per rates fixed by R&B Dept based on refinery rates
M-074	Bitumen (60-70 grade)	Tonne	
M-075	Bitumen (80-100 grade )	Tonne	

**Part I - Materials not covered under WR Work items basic data – Common SoR 2018-19**

<b>Sl. No.</b>	<b>Description</b>	<b>Unit</b>	<b>S. Rate for 2018-19</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
M-076	Bitumen (Cutback )	Tonne	As per rates fixed by R&B Dept based on refinery rates
M-077	Bitumen (emulsion)	Tonne	
M-078	Bitumen (modified graded)	Tonne	
M-079	Brick	Each	As per Building SSR
M-080	C.I. shoes for the pile	Kg	46
M-081	Cement	Tonne	Rate as per item no.5 of Material rates of WRD.
M-082	Cold twisted bars (HYSD/TMT Bars)	Tonne	Rate as per item no.62 of Material rates of WRD
M-083	Collar for joints 300 mm dia	No's	128
M-084	Compressible Fibre Board(20mm thick)	Sqm	473
M-085	Connectors/ Staples	Each	64
M-086	Copper Plate(12m long x 250mmwide)	Kg	254
M-087	Corrosion resistant Structural steel	Tonne	50138
M-088	Corrugated sheet, 3 mm thick, "Tie" beam section railing	Kg	174
M-089	Credit for excavated rock found suitable for use	Cum	194
M-090	Curing compound	Liter	101
M-091	Delineators from ISI certified firm as per the standard drawing given in IRC - 79	Each	As per local competitive quotations
M-092	Earth Cost or compensation for earth taken from private land	Cum	55
M-093	Elastomeric slab seal expansion joint assembly manufactured by using chloroprene, elastomer for elastomeric slab unit conforming to clause 915.1 of IRC: 83 (part II),	Metre	As per local competitive quotations
M-094	Electric Detonators @ 1 detonator for 1/2 gelatin stick of 125 gms each	100 no's	Rate as per item No. 21 of WRD
M-095	Epoxy compound with accessories for preparing epoxy mortar	Kg	280
M-096	Epoxy mortar	Kg	92
M-097	Epoxy primer	Kg	476
M-098	Epoxy resin-hardener mix for prime coat	Kg	491
M-099	Flag of red color cloth 600 x 600 mm	Each	24

**Part I - Materials not covered under WR Work items basic data – Common SoR 2018-19**

<b>Sl. No.</b>	<b>Description</b>	<b>Unit</b>	<b>S. Rate for 2018-19</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
M-100	Flowering Plants	Each	40
M-101	Galvanized MS flat clamp	No's	165
M-102	Galvanized steel wire crates of mesh size 100 mm x 100 mm woven with 4mm dia. GI wire in rolls of required size.	Sqm	152
M-103	Galvanized structural steel plate 200 mm wide, 6 mm thick, 24 m long	Kg	789
M-104	Gelatin 80%	Kg	57
M-105	Geo grids	Sqm	As per local competitive quotations
M-106	(a)Geo membrane 500 micron thick	Sqm	Rate as per item No. 52 of WRD
	(b) Geo membrane 750 micron thick	Sqm	Rate as per item No. 53 of WRD
	(c) Geo membrane 1000 micron thick	Sqm	Rate as per item No. 54 of WRD
M-107	Geo nets	Sqm	As per local competitive quotations
M-108	(a)Geo textile 160 gsm	Sqm	Rate as per item No. 29 of WRD
	(b) Geo textile 200 gsm	Sqm	Rate as per item No. 30 of WRD
	(c) Geo textile 250 gsm	Sqm	Rate as per item No. 31 of WRD
M-109	Geo textile filter fabric	Sqm	As per local competitive quotations
M-110	GI bolt 10 mm Dia	No's	19
M-111	Grouting pump with agitator	Hour	Rate covered in Item No.36 of hire charges of machinery of Water Resources work items
M-112	Grass (Doob)	Kg	6
M-113	Grass (Fine)	Kg	8
M-114	HDPE pipes 75mm dia	Metre	
M-115	HDPE pipes 90mm dia	Metre	Rate as per PH items

**Part I - Materials not covered under WR Work items basic data – Common SoR 2018-19**

<b>Sl. No.</b>	<b>Description</b>	<b>Unit</b>	<b>S. Rate for 2018-19</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
M-116	Hedge plants	Each	Rate as per local competitive quotations
M-117	Helical pipes 600mm diameter	Metre	
M-118	Hot applied thermoplastic compound	Litre	
M-119	HTS strand	Tonne	35,556
M-120	Joint Sealant Compound	Kg	58
M-121	Jute netting, open weave, 2.5 cm square opening for seeding and Mulching	Sqm	76
M-122	LDO for steam curing	Litre	57
M-123	M.S. Clamps	Kg	Deleted
M-124	M.S. Clamps	Kg	Rate as per local competitive quotations
M-125	M.S. shoes @ 35 Kg per pile of 15 m	Kg	Rate as per local competitive quotations
M-126	Mild Steel bars	Tonne	39,674
M-127	Modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and up to 140mm assembly comprising of edge beams, central beam, 2 modules chloroprene seal, anchorage elements, support and control system, all steel sections protected against corrosion and installed by the manufacturer or his authorized	Metre	Rate as per local competitive quotations
M-128	Modular strip/box seal expansion joint catering to a horizontal movement beyond 140mm and up to 210mm box/box seal joint assembly containing 3 modules/cells and comprising of edge beams, two central beams, chloroprene seal, anchorage elements, support and control system, all steel sections protected against corrosion and installed by the manufacturer or his authorized representative	Metre	Rate as per local competitive quotations
M-129	Nipples 12mm	No's	17
M-130	Nuts and bolts	Kg	85
M-131	Paint	Litre	198
M-132	Pavement Marking Paint	Litre	Rate as per local competitive quotations
M-133	Paving Fabric	Sqm	
M-134	Perforated geo synthetic pipe 150 mm dia	Metre	
M-135	Perforated pipe of cement concrete, internal dia 100 mm	Metre	

**Part I - Materials not covered under WR Work items basic data – Common SoR 2018-19**

<b>Sl. No.</b>	<b>Description</b>	<b>Unit</b>	<b>S. Rate for 2018-19</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
M-136	Pesticide	Kg	Rate as per local competitive quotations
M-137	R.C.C Pipes 200 mm dia, 2.5 m long for drainage	Metre	Rate as per PH item
M-138	Plastic sheath, 1.25 mm thick for dowel bars	Sqm	47
M-139	Plastic tubes 50 cm dia , 1.2 m high	No's	Rate as per local competitive quotations
M-140	Polymer braids	Metre	
M-141	Pre moulded Joint filler, 25 mm thick for expansion joint.	Sqm	262
M-142	Pre-coated stone chips of 13.2 mm nominal size	Cum	Rate as per local competitive quotations
M-143	Preformed continuous chloroprene elastomer or closed cell foam sealing element with high tear strength, vulcanized in a single operation for the full length of a joint to ensure water tightness.	Metre	Rate as per local competitive quotations
M-144	Pre-moulded asphalt filler board	Sqm	
M-145	Pre-packed cement based polymer concrete of strength 45 Mpa at 28 days	Kg	Rate as per local competitive quotations
M-146	Sealant Primer	Kg	148
M-147	Quick setting compound	Kg	27
M-148	Random Rubble Stone	Cum	240
M-149	RCC Pipe NP 4 heavy duty non pressure pipe 1000 mm dia	Metre	Rate as per PH items
M-150	RCC Pipe NP 4 heavy duty non pressure pipe 1200 mm dia	Metre	
M-151	RCC Pipe NP 4 heavy duty non pressure pipe 300 mm dia	Metre	
M-152	Reflectorising glass beads	Kg	Rate as per local competitive quotations
M-153	Reinforcement strips 60 mm wide 5 mm thick as per clause 3102. (Copper Strips)	Metre	
M-154	Reinforcement strips 60 mm wide 5 mm thick as per clause 3102. (Galvanized carbon steel strips)	Metre	
M-155	Reinforcement strips 60 mm wide 5 mm thick as per clause 3102. (Glass reinforced polymer/ fiber reinforced polymer/polymeric strips)	Metre	

**Part I - Materials not covered under WR Work items basic data – Common SoR 2018-19**

<b>Sl. No.</b>	<b>Description</b>	<b>Unit</b>	<b>S. Rate for 2018-19</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
M-156	Reinforcement strips 60 mm wide 5 mm thick as per clause 3102. (Stainless steel strips)	Metre	Rate as per local competitive quotations
M-157	Reinforcement strips 60 mm wide 5 mm thick as per clause 3102. (Aluminum strips)	Metre	
M-158	Rivets	Each	6
M-159	Sand bags (Cost of sand and Empty cement bag)	Per bag	Rate as per Item no.2 of miscellaneous items
M-160	Sapling 2 m high 25 mm dia	Each	Rate as per local competitive quotations
M-161	Scrap tyres of size 900 x 20	No's	68
M-162	Seeds(Grass)	Kg	18
M-163	Cost of Selected earth	Cum	Rate as per Item No. M-092
M-164	Separation Membrane of impermeable plastic sheeting 125 micron thick	Sqm	Rate as per local competitive quotations
M-165	Sheathing duct	Metre	
M-166	Shrubs	Each	15
M-167	Sludge / Farm yard manure @ 0.18 cum per 100 sqm at site of work for turfing	Cum	Rate as per local competitive quotations
M-168	Sodium vapour lamp	Each	As per Building SSR
M-169	Square Rubble Coursed Stone	Cum	2,130
M-170	Steel circular hollow pole of standard specification for street lighting to mount light at 5 m height above deck level	Each	Rate to be obtained from Electricity/Municipal Departments
M-171	Steel circular hollow pole of standard specification for street lighting to mount light at 9 m height above road level	Each	
M-172	Steel drum 300 mm dia 1.2 m high/empty bitumen drum	No's	As per local competitive market rate
M-173	Steel helmet and cushion block on top of pile head during driving.	Kg	
M-174	Steel pipe 25 mm external dia as per IS:1239	Metre	244
M-175	Steel pipe 50 mm external dia as per IS:1239	Metre	475
M-176	Steel wire rope 20 mm	Kg	157
M-177	Steel wire rope 40 mm	Kg	179
M-178	Strip seal expansion joint	Metre	Rate as per local competitive quotations

**Part I - Materials not covered under WR Work items basic data – Common SoR 2018-19**

<b>Sl. No.</b>	<b>Description</b>	<b>Unit</b>	<b>S. Rate for 2018-19</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
M-179	Structural Steel(HYSD/TMT bars)	Tonne	Rate as per item no.62 of Material rates of WRD
M-180	Super plasticizer admixture IS marked as per 9103-1999	Kg	Rate as per item no.70 of Material rates of WRD
M-181	Synthetic Geo grids as per clause 3102.8 and approved design and specifications.	Sqm	Rate as per local competitive quotations
M-182	Through and bond stone (a) 20X20x30 to 45 cm long	Each	Rate as per item no.75 of Material rates of WRD.
	Through and bond stone (b) 25X25x45 to 60 cm long	Each	Rate as per item no.76 of Material rates of WRD.
	Through and bond stone (c) 30X30x65 to 75 cm long	Each	Rate as per item no.77 of Material rates of WRD.
M-183	Tie rods 20mm diameter	No's	46
M-184	Tiles size 300 x 300 mm and 25 mm thick	Each	As per Building SSR
M-185	Timber	Cum	
M-186	Traffic cones with 150 mm reflective sleeve	No's	Rate as per local competitive quotations
M-187	Tube anchorage set complete with bearing plate, permanent wedges etc	No's	
M-188	Un slaked lime	Tonne	2,491
M-189(a)	Water charges(Urban)	KiloLitre	103
(b)	Water charges(Rural)	KiloLitre	77
M-190	Water based cement paint	Litre	As per Building SSR
M-191	Welded steel wire fabric	Kg	131
M-192	Wire mesh 50mm x 50mm size of 3mm wire	Kg	213
M-193	Wooden ballies 2" Dia for bracing	Each	As per Building SSR
M-194	Wooden ballies 8" Dia and 9 m long	Each	
M-195	Wooden packing	Cum	1,071

**Part I - Materials not covered under WR Work items basic data – Common SoR 2018-19**

<b>Sl. No.</b>	<b>Description</b>	<b>Unit</b>	<b>S. Rate for 2018-19</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
M-196	Wooden staff for fastening of flag 25 mm dia, one m long	Each	67
Item 8.3	Printing new letter and figures of any shade (ii) English Roman	per cm height per letter	1.60
Item 8.8	Painting Two Coats on New Concrete Surfaces	Sqm	As per Building SSR
Item 8.9	Painting angle iron post Two Coats	Sqm	As per Building SSR
<b>Miscellaneous Items</b>			
1	Benching old embankment slopes 0.45 X 0.45 M	RM	4.20
2	Laying Sand Bags in the stipulated places including cost of empty cement bag, sand, thread, stitching charges and labour charges with 13.615 % overhead charges and contractors profits.	per bag	8.50
3	Rough stone for revetment 225mm thick	Cum	138
4	Eradication of Weed growth from Drains, Canals by spraying Chemicals	Sqm	1.75
5	Thinner	Ltr	78
6	Gear Oil	Ltr	228
7	Cardium compound	kg	92

# Conveyance Charges of Material

**CONVEYANCE CHARGES OF MATERIALS AS PER SoR 2018-19**  
**(COMMON TO ALL DEPARTMENTS).**

**LEAD, LIFT, LOADING AND UNLOADING CHARGES FOR MATERIALS FOR  
THE YEAR: 2018-19**

1. For total lead up to 150 m (including initial lead) lead charges by head load only shall be adopted irrespective of mode of conveyance.
2. For total lead exceeding 150 m conveyance by mechanical means only shall be adopted irrespective of mode of conveyance.
3. The rates for loading at quarry including idle hire charges of trucks and hire charges per for each kilometer and up to 5 km are cumulative and inclusive of total charges for Preceding lead.
4. Unless otherwise specified lead charges for Earth / Sand / Gravel / Aggregates and Stones are for loose volume and not for compacted or in-situ volume.
5. The rates for lift charges, lead charges, hire charges are cumulative and inclusive of rates for preceding lift, lead and hire charges.
6. Lift charges are not payable where conveyance of materials is by mechanical means to final placing point.
7. Loading and unloading charges are not payable for conveyance by head load.
8. Loading charges are not payable for conveyance by mechanical means for disposal of excavated materials beyond initial lead of 50 m wherever specified.
9. Loading and unloading charges are not payable for conveyance by mechanical means for disposal of excavated materials beyond initial lead of 1 km wherever specified.
10. The rates for unloading of materials except earth, sand, gravel, coarse aggregate, rubble, size stone and cut stone are inclusive of stacking.
11. Hire charges are per 1KM for tippers and trucks for transport of materials from work site to dump yard and other places are cumulative & includes previous km up to 5 kms
12. The lead & lift charges are inclusive of contractor's profit and overhead charges of 13.615%
13. **During the BoCE meeting held on 24-05-2014, it is observed that in some of the estimates, Lead Charges are being added directly to the material basic rates for arriving the finished item rate. In view of that, the BoCE has instructed to see that while arriving the finished item rate, the lead charges are to be added to the material basic rates only after deducting the provision of "Contractor's Profit and Overhead charges"**
14. The loading and unloading charges are also inclusive of Contractor's profit and overhead charges of 13.615%

**A. (LEAD) CONVEYANCE CHARGES FOR MATERIALS BY HEAD LOAD FOR THE YEAR: 2018-19**

Sl No.	Total distance ( Total lead includes initial lead )	Earth / Sand /Gravel / Murrum/ Lime/ Surki/ Size stone / Cut stone Rubble / Coarse aggregate Rs/Cum	Cement / Reinforce-ment steel Str steel Rs / tonne	PCC slab/ Shahbad slab / CC block/ BS slab/ Late-rite / Wood Rs / cum
1	2	3	4	5
1	Total lead up to 50 m (covered by item rate)	initial lead	initial lead	initial lead
2	Total lead up to 100 m	64.90	37.90	82.60
3	Total lead up to 150 m	129.80	75.70	165.30

Notes: 1. No loading or unloading charges are admissible for conveyance by head load.

2. For total lead exceeding 150 m conveyance charges by mechanical means only shall be adopted irrespective of mode of conveyance.

**3. The lead & lift charges are inclusive of 13.615% Contractor Profit and Over Head charges**

**B.( LEAD) CONVEYANCE CHARGES FOR MACHINERY PER KILOMETER FOR TRANSPORTING MATERIALS BY TIPPERS AND TRUCKS EXCLUDING LOADING, UNLOADING AND IDLE HIRE CHARGES OF MACHINERY FOR THE YEAR: 2018-19**

**( No loading and unloading charges allowed for machinery loading and unloading )**

Sl No.	Distance	(Lead) charges for trucks and tippers for Earth / Sand /Gravel / Murrum/ Lime/ Surki/ per cu.meter	(Lead) charges for trucks and tippers for Rubble/Size stones/ Cut Stones/ Coarse aggregate per cu.meter	(Lead) charges for trucks and tippers for Cement/ Steel/ RCC poles/ AC & GI sheets/ Packed materials/	(Lead) charges for trucks and tippers per cu.meter for PCC slabs/ Shahabad slabs/ CC & Laterite blocks/ Wood/ cum	(Lead) charges for trucks and tippers per cu.meter water/ 1000	(Lead) charges for trucks per 1000 nos. of bricks
1	2	3	4	5	6	7	8
1	Lead up to 1 km	32.40	31.50	19.70	46.30	20.20	52.50
2	Lead up to 2 km	45.30	44.10	27.50	64.80	28.20	73.50
3	Lead up to 3 km	60.50	60.50	37.80	88.90	37.60	98.00
4	Lead up to 4 km	73.40	73.40	45.90	108.00	45.70	118.90
5	Lead up to 5 km	86.40	86.40	54.00	127.00	53.70	139.90
6	for Every km beyond 5 km up to 30 km	13.00	13.00	8.10	19.10	8.10	21.00
7	for Every km beyond 30 km	10.80	10.80	6.80	15.90	6.70	17.50

**Note: The lead & lift charges are inclusive of 13.615% Contractor Profit and Over Head charges**

**C. LOADING AND UNLOADING CHARGES BY MANUAL MEANS  
( idle hire charges of trucks are not added)**

Sl No.	Description of item	Earth / Sand /Gravel /Murrum/ / Surki/ Rs / cum	Rubble/ size stone/ cut stone/ Coarse aggregate, Lime in Rs/cum	cement in Rs/tonne	steel in Rs./tonne	brick work Rs/1000 No
1	2	3	4	5	6	7
1	Loading	21.40	43.10	71.20	85.30	59.30
2	Unloading	10.70	21.55	71.20	85.30	59.30

**Note: The lead & lift charges are inclusive of 13.615% Contractor Profit and Over Head charges**

**D. LOADING AND UNLOADING CHARGES BY MANUAL MEANS  
(including idle hire charges of trucks)**

Sl No.	Description of item	Earth / Sand /Gravel /Murrum/ / Surki/ Rs / cum	Rubble/ size stone/ cut stone/ Coarse aggregate, Lime in Rs/cum	cement in Rs/tonne	steel in Rs./tonne	brick work Rs/1000 No
1	2	3	4	5	6	7
1	Loading	117.00	138.50	176.10	190.20	232.50
2	Unloading	42.50	69.25	176.10	190.20	232.50

**Note: The lead & lift charges are inclusive of 13.615% Contractor Profit and Over Head charges.**

**E.LOADING AND UNLOADING CHARGES BY MECHANICAL MEANS  
(including idle hire charges of trucks)**

Sl No.	Description of item	Earth / Sand /Gravel /Murrum/ / Surki/ Rs / cum	Rubble/ size stone/ cut stone/ Coarse aggregate, Lime in Rs/cum
1	2	3	4
1	Loading	52.30	104.20
2	Unloading	16.40	16.40

**Note: The lead & lift charges are inclusive of 13.615% Contractor Profit and Over Head charges**

**F. LIFT CHARGES FOR MATERIALS BY HEAD LOAD**

Sl No.	Total lift ( Total lift includes initial lift )	Earth / Sand /Gravel Murrum/ Lime/ Surki/ Size stone / Cut stone Rubble / Coarse aggregate Rs / cum	Cement / Reinforce- ment steel Str steel Rs / tonne	PCC slab/ Shahbad slab / CC block/ BS slab / Laterite / Wood Rs / cum
1	2	3	4	5
1	Total lift up to 3 m (covered by item rate)	Initial lift	Initial lift	Initial lift
2	For Every 1.00 Lift beyond initial lift of 3 meters	7.60	5.50	10.10

**Note: The lead & lift charges are inclusive of 13.615% Contractor Profit and Over Head charges**

# **HIRE CHARGES**

**HIRE CHARGES OF PLANT &  
MACHINERY FOR THE YEAR : 2018-19**

<b>Sl. No</b>	<b>Description of machinery</b>	<b>Unit</b>	<b>Hire charge in Rs</b>	<b>Fuel charge in Rs</b>	<b>Crew Charge in Rs.</b>	<b>Total in Rs</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
1	Agitator car / Transit mixer 2 cum	Hour	617.10	1145.70	308.90	2071.70
2	Air compressor 5 cmm ( electric )	Hour	88.10	287.00	181.40	556.50
3	Air compressor 7 cmm ( diesel )	Hour	196.30	937.40	232.10	1365.80
4	Air compressor 7 cmm ( electric )	Hour	107.30	382.70	181.40	671.40
5	Air compressor 8.5 cmm ( diesel)	Hour	224.20	1171.80	232.10	1628.10
6	Air compressor 8.5 cmm ( electric)	Hour	139.00	478.40	181.40	798.80
7	Air compressor 15 cmm ( electric)	Hour	112.90	1063.10	193.40	1369.40
8	Angle Dozer 90 hp	Hour	1395.70	801.50	257.40	2454.60
9	Batching plant 0.5 cum ( 6 Cum/hr)	Hour	93.20	127.60	370.60	591.40
10	Batching plant 2 x 1.00 cum (15 Cum/hr)	Hour	329.80	382.70	370.60	1083.10
11	Batching plant 2 x 1.50 cum ( 50 Cum/hr)	Hour	505.00	467.70	370.60	1343.30
12	Bending machine 3000 x 12 mm	Hour	37.80	127.60	145.10	310.50
13	Clamp shell and hoisting ropes	Hour	4.80	0.00	0.00	4.80
14	Concrete bucket 1.5 cum	Hour	12.90	0.00	0.00	12.90
15	Concrete hand mixer 45 / 30 ltr	Hour	4.50	0.00	0.00	4.50
16	Concrete mixer 300 / 200 ( diesel)	Hour	43.50	104.20	241.80	389.50
17	Concrete mixer 300 / 200 ltr ( electric)	Hour	42.10	42.50	241.80	326.40
18	Concrete mixer 600 / 400 ( diesel)	Hour	75.40	208.30	241.80	525.50
19	Concrete mixer 600 / 400 ltr ( electric)	Hour	74.00	85.00	241.80	400.80
20	Concrete paver 100 sqm / hr	Hour	290.00	0.00	464.30	754.30
21	Convey mucker	Hour	669.50	296.00	193.40	1158.90
22	Core drilling machine	Hour	259.50	312.50	308.90	880.90
23	Diesel generating set 30 KVA	Hour	53.60	833.30	145.10	1032.00
24	Diesel generating set 50 KVA	Hour	69.20	1249.90	145.10	1464.20
25	Diesel Loco 45 hp	Hour	310.50	703.10	181.40	1195.00
26	Dewatering pump 5 hp ( diesel )	Hour	8.30	104.20	122.30	234.80
27	Dewatering pump 5 hp ( electric )	Hour	2.40	42.50	91.70	136.60

**Machinery Hire Charges – Common SoR 2018-19**

<b>Sl. No</b>	<b>Description of machinery</b>	<b>Unit</b>	<b>Hire charge in Rs</b>	<b>Fuel charge in Rs</b>	<b>Crew Charge in Rs.</b>	<b>Total in Rs</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
28	Dewatering pump 10 hp ( diesel )	Hour	12.40	208.30	122.30	343.00
29	Dewatering pump 10 hp ( electric)	Hour	5.50	85.00	91.70	182.20
30	Dewatering pump 20 hp ( diesel )	Hour	39.30	416.60	122.30	578.20
31	Dewatering pump 20 hp ( electric	Hour	10.00	170.10	91.70	271.80
32	Drifter	Hour	262.50	0.00	386.10	648.60
33	Drilling jumbo	Hour	299.70	56.20	193.40	549.30
34	Dumper 4.5 cum	Hour	472.50	524.90	247.10	1244.50
35	Geophysical Electric resistivity meter	Hour	90.60	0.00	0.00	90.60
36	Grouting pump	Hour	20.30	42.50	290.20	353.00
37	Guniting / sand blast equipment	Hour	97.70	0.00	241.80	339.50
38	Ice plant & accessories 30 t / day	Hour	155.70	1211.90	145.10	1512.70
39	Jack hammer	Hour	16.10	0.00	362.70	378.80
40	Needle vibrator 40 mm ( petrol )	Hour	6.20	23.20	174.10	203.50
41	Needle vibrator 40 mm ( electric )	Hour	6.50	8.50	174.10	189.10
42	Needle vibrator 60 mm ( petrol )	Hour	6.70	34.80	174.10	215.60
43	Needle vibrator 60 mm ( electric )	Hour	7.90	12.80	174.10	194.80
44	Planing machine 4 m stroke	Hour	104.50	127.60	232.10	464.20
45	Plate shearing machine up to 12 mm	Hour	37.20	170.10	154.40	361.70
46	Pneumatic placer 0.5 cum	Hour	139.20	0.00	95.60	234.80
47	Pneumatic tamper	Hour	16.90	0.00	290.20	307.10
48	Pug cutting machine	Hour	5.70	4.30	0.00	10.00
49	Pusher leg	Hour	11.30	0.00	0.00	11.30
50	Road roller diesel 10 t	Hour	160.40	937.40	232.10	1329.90
51	Shovel 0.50 cum 75 hp	Hour	816.10	624.90	257.40	1698.40
52	Shovel 0.85 cum 110 hp	Hour	1388.50	1145.70	257.40	2791.60
53	Stationery derrick crane	Hour	70.10	0.00	0.00	70.10
54	Tipper 5 cum	Hour	363.50	393.70	193.10	950.30
55	Tipping tub 1.5 cum	Hour	52.20	0.00	0.00	52.20
56	Tower crane 5 tonne	Hour	705.50	221.10	205.90	1132.50
57	Transformer 250 KVA	Hour	5031.40	0.00	0.00	5031.40
58	Truck 10 t	Hour	336.90	393.70	193.10	923.70
59	Truck mounted derrick crane 5 t	Hour	422.80	393.70	193.10	1009.60
60	Upright drilling machine/grinder	Hour	18.30	42.50	214.50	275.30

**Machinery Hire Charges – Common SoR 2018-19**

<b>Sl. No</b>	<b>Description of machinery</b>	<b>Unit</b>	<b>Hire charge in Rs</b>	<b>Fuel charge in Rs</b>	<b>Crew Charge in Rs.</b>	<b>Total in Rs</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
61	Ventilation fan 20 hp	Hour	10.20	170.10	31.60	211.90
62	Vibratory pad foot roller 8 t	Hour	1092.00	1354.00	290.20	2736.20
63	Wagon drill	Hour	153.40	0.00	308.90	462.30
64	Water tanker 8000 ltr	Hour	359.00	393.70	193.10	945.80
65	Welding set	Hour	14.10	102.10	0.00	116.20
66	Winch 35 hp ( electric )	Hour	105.30	208.40	290.20	603.90
67	Hydraulic Truck Crane 30T	Hour	2519.40	118.80	576.60	3214.80
68	Hydraulic Truck Crane 16T	Hour	1853.40	75.00	576.60	2505.00
69	Heavy Duty Airless Spray Painting Equipment	Hour	98.80			98.80
70	Concrete Placer Pump (25 cum/hr) (Electric)	Hour	817.10	510.30	181.40	1508.80
71	Tractor with 2 T roller	Hour				345.00



**Government of Andhra Pradesh**

**COMMON SCHEDULE OF RATES  
FOR THE YEAR 2018-19  
(Effective from 1<sup>st</sup> June, 2018)**

**R&B Department, AP**

# **ROAD & BRIDGE WORKS**

**INDEX**  
**PART-II**  
**ROAD & BRIDGE WORKS**

<b>Sl. No.</b>	<b>Description</b>	<b>Page No.</b>	
		<b>From</b>	<b>To</b>
1	Preamble	3	8
2	Labour Rates	9	13
3	Material & Work Item Rates	14	25
4	Hire Charges of Plant & Machinery for Road & Bridge Works	26	29

# **PREAMBLE**

## **1.0 AREA ALLOWANCES:**

### **A) CORPORATIONS & MUNICIPALITIES:**

- a)
  - i) 25% extra over the rates on labour component of works is allowed in all Municipal Corporation Limits of Andhra Pradesh except Greater Visakhapatnam Municipal Corporation and Vijayawada Municipal Corporation (Upto a belt of 12 kms from Municipal corporation limits) and other Municipal Corporations as notified by the Government from time to time.
  - ii) 40% extra over the rates on labour component of works for Greater Visakhapatnam and Vijayawada Municipal Corporation limits (Upto a belt of 12 kms from Municipal corporation limits)
  - iii) 40% extra over the rates on labour component of works for Amaravati Capital City area (2017 Sq. Km) as declared by the Govt. vide GO MS No. 141 MA&UD (M2) Dept., dt. 9.6.2015 (This is introduced as per the Govt. instructions issued in Govt. Memo No. 668755/ Reforms/ 2017 dt. 14.7.2017).
- b) Allow 20% extra over basic rates on labour component of works in all District Headquarters and the remaining Municipal limits (up to a belt of 12 Kms. from Municipal limits)
- c) For works at Tirumala Hills in Chittoor District, 40% extra over the basic rates of labour component is allowed.
- d) For works at Horsely hills in Chittoor District, 30% extra over the basic rates of labour component is allowed.
- e) For works located inside Tirumala Temple, 20% extra over the basic rate of labour component specified for Tirumala Hills is allowed.
- f) For Works located inside T.T.D Temples of Sri Padmavathi Ammavari Temple, Tiruchanoor, Sri Govindaraja Swamy Temple at Tirupathi, Sri Kapileswara Swamy Temple, Kapilatheertham, Tirupathi and Sri Kalyana Venkateswara Swamy Temple, Srinivasa Mangapuram , 20% extra over the basic rates of labour component for Tirupathi Municipal Corporation is allowed.

### **B) JAIL COMPOUNDS:**

20% extra is allowed over labour rates for the works in the Jail compounds. Only equivalent number of Man Mazdoor shall be provided in the Jail premises and no Women Mazdoor are allowed inside.

**C) INDUSTRIAL AREA:**

- a. 20% Extra over basic rates on labour component works allowed for works situated within 10 Kms belt of Industrial area of Ibrahimpatnam, Vuyyuru, Jaggaiahpetta in Krishna District, Macherla, Gurajala, Challapalli in Guntur District, Garividi in Vijayanagaram District, Renigunta in Chittoor District, Yerraguntla & Mangampet in Kadapa District, Hindupur, Tadipatri, Anantapur, Guntakal, Rayalcheruvu, Yadiki of Anantapur District, Adoni, Dhone, Cement Nagar, Nandyal, Kurnool, Yemmiganur & Bethamcherla of Kurnool District and Anakapally of Vishakhapatnam District.

**D) AGENCY / TRIBAL AREAS:**

- a) 25% extra allowed for the works located with in the interior Agency / Tribal limits, i.e. for the works located with in & upto 16 KMs from any all weather route inside Agency / Tribal.
- b) 40% extra allowed for the works located with in the interior Agency / Tribal limits, i.e. for the works located beyond 16 KMs from any all weather route inside Agency / Tribal.

- NOTE:**
1. No extra percentage is permissible in respect of Forest produce such as Bamboo, Rellu grass and for all materials obtained from outside the Agency / Tribal.
  2. The extra percentage under Agency / Tribal areas allowance may be allowed on the labour component and on the labour charges in the rates for conveyance of materials.
  3. The extra percentage on cost of materials in Agency / Tribal areas can be allowed on the labour component only, if they are manufactured in the Agency / Tribal areas itself except Forest produce.

**E) GHAT ROADS:**

For Ghat Roads steeper than 1 in 20, the length of the road may be taken as 1.5 times the existing length of the road for the purpose of leads only for conveyance of materials based on the certificate for the Ghat Road given by the Superintending Engineer concerned.

**Note:** Under compelling circumstances, the concerned Chief Engineer can adopt the equivalent length of road as 2 ½ times of actual length.

**Note for area allowances:**

*If more than one area allowance ( such as those ) for (1) Municipalities (2) Agency / Tribal areas (3) Industrial areas are applicable for a particular situation, only the maximum out of the allowable percentages is to be allowed.*

## 2.0 WATER LEADS:

The following labour is allowed for conveyance of water for every ½ Kilometer lead or part there of over the initial lead of ½ kilometer.

- a) Cement concrete : 1.5 Women Mazdoor / Cum.
- b) Masonry : 1.0 Woman Mazdoor/ Cum.
- c) Plastering : 0.5 Woman Mazdoor/ 10 Sq.m

**Note:-** For Water leads of over 2 KMs, specific approval of Chief Engineer concerned is necessary.

## 3.0 EXCAVATION OF TRIAL TRENCHES, TRIAL PITS AND EXCAVATION IN RESTRICTED PLACES: -

### I) EXCAVATION OF TRIAL TRENCHES, TRIAL PITS AND EXCAVATION IN RESTRICTED PLACES: -

#### A. TRIAL TRENCHES:

- 1) Trial trenches of not more than 2 metres in width ...25% extra

#### B. TRIAL PITS:

- 1) Up to 2 Metres depth ... 25% extra
- 2) 2 Metres to 4 Metres depth ... 50% extra
- 3) 4 Metres to 6 Metres depth ... 75% extra
- 4) 6 Metres to 8 Metres depth ... 100% extra
- 5) 8 Metres to 9 Metres depth ... 150% extra
- 6) More than 9 Metres depth ... 200% extra

### II) EXCAVATION IN RESTRICTED PLACES:-

- I) Foundation of Buildings .... 75% extra
- II) For pipe lines where the depth is less than 1.5 times the width ..... 75% extra
- III) For pipe lines where the depth is 1.5 times or more than the width . . . . 120% extra
- IV) Silt removal in restricted areas such as U. T's., Culverts and Syphons. ... 120% extra
- V) Excavation of field channels ... 75% extra

- VI) For narrow trenches not more than 2 meters in width and depth not less than twice the width and for excavation of road boundary drains, model sections of canals. ... 75% extra
- VII) High berm cutting of not more than 150 mm average thickness and Sectioning for roads ... 50% extra

**Note:** 1) The extra percentage is allowed over rate for corresponding soil. It includes the charges for all lifts and initial lead but does not include dewatering charges if any in respect of all the items under (A) and (B) above.

2) The above extra percentages in respect of excavation in hard rock for restricted places are to be allowed for (2/3) rd of the cost and shall not to be allowed in respect of items involving blasting component which may be taken as 1/3 of the cost.

**4.0 Proportion of First class and 2nd class workmen under Skilled Labour:**

30% of the skilled labour provided in the data may be taken as 1st Class and the remaining 70% as 2nd Class.

**5.0 Revetment and apron works:**

- I) The size of stone for the volume range ( 0.015 to 0.030 Cum) shall not be less than (0.30 X 0.30 X 0.15 to 0.30 X 0.225 X 0.225m)
- II) The size of stone for the volume range (0.011 to 0.015 Cum) shall not be less than (0.30 X 0.225 X 0.15 to 0.225 X 0.225 X 0.225 m)
- III) The rate of labour component as per the standard data book is to be adopted for revetment work only. However for apron work Rs. 3.00 per cum. should be deducted.
- IV) For the labour for the “Rock Toe” shall be taken as 2/3rd of the labour charges of revetment as Chief Engineer, Circular No. P3/ OT2/ T3/ 65167/78, Dt: 19.03.1980.

**6.0 Deep cuts:**

Deep cuts are defined as reaches of canal where excavation in all soils is for a depth of excavation 6m and more. The following increase over normal rates is permitted in deep cuts on a graded basis.

- I) Up to 6 m excavation: The S. S. R. of corresponding classification of earth work excavation is applicable.
- II) Beyond 6 m and up to 9 m excavation - 9% extra
- III) Beyond 9 m and up to 12 m excavation - 12% extra
- IV) Beyond 12 m and up to 16 m excavation - 15% extra

V)	Beyond 16 m and up to 30 m excavation	-	20% extra
VI)	Beyond 30 m excavation	-	40% extra

**NOTE :** 1) The extra percentage is only on basic rate. 2) The above percentage are not applicable for “LEADS & LIFTS”. 3) The above extra percentages are to be allowed only on items excluding the blasting component which may be taken as 1/3 of the rate.

**7.0 The conveyance of bitumen for bulk and packed may be admitted as follows:**

Packed	---	Rs. 1.75 per Km/ MT
Bulk	---	Rs. <b>1.65</b> per Km/ MT (round the trip)

**8.0 SEIGNIORAGE CHARGES:**

Seigniorage charges for materials as fixed by the Government in G.O.Ms.No.100 (Industries and commerce department) Dt. 31.10.2015 may be added in the data of rates in the estimate. The Provision towards Contractor's Profit and Overhead charges **should not be operated** on the Seigniorage Charges while adding Seigniorage Charges to the data in the estimate. In case of revision, the revised rates as fixed by Mines and Geology Department have to be adopted.

**9.0** Earthwork excavation rate for Trench cutting, formation of embankment & shoulders, foundations, removal of unserviceable soil etc., is to be arrived based on the Machinery adopted in the MoRTH Standard data book for excavation of soil.

**10.0** All the Materials rates and Machinery Hire charges are excluding GST.

# **LABOUR RATES**

Si. No	S.S. Item No.	Description	Unit (Per)	S o Rate for 2018-19 in Rs.	Remarks
1	2	3	4	5	6
		<b>(A) SKILLED WORKMEN</b>			
		<b>First Class</b>			
1	a	Mason and stone cutter	Day	490	As per WR Dept. (S.No.39)
2	b	Brick Layer	Day	475	As per WR Dept. (S.No.11)
3	c	Carpenter	Day	550	As per WR Dept. (S.No.4)
4	d	Painter	Day	550	As per WR Dept. (S.No.35)
5	e	Plumber	Day	550	As per WR Dept. (S.No.36)
6	f	Welder	Day	490	As per WR Dept. (S.No.41)
7	g	Fitter	Day	520	As per WR Dept. (S.No.6)
8	h	Electrician	Day	555	As per WR Dept. (S.No.5)
9	1	Cook	Day	450	As per WR Dept. (S.No.2) Other Category
10	2	Mechanic	Day	510	As per WR Dept. (S.No.12)
11	3	Rigger	Day	515	
12	4	Rigger Syrang	Day	515	
13	5	Well Sinker	Day	515	
14	6	Blaster	Day	550	As per WR Dept. (S.No.3)
15	3	Bar bender	Day	600	As per WR Dept. (S.No.1)
16	7	Tipper and Heavy Vehicle Driver above 12 T	Day	550	As per WR Dept. (S.No.15)
17		Tanker and medium Vehicle driver (7.5 T to 12 T)	Day	513	
18		Tanker and Light Vehicle driver up to 7.5 T	Day	396	
19		Wagon Drill Operator upto 7.5 T	Day	512	
20	8	Lorry and Heavy Vehicle Driver above 12 T	Day	543	
21		Road Roller Driver (7.5 T to 12 T)	Day	490	As per WR Dept. (S.No.27)
22		Road Roller Driver 7.5 T	Day	Deleted	
23	9	Tractor Driver above 12 T	Day	Deleted	
24		Tractor Driver (7.5 T to 12 T)	Day	Deleted	
25		Tractor Driver 7.5 T	Day	494	
		<b><u>Operator</u></b>			
26	10	Pan Mixer	Day	530	
27		Concrete Mixer	Day	490	As per WR Dept. (S.No.16)

Si. No	S.S. Item No.	Description	Unit (Per)	S o Rate for 2018-19 in Rs.	Remarks
1	2	3	4	5	6
28		Vibrator	Day	490	As per WR Dept. (S.No.32)
29		Composer	Day	493	
30		Jack Hammer	Day	490	As per WR Dept. (S.No.23)
31		Driller	Day	550	As per WR Dept. (S.No.34)
32		Boring Maistry	Day	474	
33	11	Pump operator	Day	490	As per WR Dept. (S.No.24)
34	12	Turner Grade-I	Day	515	
35	13	Wireless Operator	Day	550	As per WR Dept. (S.No.12) Other Category
36	14	Assistant Wireless Operator	Day	470	
37	15	Jeep Driver	Day	545	As per WR Dept. (S.No.15) Other Category
38	16	Work Inspector with I.T.I qualification	Day	560	As per WR Dept. (S.No.9) Other Category
39	17	Work Inspector with LCE, LME,L.E.E qualification	Day	725	As per WR Dept. (S.No.4) Other Category
40	18	Work Inspector with B.E (Civil, Mechanical and Electrical) qualification	Day	935	As per WR Dept. (S.No.7) Other Category
41	19	Work Inspector with Non-technical qualification SSLC/SSC/HSC	Day	550	As per WR Dept. (S.No.10)
42	20	Mason Spl. Grade for Mossaic and Polished shahabad stone floor	Day	508	
43	21 a(i)	Typist / Job Typist	Day	550	As per WR Dept. (S.No.13) Other Category
	a (ii)	Computer operator	Day	610	As per WR Dept. (S.No.11) Other Category
	b	CAD Operator with Diploma in Engineering /General degree with CAD certificate	Day	750	As per WR Dept. (S.No.14) Other Category
		<b>(B) SEMI –SKILLED WORKMEN</b>			
		<b>SECOND CLASS</b>			
44	a	Mason	Day	440	As per WR Dept. (S.No.35) Semi-Skilled
45	b	Brick Layer and Stone Cutter	Day	440	As per WR Dept. (S.No.35) Semi-Skilled
46	c	Carpenter	Day	440	As per WR Dept. (S.No.4) Semi-Skilled
47	d	Painter	Day	440	As per WR Dept. (S.No.37) Semi-Skilled

Sl.no	S.S. Item No.	Description	Unit (Per)	S o Rate for 2018-19 in Rs.	Remarks
1	2	3	4	5	6
48	e	deleted			
49	f	Blacksmith	Day	475	As per WR Dept. (S.No.2) (Skilled)
50	g	Welder	Day	451	
51	h	Fitter	Day	451	
52	i	Electrician	Day	451	
53	2	Caulker	Day	451	
54	4	Tinker	Day	451	
55	5	Sawyer	Day	451	
56	6	Brick-Moulder	Day	451	
57	7	Pot-tile turner	Day	451	
58	8	Pan-tile turner	Day	451	
59	9	Brick and Lime Kiln man/Glazier	Day	451	
60	10	Telephone Operator	Day	550	As per WR Dept. (S.No.12) Other Category
61	11	Hand Driller	Day	452	
62	12	Quarry Man	Day	452	
63	13	Hammer Man	Day	440	As per WR Dept. (S.No.40) Semi-skilled
64	14	Thatcher	Day	451	
65	15	Fireman	Day	451	
66	16	Cleaner/Helper	Day	451	
67	17	Stone Packer	Day	451	
68	18	Jawali	Day	451	
69	19	Ex-Service man/Goorkha watchman	Day	451	
70	20	Ratton Worker	Day	451	
71	21	Mate	Day	451	
72	1	Head Mazdoor (Mukaddar)	Day	440	As per WR Dept. (S.No.10) Semi-Skilled

**(C) UNSKILLED WORKMEN**

73	2	Man Mazdoor	Day	400	As per WR Dept. (S.No.3) Un-Skilled
74	3	Watch Man	Day	400	As per WR Dept. (S.No.5) Un-Skilled
75	5	Woman Mazdoor	Day	400	As per WR Dept. (S.No.4) Un-Skilled
76	6 (b)	Helper/Cleaners/Sweepers/Scavangers/Chouki dars/Security Guards/Office Boys	Day	400	
77	<i>Note : Whenever unskilled workmen are engaged for cleaning of Sewers &amp; Septic Tanks, they may be paid double the above wages.</i>				

<b>(D) OTHER CONVEYANCE ITEMS</b>			<b>S o Rate for 2018-19 in Rs.</b>	Remarks	
1	2	3	4	5	6
78	1	Single bullock with driver and cart	Day	465	As per WR Dept. (S.No.6) Semi-Skilled
79	2	Bullock pair with driver	Day	516	
80	3	Bullock pair with driver and cart	Day	500	As per WR Dept. (S.No.5 ) Semi Skilled
81	4	Bullock pair with driver and cart with pneumatic tyres	Day	575	
82	5	Bullock pair driver and kapila	Day	deleted	
83	6	Nava with crew	Day	440	As per WR Dept. (S.No.3) Semi Skilled
84	7	Punt thundal	Day	385	
85	8	Punt lascar	Day	385	
	Note:	1) The wage should not be less than the minimum wages of schedule of employment, subject to out turn.			
		2) 25% extra over the corresponding labour rates in respect of the work to be done during night time subject to issue of certificate accordingly by the concerned estimate sanctioning authority for providing in the data and by the concerned Executive Engineer in charge of the work for payment. The night time allowance is applicable only to the works done under Greater Visakhapatnam Municipal Corporation and Vijayawada Municipal Corporation only.			

# **MATERIAL & WORK ITEM RATES**

**RATES OF MATERIALS & WORK ITEMS**

<b>RATES OF MATERIALS &amp; WORK ITEMS SSI No.</b>	<b>S.S. Item No.</b>	<b>Description</b>	<b>Unit (per)</b>	<b>S o Rate for 2018-19 in Rs.</b>	<b>Remarks</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
		<b>(A) STONE AND ROAD MATERIALS</b>			
		<b>ROUGH STONE QUARRIED INCLUDING WEDGING, BREAKING, BURNING, SPLITTING.</b>			
1	22.a	For R.R Masonry Work (other than Granite, Dolomite and Trap)	1 cum	171.45	
2	b.i	For SS Revetment work 225 mm	1 cum	138.00	As per WR Dept. (S.No.3) of Miscellaneous items - Material other than covered under irrigation
3	b.ii	For SS Revetment work 300 mm	1 cum	156.00	As per WR Dept. (M 003 of Material) Material other than covered under irrigation items
4	b.iii	For SS Revetment work 450 mm	1 cum	148.55	
5	c	Jeddy Stone above 450 mm to 600 mm	1 cum	196.20	
6	d i	Laterite for revetment 225 mm	1 cum	129.50	
7	d ii	Laterite for revetment 300 mm	1 cum	151.43	
8	d iii	Granite for SS revetment 225 mm	1 cum	168.55	
9	d iv	Granite for SS revetment 300 mm	1 cum	163.80	
		Note:- Only when other granite is not available			
10	e	Laterite for masonry	1 cum	148.55	
11	f	Cyclopean stones above 0.2 cum	1 cum	278.10	
12	g	For R.R.Masonry works ( granite, dolomite and trap variety)	1 cum	240.00	As per WR Dept. (M 148 of Material) Material other than covered under irrigation items
13		NOTE:- For items 22(a) to 22© and 22(g) add extra Rs /cum, wherever quarrying is done by blasting	1 cum	70.00	
		<b>COURSED RUBBLE STONE QUARRYING WEDGING, BREAKING, BURNING AND SPLITTING FOR SS FIRST SORT WORKS</b>			
14	23.a	Granite, Dolomite and trap	1 cum	274.30	

<b>RATES OF MATERIALS &amp; WORK ITEMS SSI No.</b>	<b>S.S. Item No.</b>	<b>Description</b>	<b>Unit (per)</b>	<b>S o Rate for 2018-19 in Rs.</b>	<b>Remarks</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
15	23.b	For other varieties	1 cum	197.15	
16	27	Granite stone slabs for culverts, lintels and copings (3 faces dressed coarsed rubble masonry)	1 cum	1810.50	
17		NOTE: - For items 23(a), 23(b) and 27 add extra Rs. Per Cum, wherever quarrying is done by blasting	1 cum	82.00	
18	28.a	Bond stones ( 600 x 200 x 200 mm )	each	47.60	
19	b	Chainage stones and Centre line stones (750x150x150 mm)	each	47.60	
20	31	Demarcation Stones ( 900 x 150 x 150 mm)	each	85.70	
21	32.a	Guard Stones ( 1200 x 200 x 200 mm )	each	144.75	
22	B	Guide Stones ( 800 x 150 x150 mm )	each	97.15	
23	C	Carving letters and figures in stone up to 100 mm size	each	9.50	
24	D	Carving letters and figures in stone above 100 mm size	each	10.50	
		<b>HARD BROKEN STONE OF GRANITE, TRAP AND DOLERITE FREE FROM DUST OBTAINED BY QUARRYING, WEDGING, BREAKING, BURNING AND SPLITTING</b>			
25	33.a	- do - 6mm size (SS 5)	1 cum	506.40	As per WR Dept. (M 050 of Material) (excluding blasting charges of Rs.70/- and Machine crushing charges of 25%)
26	b	- do - 10mm size (SS 5)	1 cum	659.20	As per WR Dept. (M 051 of Material) (excluding blasting charges of Rs.70/- and Machine crushing charges of 25%)

<b>RATES OF MATERIALS &amp; WORK ITEMS SSI No.</b>	<b>S.S. Item No.</b>	<b>Description</b>	<b>Unit (per)</b>	<b>S o Rate for 2018-19 in Rs.</b>	<b>Remarks</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
27	c	- do - 12mm size (SS 5)	1 cum	782.40	As per WR Dept. (M 052 of Material) (excluding blasting charges of Rs.70/- and Machine crushing charges of 25%)
28	d	- do - 20mm size (SS 5)	1 cum	986.40	As per WR Dept. (M 053 of Material) (excluding blasting charges of Rs.70/- and Machine crushing charges of 25%)
29	e	- do - 25mm size (SS 5)	1 cum	947.20	As per WR Dept. (M 054 of Material) (excluding blasting charges of Rs.70/- and Machine crushing charges of 25%)
30	f	- do - 40mm size (SS 5)	1 cum	590.40	As per WR Dept. (M 055 of Material) (excluding blasting charges of Rs.70/- and Machine crushing charges of 25%)
31	g	- do - 50mm size (SS 5)	1 cum	434.30	
32	h	- do - 60mm size (SS 5)	1 cum	399.05	
33	i	- do - 65mm size (SS 5)	1 cum	360.95	
34	j	- do - 75mm size (SS 5)	1 cum	289.50	
35	k	- do - 75 to 100mm size (SS 5)	1 cum	236.20	
36		NOTE:- (1) Add extra Rs. /- per cum for items 33 (a) to 33 (k) if the metal is obtained by blasting	1 cum	70.00	
37		(2) Add 25% extra per cum if the metal is obtained by machine crushing excluding cost of blasting.	1 cum	25%	

RATES OF MATERIALS & WORK ITEMS SSI No.	S.S. Item No.	Description	Unit (per)	S o Rate for 2018-19 in Rs.	Remarks
1	2	3	4	5	6
38		(3) Deduct Rs. /- per cum if the metal or rubble is obtained from surface stone and boulders.	1 cum	9.90	
39		(4) Add Rs. /- per cum for selection of stones and boulders from excavated spoil dumps for items 33 a to 33 k, when this addition of Rs. /- per Cum is allowed, deduction of Rs. /- per Cum mentioned under Note (3) above should invariably be made.	1 cum	17.00	
			1 cum	9.90	
		<b>SOFT BROKEN STONE SCREENED AND FREE FROM DUST</b>			
40	33.l	- do - 40 mm size ( SS 5 )	1 Cum	117.15	
41	33.m	- do - 50 mm size ( SS 5 )	1 Cum	105.70	
42	33.n	- do - 60 mm size ( SS 5 )	1 Cum	82.85	
43	33.o	- do - 65 mm size ( SS 5 )	1 Cum	74.30	
44	33.p	- do - 75 mm size ( SS 5 )	1 Cum	69.50	
		<b>HARD BROKEN STONE OF GRANITE TRAP DOLERITE AND DOLAMITE FREE FROM DUST OBTAINED BY QUARRYING WEDGING, BREAKING, BURNING AND SPLITTING (QUARTZITE AND BASALT WITH AGGREGATE IMPACT OF LESS THAN 20)</b>			
45	33a	-do- 2.36 to 5 mm size (IRC&MORTH)	1 cum	293.35	
46	b	-do- 5 to 7mm size (IRC&MORTH)	1 cum	480.00	
47	c	-do- 9.5 to 11.2mm size (IRC&MORTH)	1 cum	624.75	
48	d	-do- 12mm to 14 mm size ( IRC and MORTH )	1 cum	742.85	
49	e	-do- 19 mm to 22 mm size ( IRC and MORTH )	1 cum	937.15	
50	f	-do- 25 mm to 27 mm size ( IRC and MORTH )	1 cum	899.05	
51	g	-do- 40 mm to 45 mm size ( IRC and MORTH )	1 cum	560.00	
52	h	-do- 50 mm to 55 mm size ( IRC and MORTH )	1 cum	434.30	
53	i	-do- 60 mm to 63 mm size ( IRC and MORTH )	1 cum	399.05	
54	j	-do- 65 mm size ( IRC and MORTH )	1 cum	360.95	
55	k	-do- 75 mm size ( IRC and MORTH )	1 cum	289.50	
56	l	NOTE:- Add extra Rs. /- per cum for items 33 (a) to 33 (j) if the metal is obtained by blasting	1 cum	70.00	As proposed by WR Dept.

<b>RATES OF MATERIALS &amp; WORK ITEMS SSI No.</b>	<b>S.S. Item No.</b>	<b>Description</b>	<b>Unit (per)</b>	<b>S o Rate for 2018-19 in Rs.</b>	<b>Remarks</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
57	2	Add 25% extra per cum if the metal is obtained by machine crushing excluding cost of blasting.	1 cum	25%	As proposed by WR Dept.
58	3	Deduct Rs. /- per cum if the metal or rubble is obtained from surface stones and boulders	1 cum	9.90	
59	4	Add Rs. /- per cum for selection of stones and boulders from excavated soil dumps for items 33 (a) to 33 (k), when this addition of Rs. /- per cum allowed deduction of Rs. /- per cum mentioned under note (3) above should invariably be made	1 cum	17.00  9.90	
		<b>HARD BROKEN STONE OTHER THAN GRANITE SUCH AS QUARTZ, QUARTZ-NAPA AND BASALT SCREENED AND FREE FROM DUST</b>			
60	33.q	- do - 10 mm size (SS 5)	1 Cum	367.60	
61		-do- 9.5 mm to 11.2 mm size ( IRC and MORTH )	1 Cum	367.60	
62	r	- do - 12 mm size (SS 5)	1 Cum	344.75	
63		-do- 12mm to 14 mm size ( IRC and MORTH )	1 Cum	344.75	
64	S	- do - 20 mm size (SS 5)	1 Cum	279.05	
65		-do- 19 mm to 22 mm size ( IRC and MORTH )	1 Cum	279.05	
66	T	- do - 25 mm size (SS 5)	1 Cum	273.35	
67	U	- do - 40 mm size (SS 5)	1 Cum	161.90	
68		-do- 40 mm to 45 mm size ( IRC and MORTH )	1 Cum	161.90	
69	V	- do - 50 mm size (SS 5)	1 Cum	142.85	
70		-do- 50 mm to 55 mm size ( IRC and MORTH )	1 Cum	142.85	
71	33.w	- do - 65 mm size (SS 5)	1 Cum	135.25	
72		-do- 60 mm to 65 mm size ( IRC and MORTH )	1 Cum	135.25	
73	X	- do - 75 mm size (SS 5)	1 Cum	111.45	
74		- do - 75 mm size ( IRC &MORTH)	1 Cum	111.45	
75	Y	- do - 75 to 100 mm size (SS 5)	1 Cum	87.60	
76		- do - 75 to 100 mm ( IRC& MORTH)	1 Cum	87.60	
		<b>OTHER ITEMS</b>			
77	33.z1	Laterite 40 to 75 mm ( ring)	1 Cum	96.20	
78	z2	kankar, hard broken kankar 40 to 75 mm ( ring )	1 Cum	71.45	
79	z3	Soling stone of 150 mm size of granite, trap and Dolomite varieties.	1 Cum	90.50	

RATES OF MATERIALS & WORK ITEMS SSI No.	S.S. Item No.	Description	Unit (per)	S o Rate for 2018-19 in Rs.	Remarks
1	2	3	4	5	6
80		NOTE:- (1) Add extra for items to 33(z3) Rs /- Per cum, wherever quarrying is done by blasting. (2) Wherever controlled blasting is resorted to the Chief Engineer concerned shall approve the observed data in support of SS item No. 22 a to 22 c , 22g, 23	1 Cum	70.00	As proposed by WR Dept.
81	z4	Soling stone of 150 mm size other than granite variety	1 Cum	72.40	
82	z5	Soling Stone laterite, Kankar 150mm, surface stone	1 Cum	44.75	
83	z6	Field picked metal unbroken 20 mm size	1 Cum	58.10	
84	z7	- do - 25 mm size	1 Cum	43.80	
85	z8	- do - 40 mm size	1 Cum	50.50	
86	z9	- do - 50 mm size	1 Cum	43.80	
87	z10	- do - 60 mm size	1 Cum	38.10	
88	z11	- do - 80 mm size	1 Cum	33.35	
89		NOTE:- Add Rs. /- Per Cum for selection of stone and boulders from excavated spoil dumps for items 33 (Q) TO 33 Z, when this addition of Rs. /- per Cum is allowed, deduction of Rs. /- per Cum should invariably be made towards the metal or rubble if it is obtained from surface stone and boulders.		17.00	
90	34	Gravel	1 Cum	110.00	As per WR Dept. (M 008 of Material)
91	35 a	Quarry rubbish	1 Cum	84.75	
92	B	HBG Stone Chips 2.36mm and below	1 Cum	333.00	As per WR Dept. (SI.No.67 of Material)
93	36.a	Fine aggregate / <b>Sand</b> (un-screened) for Concrete & Filtering items (excluding Seigniorage charges)	1 Cum	100	As per WR Dept. (Si. No. 27 of Material)
94	b.	Fine aggregate / <b>Sand</b> (unscreened) for filling (excluding Seigniorage charges)	1 cum	100	
95	c	Fine aggregate / <b>Sand</b> (screened) for Mortar, Plastering items and Sand blasting items (excluding Seigniorage charges) (Rs. 70/- is added towards screening charges)	1 Cum	182	As per WR Dept. (Si. No. 28 of Material)
96	37	Clay for puddle and masonry Items 38 (a) to 39 (h) As per local prevailing rates based on competitive quotations.	1 Cum	38.00	
		<b>(C) LIME AND CEMENT</b>			
97	40 to 41(c)			As per local prevailing rates based on competitive rates	

<b>RATES OF MATERIALS &amp; WORK ITEMS SSI No.</b>	<b>S.S. Item No.</b>	<b>Description</b>	<b>Unit (per)</b>	<b>S o Rate for 2018-19 in Rs.</b>	<b>Remarks</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
98	42	Cement excluding cost of empty cement bags	1 MT	<b>3882.00</b>	Monthly rates will be communicated by the Govt
NOTE: (1) The rates are exclusive of GST 2) The price of cement will be reviewed and fixed on monthly basis and rates will be communicated separately.					
99	C	Grinding lime mortar or Surkhi mortar	1 Cum	95.25	
100	D	Shell lime slaked and screened	1 Cum	940.00	
101	E	White cement	1 Kg.	27.95	
102		<b>(D) MORTARS</b>			
103	43 to 45	Items 43 to 45			
		<b>(E) METAL AND IRON WORKS</b>			
104		Mild steel rods 6mm dia.	1 MT	Monthly rates communicated by the Govt	
105		Mild steel flats	1 MT		
106		Mild Steel, Structural Steel, I.e., Angles, Channels and I sections.	1 MT		
107		High Yield Strength Deformed Bars/TMT bars	1 MT		
108		Mild steel plates	1 MT		
NOTE: (1) The rates are exclusive of GST 2) The prices of steel will be reviewed and fixed on monthly basis and rates will be communicated separately.					
<b>III RATES OF WORKS</b>					
<b>(A) CLEARING SITE</b>					
109	1.a	Clearing heavy Jungle	1 Sqm	3.20	
110	b	Clearing light Jungle	1 Sqm	2.80	
111	c	Clearing Scrub Jungle	1 Sqm	2.80	
112	d	Clearing Juliflora (Prosafis) jungle including up-rooting and removing of Juliflora stumps.	1 Sqm	4.40	
113	2.a.1	Cutting and removing Palmyrah trees including stacking of girth 30 to 100 cm.	Each	21.00	
114	a.2	- do - 100 to 200 cm.	Each	48.00	
115	2.b.1	Uprooting and removing Palmyrah stumps including stacking of girth 30 to 100 cm.	Each	51.00	
116	b.2	- do - 100 to 200 cm.	Each	53.00	
117	2.c.1	Cutting and removing date trees including stacking of girth 30 to 100 cm	Each	26.00	
118	c.2	- do - 100 to 200 cm	Each	39.00	
119	2.d.1	Uprooting and removing stumps of date trees including stacking of girth 30 to 100 cm.	Each	26.00	
120	d.2	- do - 100 to 200 cm	Each	33.00	

<b>RATES OF MATERIALS &amp; WORK ITEMS SSI No.</b>	<b>S.S. Item No.</b>	<b>Description</b>	<b>Unit (per)</b>	<b>S o Rate for 2018-19 in Rs.</b>	<b>Remarks</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
121	2.e 1	Cutting and removing other kind of trees including stacking of girth 30 to 100 cm	Each	33.00	
122	e.2	- do - 100 to 200 cm	Each	51.00	
123	e.3	- do - above 200 cm	Each	83.00	
124	2.f.1	Uprooting and removing stumps of other kind of trees including stacking of girth 30 to 100 cm.	Each	26.00	
125	f.2	- do - 100 to 200 cm	Each	36.00	
126	f.3	- do - above 200 cm	Each	45.00	
127	3.a	Uprooting and clearing prickly pear jungle	1 Sqm	2.50	
128	b	- do - under 2.5 meters height including burning and burrying as directed.	1 Sqm	3.30	
129	c	- do - over 2.5 meters height including burning and burrying with an initial lead of conveyance	1 Sqm	3.90	
130	4.a	Removing of natchu, goobi, thooti etc., from drains, channels including clearance if not more than 1 metre depth of water with an initial lead of 10 metres and lift of 2 metres.	1 Sqm	2.10	
131	b.i	Clearing alchi, tilla	1 Sq.m	4.20	
132	b.ii	Removal of Jammu	1 Sq.m	3.60	
133	c.i	Removal of imponea, cornea	1 Sq.m	4.00	
134	c.ii	Removal of water hyacinth upto 30 cm thick.	1 Sqm	4.10	
135	c.iii	- do - more than 30 cm thick	1 Sq.m	5.50	
136	d	Removal of natchu, goobi, thooti etc., for every extra lead or lift over the initial lead or lift.	1 Sqm	1.50	
		<b>(B) DISMANTLING</b>			
	<b>5</b>	<b>DISMANTLING, CLEARING AWAY MATERIALS USEFUL FOR REUSE.</b>			
137	a.i	Dry rough stone revetment for aprons and stacking within 40 metres	1 cum	65.60	
	<b>7</b>	<b>Drilling holes in hard granite or sheet rock</b>			
	a)	<b>Manually ( Hand)</b>			
138	i)	20 mm dia meter	1 RM	136.00	
139	ii)	25 mm dia meter	1 RM	144.00	
140	iii)	36 mm dia meter	1 RM	166.00	
141	b)	<b>Pneumatic Compressor</b>			
142	i)	20 mm dia meter	1 RM	154.00	
143	ii)	25 mm dia meter	1 RM	167.00	
144	iii)	36 mm dia meter	1 RM	182.00	
	<b>8</b>	<b>Grouting the holes with neat cement slurry excluding cost of steel</b>			

<b>RATES OF MATERIALS &amp; WORK ITEMS SSI No.</b>	<b>S.S. Item No.</b>	<b>Description</b>	<b>Unit (per)</b>	<b>S o Rate for 2018-19 in Rs.</b>	<b>Remarks</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
145	i)	20 mm dia meter	1 RM	97.00	
146	ii)	25 mm dia meter	1 RM	122.00	
147	iii)	36 mm dia meter	1 RM	152.00	
		<b>White Washing and Painting works</b>			
148	A	White washing and colour banding for guard and guide stones including cost of materials	each	10.00	
149	B 1	Screening sand and gravel	1 cum	10.50	
150	B 2	Screening chips and metal	1 cum	17.60	
151	C	Removing and refixing Hectometre or Demarcation stones	each	12.65	
		<b>(S ) ROAD WORK ITEMS</b>			
		<b>PICKING OLD METALLED SURFACE TO DEPTH OF 40 TO 100 mm SPREADING OLD METAL AND NEW METAL SECTIONING INCLUDING EDGEBUNDS AND SUBGRADE ROLLING, SPREADING METAL INCLUDING BLINDAGE OFGRAVEL WATERING WITH AN INITIAL LEAD OF 2 HECTOMETERS AND HAND ROLLER ( 1.5 TO 2 TONNES) ROLLING ETC., INCLUDING BARRICADING, DIVERSION OF TRAFFIC AND WETTING THE NEW CONSOLIDATION FOR A FORTNIGHT COMPLETE</b>			
		( For a compact thickness )			
	1 (i)	<b>HARD METAL</b>			
152	A	40 mm thickness	10 sqm	70.00	
153	B	50 mm thickness	10 sqm	74.00	
154	C	75 mm thickness	10 sqm	80.30	
155	D	100 mm thickness	10 sqm	87.00	
156	1 (ii)	<b>(For compact thickness of soft metal)</b>			
157	A	50 mm thickness	10 sqm	53.80	
158	B	75 mm thickness	10 sqm	63.90	
159	C	100 mm thickness	10 sqm	70.10	

RATES OF MATERIALS & WORK ITEMS SSI No.	S.S. Item No.	Description	Unit (per)	S o Rate for 2018-19 in Rs.	Remarks
1	2	3	4	5	6
	5	Picking old metallised surface to a depth of 40 to 100 mm and spreading metal including watering with an initial lead of 2 Hectometers and rolling with power rollers watering and spreading gravel for blindage and power roller rolling including hire charges of power roller( 8 to 10 T ) barricading and diversion of traffic and wetting the new consolidation for a fortnight(for compacted thickness of )			
		<b>HARD METAL</b>			
160	5 (a)	40 mm thick ness	10 sqm	185.00	
161	(b)	50 mm thick ness	10 sqm	210.00	
162	(c )	75 mm thick ness	10 sqm	231.00	
163	(d )	100 mm thick ness	10 sqm	248.80	
164	(e)	150 mm thick excluding hire charges	10 sqm	445.40	
165		Gelatin(For MORTH data, for works of state & national high ways only)	Per Kg	<b>57.00</b>	As per WR Dept. (M 104 of Material) other than covered under irrigation
166		Electric Detonators(For MORTH data, for works of state & national high ways only)	each	<b>9.00</b>	As per WR Dept. (Si. No. 21 of Materials of WR Dept.)
167		Hot applied thermoplastic compound(For MORTH data, for works of State & National high ways only)	Per litre	Rate as per local competitive quotations	As per WR Dept. (M 118 of Material other than covered under Irrigation Items)
168		Reflectionising glass beads of 2 mm thick(For MORTH data, for works of State & National high ways only)	Per Kg		<b>deleted</b>
169		Road marking paint confirming to IS 164(For MORTH data, for works of State & National high ways only)	Per Kg	152.15	
170	n	Labour charges for laying filters with coarse aggregate.	1 cum	55.30	
171	o	Labour charges for laying filter with sand.	1 cum	30.70	
172		Fly Ash	1 cum		<b>deleted</b>

<b>RATES OF MATERIALS &amp; WORK ITEMS SSI No.</b>	<b>S.S. Item No.</b>	<b>Description</b>	<b>Unit (per)</b>	<b>S o Rate for 2018-19 in Rs.</b>	<b>Remarks</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
173		Binding Wire	1 Kg	<b>53.00</b>	As per WR Dept. (M 072 of Material) other than covered under irrigation items
174		Jute rope	Mtr	8.35	
175		De bonding strips	Mtr	8.55	
176		Selent	Ltr	53.95	
177		Poly sheet 125 microns	1 sqm	15.25	
178		Rural water rate	1 kl	77.00	

# **HIRE CHARGES OF PLANT AND MACHINERY**

**HIRE CHARGES OF PLANT & MACHINERY FOR  
ROAD & BRIDGE WORKS FOR THE YEAR 2018-19**

Sl. No.	Description		Unit	S o Rate for 2018-19 in Rs.	Remarks
	Machine	Activity			
1	2	3	4	5	6
1	Dozer( D 80 )	Spreading	Per Hour	2454.60	As per WR Dept. (S.No.8)
		Cutting			
		Cleaning			
2	Dozer (D50)	Spreading	Per hour	1546.80	
		Cutting			
		Cleaning			
3	Mortor Grader	Clearing	Per Hour	3020.40	
		Spreading			
		GSB			
		WMM			
4	Hydraulic Excavator	Soil Ordinary	Per Hour	2791.60	As per WR Dept. (S.No.52)
		Soil Marshy			
		Soil unsuitable			
5	Front end loader	Soil loading	Per Hour	1594.70	
		Aggregate loading	Per Hour		
6	Tipper- 5.5 Cum	Transportation of soil, GSB,WMM, Hot mix etc	Per Hour	950.30	As per WR Dept. (S.No.54)
7	Vibratory roller 8 tonne	Earth/Soil, GSB,	Per Hour	2736.20	As per WR Dept. (S.No.62)
		WMM			
8	Smooth wheeled roller 8 tonne	Soil compaction ,BM compaction	Per Hour	1329.90	As per WR dept. (S.No.50)
9	Water tanker 8 Kilolitre	Water transport	Per Hour	945.80	As per WR Dept. (S.No.64)
10	Water tanker 6 Kilolitre	Water transport	Per Hour	655.20	
11	Tractor	Pulling	Per Hour	413.60	
12	Tractor with rotavator	GSB mixing @ site	Per Hour	423.60	
13	Tractor with ripper attachment	Scarifying	Per Hour	423.60	
14	Air Compressor 5 cmm(electric)	General purpose	Per Hour	556.50	As per WR Dept. (S.No.2)
15	Wet mix plant 60 TPH	Wet mix	Per Hour	1679.70	
16	Mechanical broom Hydraulic	Surface cleaning	Per Hour	381.80	
17	Bitumen Pressure Distributor	Applying bitumen tack coat	Per Hour	1527.10	
18	Emulsion Pressure Distributor	Applying emulsion tack coat	Per Hour	875.60	
19	Hot mix Plant – 120 TPH capacity	DBM/BM/SDC	Per Hour	28708.00	
		/Premix			
20	Hot mix Plant – 100 TPH capacity	DBM/BM/SDC	Per Hour	24636.00	
		/Premix			

Sl. No.	Description		Unit	S o Rate for 2018-19 in Rs.	Remarks
	Machine	Activity			
1	2	3	4	5	6
21	Hot mix Plant – 60 TPH capacity	DBM/BM/SDC	Per Hour	22092.00	
		/Premix			
22	Hot mix Plant – 40 to 60 TPH capacity	DBM/BM/SDC	Per Hour	19546.00	
		/Premix			
23	Paver Finisher Hydrostatic with sensor control 100 TPH	DBM/BM/SDC	Per Hour	3115.20	
		/Premix			
24	Paver finisher Mechanical 100	Paving of WMM, paving of DLC	Per Hour	2290.60	
25	Hydraulic Chip Spreader	Surface dressing	Per Hour	2743.70	
26	Tandem Road roller	Rolling of Asphaltic surface	Per Hour	1856.50	
27	Pneumatic Road roller	Rolling of Asphaltic surface	Per Hour	1515.60	
28	Pot-Hole repair machine	Repair of pot-holes	Per Hour	903.00	
29	Bitumen boiler oil fired	Bitumen Spraying	Per Hour	223.00	
30	GSB Plant 50 Cum	Producing GSB	Per Hour	1279.70	
31	Mastic Cooker	Mastic wearing coat	Per Hour	79.50	
32	Batching and Mixing Plant (a) 30 Cum capacity	Concrete mixing	Per Hour	1310.90	
	(b) 15 - 20 Cum capacity	Concrete mixing	Per Hour	1083.10	As per WR Dept. (S.No.10)
33	Transit mixer	Transportation of concrete mix	Per Hour	2071.70	As per WR Dept. (S.No.1)
34	Concrete pump of 45 and 30 cum	Pumping of Concrete	Per Hour	1508.80	As per WR Dept. (S.No.70)
35	Cranes				
	(a) 80 tonnes	Lifting purpose	Per Hour	1311.20	
	(b) 35 tonnes			885.70	
	(c) 3 tonnes			429.60	
(d)Crane with grab bucket 0.75 cum	Well foundation	Per Hour	2308.90		
(e)Crane with grab bucket 1 cum	Well foundation	Per Hour	3775.80		
36	Concrete bucket 1.50 cum	For pouring concrete	Per Hour	12.90	As per WR Dept. (S.No.14)
37	Kerb casting machine	Kerb making	Per Hour	671.90	
38	Concrete mixer	Concrete mixing	Per Hour	525.50	As per WR Dept. (S.No.18)
	(a)0.28 cum				
	(b) 1.0 cum	Concrete mixing	Per Hour	661.50	

Sl. No.	Description		Unit	S o Rate for 2018-19 in Rs.	Remarks
	Machine	Activity			
1	2	3	4	5	6
39	Piling rig with bantonite pump	0.75 m dia to 1.20 m dia boring attachment	Per Hour	6131.70	
40	Concrete paver finisher with 40 HP motor	Paving of concrete surface	Per Hour	3247.20	
41	Integrated stone crusher	Crushing of spalls 100 TPH	Per Hour	9755.20	
		Crushing of spalls 200 TPH	Per Hour	20570.00	
42	Pre stressing jack with pump and access	Stressing of steel wires/ stands	Per Hour	157.80	
43	Generator	Generation of electric energy			
	250 KVA		per hour	2162.60	
	125 KVA		per hour	1543.10	
	100 KVA		per hour	1316.30	
	30 KVA		per hour	1032.00	As per WR Dept. (S.No.23)
44	Pneumatic sinking of Plants	Pneumatic sinking of wells	Per K.m.	5701.00	
45	Truck 5.5 cum per 10 tonnes	Material transport	Per her	923.70	As per WR Dept. (S.No.58)
46	Road marking Machine	Road marking	Per Hour	135.50	
47	Mobile slurry seal equipment	Mixing and laying slurry seal	Per Hour	1261.40	
48	Plate compacter	For compacting in medians	Per Hour	59.10	
49	Drilling equipment	For drilling	Per Hour	880.90	As per WR Dept. (S.No.22)

**Note:** The above hire charges of Machinery & Plant includes crew, oils, conveyance of Machinery to site and all other incidental charges

**PART-IV**  
**PUBLIC HEALTH ITEMS**

<b>PUBLIC HEALTH ITEMS</b>			
Sl. No.	Description	Unit	SoR for 2018-19
1	2	3	4
1	<b>RATES OF LABOUR (SKILLED WORKMEN)</b>		
	1. Caulker	Per Day	As per Labour rates of SoR
	2. Plumber 1st Class	Per Day	
	3. Plumber 2nd Class	Per Day	
	4. Sewer Cleaner	Per Day	
	5. Well Sinker	Per Day	
	6. Pipe line Fitter 1st Class	Per Day	
	7. Pipe line Fitter 2nd Class	Per Day	
	8. Pump Operator	Per Day	
	9. Bore Mechanic	Per Day	
	10. Light Vehicle Driver	Per Day	
	Note: The rate at relevant item in common SoR is applicable for occasional employment.		
2	<b>RATES FOR EARTH WORK :</b>		
a.	Earth work excavation in all types soils for pipe lines, for drainage and water supply, where the depth is more than 1.5 times the width.		To follow the relevant items of Irrigation work items as per AP. Standard data
b.	Earth work excavation in all types soils for pipe lines, for drainage and water supply, where the depth is less than 1.5 times the width.		
c.	Earth work excavation in all types soils for open trenches, for valve pits, inspection chambers, etc.		
3.	Excavation of pipe line trenches for drainage and water supply in rock requiring blasting with initial lead and lift including cost of blasting materials where the depth is more than 1.5 times the width, in places where there is no habitation.		
a.	Excavation of pipe line trenches for drainage and water supply in rock requiring blasting with initial lead and lift including cost of blasting materials where the depth is less than 1.5 times the width, in places where there is no habitation.		
b.	Excavation of pipe line trenches for drainage and water supply in rock requiring blasting with initial lead and lift including cost of blasting materials where the depth is less than 1.5 times the width, in places where there is no habitation.		
c.	Cutting rock for pipe line trenches by hammers, knuckles and chisels including stacking where the depth is 1.5 times or more than the width.		
d.	Cutting rock for pipe line trenches by hammers, knuckles and chisels including stacking where the depth is less than 1.5 times the width.		

e.	Cutting rock for works other than pipe lines trenches by hammers, knuckles and chisels including stacking.		
f.	For controlled blasting at restricted places		
	NOTE: - Rock should be measured in solids. In case it is not possible, stacks should be made in which case 40% for voids to be deducted from the stack measurements.		
4	Loading or unloading materials such as C.I. Pipes, PVC Pipes, AC Pressure Pipes, DI Pipes, SW Pipes, PVC Pipes, A.C/Specials less than 300 mm dia. Up to 4 m in length including stacking.		
a.	C.I. Pipes/D.I. Pipes and fittings	Per Tonne	To follow as per AP. Standard data
b.	A.C. Pipes & Specials	Per Tonne	
c.	Stoneware pipes & Specials	Per Tonne	
d.	P.V.C. Pipes and fittings	Per Tonne	
5	Loading or unloading materials such as C.I. Pipes, DI pipes, SW pipes, AC pressure pipes & fittings/ specials from 300 mm to 600 mm dia. Up to 4 m in length including stacking.		
a.	C.I. Pipes/D.I. Pipes and fittings	Per Tonne	To follow as per AP. Standard data
b.	A.C. Pipes & Specials	Per Tonne	
c.	Stoneware pipes & Specials	Per Tonne	
6	Loading or unloading materials such as C.I. Pipes, DI pipes, PVC pipes, AC pipes less than 300 mm dia., above 4 m in length including stacking.		
a.	C.I. Pipes/D.I. Pipes and fittings	Per Tonne	To follow as per AP. Standard data
b.	A.C. Pipes & Specials	Per Tonne	
c.	P.V.C. Pipes and fittings	Per Tonne	
7	Loading or unloading materials such as C.I. Pipes, DI pipes, AC pipes from 300 mm to 600 mm above 4 m in length including stacking.		To follow as per AP. Standard data
a.	C.I. Pipes/D.I. Pipes and fittings	Per Tonne	
b.	A.C. Pipes & Specials	Per Tonne	
	Note:- For loading and unloading the above materials at Railway Stations, the rates may be adopted based on the competitive quotations or the hummable charges if prevailing.		
8.	Lowering C.I. / D.I. Pipes (all classes) and specials (fittings) with s/s ends carefully into trenches and laying them true to alignment and gradient including all sundries but excluding cost and conveyance of pipes from source of supply (Ref to specifications. BIS No.3114/1994)		To follow as per AP. Standard data
	Diameter of Pipe/Fittings in mm :		
	80mm to 1000mm dia.	Per Meter	

<b>PUBLIC HEALTH ITEMS</b>			
<b>Sl. No.</b>	<b>Description</b>	<b>Unit</b>	<b>SoR rates for 2018-19</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
8. b.	Lowering C.I. / D.I. Pipes (all classes) and specials (fittings) with flanged ends carefully into trench and laying them true to alignment and gradient including all sundries but excluding cost and conveyance of pipes from source of supply. (Reference to specifications. BIS No.3114/1994)		
	DIAMETER OF PIPE/Fittings in mm :		To follow as per AP. Standard data
	80mm to 750mm dia.		
	800	Per Meter	<b>624</b>
	900	Per Meter	<b>811</b>
	1000	Per Meter	<b>1054</b>
	1100	Per Meter	<b>1298</b>
	1200	Per Meter	<b>1543</b>
9. a.	Jointing CI /DI pipes & fittings with s/s ends including cost of pig lead, Spun yarn and sundries such as cost of fuel for melting lead, filling with water with lead up to 500m and testing to required pressure complete. (Reference to specifications. BIS No.3114/94/12288:1997)		
	DIAMETER OF PIPE/Fittings in mm :		To follow as per AP. Standard data
	80mm to 800mm		
	900	Each Joint	<b>16304</b>
	1000	Each Joint	<b>18215</b>
	1100	Each Joint	<b>20123</b>
	1200	Each Joint	<b>22033</b>
9. b.	Jointing C.I., D.I. pipes and fittings with rubber gasket (push-on-joint),excluding the cost of the gasket but including all sundries filling with water, with a water lead up to 500m and testing to required pressure, etc. complete (Reference to specifications IS 3114/1994/12888/1997)		
	Diameter of Pipe/Fittings in mm :		To follow as per AP. Standard data
	80mm to 1000mm dia.	Each Joint	

10	Jointing CI pipes, fittings and valves with flanged ends including cost of jointing materials such as bolts, rubber insertion, white lead including filling with water, with lead up to 500 meters and testing to required pressure complete. (Reference to specifications. BIS No.3114/1994.)		
	DIAMETER OF PIPE/Fittings/ valve in mm :		
	80mm to 750mm dia.	Each Joint	To follow as per AP. Standard data
	800	Each Joint	<b>6836</b>
	900	Each Joint	<b>8040</b>
	1000	Each Joint	<b>9259</b>
	1100	Each Joint	<b>10508</b>
	1200	Each Joint	<b>11802</b>
11a	Lowering the RCC plain ended pipes carefully into the trench laying them true to alignment and gradient, jointing RCC pipes with cement joints including curing, the cost of jointing materials i.e., Cement Mortar (1:1.5), hemp yarn etc., and testing including filling with water with a water lead up to 500 Meters excluding cost of rubber rings as per BIS No.783/85.		
	per every 25 mm dia.	Per Meter	<b>24</b>
11b	Lowering the RCC S/S pipes carefully into the readymade trenches laying them true to alignment and gradient, jointing with rubber rings and testing including filling with water with a water lead up to 500 meters including cost of rubber rings as per BIS No. 783/1985		
	per every 25 mm dia.	Per Meter	
	80mm to 600mm		To follow as per AP. Standard data
	700		<b>377</b>
	800		<b>453</b>
	900		<b>543</b>
	1000		<b>651</b>
12	Lowering and Jointing G.I. pipes and specials / fittings including excavation of trench of 0.5m width and 0.50 m depth in all soils except rock requiring blasting and refilling trenches after laying and jointing pipes and also including cost of jointing materials but excluding the cost of pipes. Reference to specifications. BIS No.783/85		
a	G.I. Pipes :Dia. in mm		To follow

	15mm to 150mm	Per Meter	as per AP. Standard data
12-b	Laying, jointing of PVC/HDPE pipes as per BIS No.7634 part-III/75 for PVC and BIS No.7634 part-II/75 for HDPE pipes including trench excavation and refilling.		
	DIA in mm		
	50	Per Meter	<b>36</b>
	40	Per Meter	<b>36</b>
	32	Per Meter	<b>36</b>
	25	Per Meter	<b>33</b>
	20	Per Meter	<b>31</b>
	NOTE: - (i) The above rates are applicable for the works in District only.		
	(ii) If the depth of excavation is more than 0.5 m separate rates to be worked out.		
<b>13</b>	Lowering and laying in readymade trench true to alignment and gradient, jointing, and testing of Stone ware pipes including cost of jointing material such as cement mortar (1:1) proportion and hemp yarn but excluding cost and conveyance of pipe. (Reference to specifications BIS No. 6530/72)		
	Dia. of Pipes in mm		<b>To follow as per AP. Standard data</b>
	100mm to 450mm	Per Meter	
<b>14</b>	Lowering, Laying, Jointing and Testing to hydraulic test pressure including cost of water with minimum water lead of 500m for UPVC pressure pipes in readymade trenches to alignment and gradient including all sundries but excluding cost & conveyance of pipes from source of supply and jointing material as per BIS No: 7634 part-III-1975.		
	Dia. Of pipe	Per Meter	<b>To follow as per AP. Standard data</b>
	63 to 315mm		
15	Laying and jointing of HDPE pipes by butt fusion welding as per IS: 7634 – part-II/1975 as amended from time to time to the alignment and gradient and testing the pipeline to the required pressure.		
	Outer Dia. of pipes in MM		
	63 to 355 mm dia.		<b>To follow as per AP. Standard data</b>
	400		<b>255</b>

	450		<b>282</b>	
16	Lowering, keeping in position and fixing D.I. sluice valves (with cap / with hand wheel & Reflex valves) excluding cost of bolts, nuts, rubber insertion, sluice valve and tail pieces			
	<u>Dia. of Valve in mm.</u>		<b>To follow as per AP. Standard data</b>	
	80mm to 600mm	Each		
17	Labour charges for fixing <u>Air valves</u> including boring the mains and threading the bore fixing nipple etc., complete.			
	<u>Dia. of Air valve in mm.</u>		<b>To follow as per A.P. Standard data</b>	
	25	Each		
	40	Each		
	50	Each		<b>195</b>
	65	Each		<b>207</b>
	80	Each		<b>224</b>
	100	Each		<b>266</b>
	125	Each		<b>414</b>
	150	Each	<b>453</b>	
18	Labour charges for fixing Kinetic Air Valves with isolating Sluice valves, Double Air valves/ Air Cushion valve excluding cost of jointing materials such as bolts, nuts and rubber insertions etc., complete.			
	<u>Dia. of Air valve in mm.</u>			
	25	Each	<b>184</b>	
	40	Each	<b>208</b>	
	50(Double Air valves)	Each	<b>221</b>	
	65	Each	<b>237</b>	
	80	Each	<b>259</b>	
	100	Each	<b>301</b>	
	125	Each	<b>471</b>	
	150	Each	<b>516</b>	
19	Uprooting C.I. / DI Pipes by melting the lead, loosening the joints, scraping the pipes, hoisting and keeping within a lead of 10 m but excluding earth work excavation and refilling.			
	80mm to 600mm	Per Meter	<b>To follow as per AP. Standard data</b>	
20	Uprooting of RCC pipes including breaking the collars, loosening the joint, separating the pipes, hoisting and keeping within a lead of 10 m but excluding earthwork			

	excavation and refilling.		
	100mm to 300mm	Per Meter	<b>To follow as per AP. Standard data</b>
<b>21</b>	Removing old G.I. pipes and specials / fittings and cleaning, scraping the pipes, hoisting and keeping within 50m lead but excluding earth work excavation of trenches and refilling.		
	Dia. of Pipes in mm		
	15mm to 50mm	Per Meter	<b>To follow as per AP. Standard data</b>
22	Cutting C.I./ DI Pipes without water in mains Dia. of pipes in mm.		
	Dia. of Pipes in mm		
	80mm to 600mm	Each cut	To follow as per AP. Standard data
	680	Each cut	<b>572</b>
	700	Each cut	<b>587</b>
	750	Each cut	<b>633</b>
	800	Each cut	<b>673</b>
	900	Each cut	<b>756</b>
	1000	Each cut	<b>840</b>
	1100	Each cut	<b>926</b>
	1200	Each cut	<b>1010</b>
23	Cutting A.C. Pipes without water in mains Dia. of pipes in mm.		
	Dia. of Pipes in mm		
	80	Each cut	<b>37</b>
	100	Each cut	<b>37</b>
	125	Each cut	<b>37</b>
	150	Each cut	<b>37</b>
	200	Each cut	<b>39</b>
	250	Each cut	<b>64</b>
	300	Each cut	<b>64</b>
	350	Each cut	<b>79</b>
	400	Each cut	<b>87</b>
	450	Each cut	<b>108</b>
	500	Each cut	<b>120</b>

	600	Each cut	<b>132</b>
24	Drilling and tapping CI/ DI / GI Main and fixing brass screw down ferrule and plug.		
	10 mm to 20mm	Each Tapping	<b>To follow as per AP. Standard data</b>
	25 mm to 40mm	Each Tapping	
25	Cutting road surface including stacking of excavated materials for pipe line trench work.		
	a) Cutting open B.T. road surface (as well as asphalt concrete up to 75 mm thick) including water bound macadam	10 Sqm	<b>722</b>
	b) Cutting open C.C. road surface with concrete saw cutter and removal with Breaker	1 Cum	<b>2204</b>
	c) Cutting open water bound macadam road including soiling	1 Cum	<b>246</b>
26	<b>Bailing out water.(For PH item)</b>		
	a) Bailing out water from the pipe line trenches with oil engine driven pump sets, including hire charges, fuel charges and wages for Driver and Helper upto 5HP capacity pumps.	HP/Hour	<b>64</b>
	b) Bailing out water from the pipe line trenches with Electric Driven pump set including hire charges, current charges and wages for Driver and Helper upto 5HP capacity pumps.	HP/Hour	<b>45</b>
	c) For capacity of Pumps more than 5HP		
	A. Water lifting charges using Electrical driven pump		
	i. per hphr rate(including contractors profit and overhead charges of 13.615%	Rs.10.24/-	<b>Per hphr</b>
	ii. Other expenses in terms of Mazdoor, pump operator and pipe laying and dismantling(including contractors profit and overhead charges of 13.615%) per hr	Rs.166.78/-	<b>Per hr</b>
	Total hire charges of Electrically driven dewatering pump per hour	= (10.24xhp capacity)+166.78	<b>Per hr</b>
	B. Water lifting charges using Diesel driven pump		
	i. per hphr rate(including contractors profit and overhead charges of 13.615%	Rs.25.51/-	<b>Per hphr</b>
	ii. Other expenses in terms of Mazdoor, pump operator and pipe laying and dismantling(including contractors profit and overhead charges of 13.615%) per hr	Rs.201.55/-	<b>Per hr</b>
	Total hire charges of Diesel driven dewatering pump per hour	= (25.51xhp capacity)+201.55	<b>Per hr</b>
	NOTE:- The rate is payable on the total H.P. hours ignoring fractions less than 0.5 HP hour and rounding off 0.5 HP hour or more to the next higher integer.		
27	Shoring and strutting of trenches for water and sewer main		

	a) Single Staging from (0 to 2.5 Mts.)	1 Sqm of Shoring area	<b>To follow as per AP. Standard data</b>
	b) Double staging from (2.5 m to 4.5 Mts.)	1 Sqm of Shoring area	
28	Barricading, hoarding, lighting and watching etc., for water supply and sewerage works for trenches.	1 RMT	To follow as per AP. Standard data
29	Excavation of trenches for infiltration galleries, siphon lines and connecting mains in all soils under water including all leads, lifts, shoring, strutting, bailing out water and removal of shoring and strutting materials, after completion of pipe line work.		
	a) 0 to 1 m deep under water.	10 Cum	<b>12838</b>
	b) 1 to 2 m deep under water.	10 Cum	<b>18389</b>
	c) 2 to 5 m deep under water.	10 Cum	<b>27601</b>
	d) Beyond 5 m deep under water for every additional 1 m depth over item 'c'	10 Cum	<b>5273</b>
	NOTE:- The above rates do not include rock requiring blasting or chiseling		
30	Laying and jointing <u>perforated RCC pipes</u> inclusive of bailing out water and jointing with cement fillets and all other incidental charges for infiltration gallery inclusive of bailing out water by pumping to keep the trench reasonably dry to facilitate the work excluding cost of perforated pipes and collars.	Per Meter	<b>40</b>
	Per every 25 mm dia.		
31	Centering and scaffolding charges for RCC members including all materials and labour charges for forming and dismantling.		
a)	for R C C Elevated Service Reservoir of staging up to 15 Meter below L W L.	One Sqm of Centering area	
	1) Slabs for thickness (150 mm to 300 mm)		<b>4028</b>
	2) Slabs for thickness above 300 mm		<b>extra for every 50mm thickness increase Rs.473/-</b>
	3) Side walls curved surfaces. (rate is for both sides centering)		<b>3044</b>
	4) Side wall straight surfaces. (rate is for both sides centering)		<b>2708</b>
	5) Dome.		<b>3300</b>
	6) Roof Slab.		<b>1846</b>
	7) Column braces and beams		<b>1359</b>
	8) Circular braces, ring beams & circular column.		<b>1491</b>

	Note: - For RCC ELSR of staging above 15 m, the % increase in these rates shall be as follows. 15-18 m ---- 9% 18-21m --- 15% 21-24 m --- 21% 24 m -27m --27% above27m --- 30%		
	<b>Note: The Centering charges for item No's.3 &amp; 4 are for both the faces of the respective numbers. The measurement of centering charges shall be in "Sqm" for one face only and the centering charges given are for two faces of centering.</b>		
b)	For Ground level works :-		
	1) Slabs	1 Sqm	<b>To follow as per AP. Standard data</b>
	2) Beams & Lintels	1 Cum	
	3) Sun shades	1 Sqm	
	4-a) RCC vertical walls of plane surface (rate is for both sides centering) including open drains	1 Sqm of centering area	<b>1000/Sqm</b>
	4-b) VCC vertical walls of plane surface (rate is for both sides centering) including open drains	1 Sqm of centering area	<b>980/ Sqm</b>
	5) RCC vertical walls of circular faces (rate is for both sides centering)	1 Sqm of centering area	<b>1270/ Sqm</b>
	<b>Note: The Centering charges for item No's 4 &amp; 5 are for both the faces of the respective numbers. The measurement of centering charges shall be in "Sqm" for one face only and the centering charges given are for two faces of centering.</b>		
32	Lift or delift of materials :		
	a) Lifting of cement concrete for RCC elevated reservoir. For every <b>1m</b> height or part thereof over the initial lift of <b>3 m</b>	1 Cum	<b>161</b>
	b) Delifting the materials such as stones, concrete etc., for concrete below ground level for construction of masonry ground level reservoirs, construction of ground level reservoirs, inspection wells, test wells and sump wells etc., for every 1 m depth or part there of beyond the initial depth of 3 meters from ground level.	1 Cum	<b>50</b>
39 (a)	Extra allowance for isolated scattered works viz., valve pits / chambers, public fountains, meter pits and manholes, delivery cistern etc., complete.	Each	30% extra over the cost of chamber.
(b)	Repairs to the existing mains, interconnections, replacement of valves/specials etc., including the cutting, jointing, bailing out of water, drying, earth work excavation etc., complete.		100% extra over the cost of work
40	Removal of wet silt and sludge by manual means from sullage drains with aid of baskets and vessels.	10 Cum	<b>2485</b>
41	Well sinking in sandy and other loose soils under water either by manual labour, divers, or dredgers, weighting the top of staining to assist sinking etc., including		

	dewatering and other incidental charges such as hire charges for mechanical equipment etc.,		
	Up to 2 m below GL/m	Per meter	To adopt as per Standard data
	From 2 to 4 m below GL/m	Per meter	
	From 4 to 6 m below GL/m	Per meter	
	From 6 to 8 m below GL/m	Per meter	
	From 8 to 10 m below GL/m	Per meter	
42	Sinking in Hard strata other than rock but in soils like limestone, gravel, clay under water including, pumping dewatering, hire charges for mechanical equipment etc., complete.		Observed Data
43	Rates for OHSRs/ELSRs including fixtures with a staging of 15 m, without Seismic analysis.		
a	500 Kilo liters	Per liter	<b>18.20</b>
b	1000 Kilo liters	Per liter	<b>15.12</b>
c	1500 Kilo liters	Per liter	<b>13.63</b>
d	2000 Kilo liters	Per liter	<b>11.87</b>
e	2500 Kilo liters	Per liter	<b>11.12</b>
	1) The above rates are arrived with base rate of Cement Rs.3882/- per MT & Steel Rs 41300/- per MT (Bo CE rates for the month of March 2018.)		
	2) All concrete components shall be designed with M30 Design Mix proportion.		
	3) For intermediate capacities proportional rates shall be adopted.		
	4) The foundations shall be designed for Annular Raft Footings. The above rates are applicable for Elevated Level Services Reservoirs / OHSRs for <b><u>SBC of 15 T/Sqm.</u></b>		
	a) For every decrease of 2.50 T/Sqm of SBC, the rate shall be increased by <b><u>2.50% on basic rate.</u></b>		
	b) For every increase of 2.5 T/Sqm of SBC, the rate shall be decreased by <b><u>1.0% on basic rate up to 20 T/Sqm</u></b>		
	c) For SBC below 10T/Sqm , solid raft shall be provided and for solid raft the rate shall be increased by <b><u>10% on basic rate.</u></b>		
	5) For staging less than 15 m, the rate shall be decreased by Rs.0.05 paisa on basic rate per liter per every Meter decrease in staging.		
	6) For staging above 15 m, the rate shall be increased by Rs.0.10 paisa on basic rate per liter per every Meter additional staging.		
	7) The above rates shall be increased / decreased due to increase/decrease in the cost of cement by Basic rate x $\{(Rc-3882)/3882\} \times 0.07$ Rc = Rate of Cement (Rs per MT) at the time of preparation of estimate.		
	8) The above rates shall be increased / decreased due to increase/decrease in the cost of Steel by Basic rate x $\{(Rs-41300)/41300\} \times 0.2$ Rs = Rate of Steel (Rs per MT) at the time of preparation of estimate.		
	9) a) Rate inclusive of three coats of epoxy paint Food Grade of best quality to inner surface of the Reservoir including roof.		

	b)The rate inclusive of 2 coats of weather proof emulsion painting for external surfaces, lettering, all required fixtures, Pipes, Pipe specials, valves of DI material, Valve chambers etc., for pipe connections including cost of pipes, specials and valves as per departmental designs and drawings.
	10) For tribal/Agency / Rural area, the above rates as arrived up to shall be increased by 10%.
	11) The above rates adopted for a wind pressure up to "250 kg/Sqm". For every 100 kg/Sqm decrease in wind pressure, the rate shall be decreased by 5%
	12) a) The Basic rate is adopted by considering the design for Seismic forces for Zone- II only of seismic zones.
	(b) The basic rates shall be increased by 15 % for Zone-III of seismic zones.
	13-(a). The ELSR/OHSR shall be designed with minimum of two rows of columns for capacities above 500 KL & up to 1000KL.
	13-(b). The ELSR/OHSR shall be designed with minimum of three rows of columns for capacities above 1000KL.
	14. The shaft type staging with slip form can also be provided with proper approval from competent authority without any additional cost.
	<b>15) The basic rate is inclusive of following <u>Fixtures</u></b>
	i) Pipe connections & Specials with D.I materials
	(a) All pipe connections for Inlet, Out let, Over Flow, Scour pipes shall be provided with D/F DI material. (b) The Valves for above pipe connections also shall be of DI material of PN 16 duty confirming to the specification of SoR item No.28 (c) All specials such as Bends, Tees, Reducers, Duck foot Bends, Bell mouths etc., Shall be of DI material.
	II) The sizes of the verticals for ELSR/OHSR shall be:
	a) For 500 KL to 750 KI ELSRs Inlet Pipe - 300mm dia. Out let Pipe - 350mm dia. DI valves – 2 No's Over Flow pipe - 350m dia. Scour Pipe - 200mm dia.
	b) For 800 KL to 1500 KI ELSRs Inlet Pipe - 400mm dia. Out let Pipe - 450mm dia. DI valves – 2 No's Over Flow pipe - 450m dia. Scour Pipe - 200mm dia.
	c) For above 1500 KL to 2500 KI ELSRs Inlet Pipe - 400mm dia. Out let Pipe - 500mm dia. DI valves – 2 No's Over Flow pipe - 500m dia. Scour Pipe - 200mm dia.

	(iii) Manhole Frames & Covers
	a) All man hole Frames & Covers shall be made of CI/DI materials with min. size of 0.60mX 0.60m - For Roof & Valve Chambers.
	iv) CI/D.I Double Swan neck ventilators (min. of 150mm dia.) shall be provided in top dome and slab with mosquito/fly proof nets - 4Nos.
	v) RCC Finial ventilator with fly/bird protection with GI mesh - 1 No.
	vi) RCC precast ladders of 0.60 m width - 2 Nos.
	vii) RCC dog legged stair case of 1.00 m flight width and 1.20 m landing width R.C.C hand railing of 1.0 m height – 1 No
	viii) The staircase shall be enclosed with brick masonry walls on three sides and collapsible MS gate on front side up to 1 <sup>st</sup> brace level, to prevent unauthorized entry.
	ix) Construction of R.C.C valve chambers as per Standard Drawings with RCC cover slab fixed with CI/DI manhole Frame & Cover with lock and Key arrangement. The Mix shall not be less than VRCC M 20 grade with 150mm thick side walls, 150mm thick top slab, 150mm thick base slab over base course of 100mm thick (1:4:8) prop.
	x) Balcony of 1.00 m width at floor slab level / middle ring beam level by using Stainless Steel pipe of grade 304 hand railing up to 1.20 m height, with top railing of 40mm dia. pipe & middle railing of 25mm dia. and verticals with 40mm dia. at an interval not more than of 1.00m c/c.
	xi) Water Level Indicator of reputed make – Digital type (1 No) and Conventional type (1 No)
	xii) Lightening Arrestor with all its accessories complete including earthing, with relevant IS Codes - 1 No.
	xiii) <b>Compound wall:</b> Construction of compound wall including ornamental M.S.Gate of size 3.0 X 2.40m is included in the basic rate of ELSRs. Length of compound wall hall is minimum of 150m. Min. height of the compound wall shall be 1.80m above plinth and thickness 230mm in brick masonry in CM (1:6).The compound wall shall be constructed including earth work excavation in all types of soils for plinth beam of 230mm X 300mm and 0.75X0.75X1.20m size for column footing portions. The footings shall be of 0.75X0.75X0.25m in VRCC M20 grade and constructed over a C.C (1:4:8) prop bed of 100mm thick. The columns shall be of 230X230 mm in size with VRCC M20 grade at 3.00m c/c spacing, having depth of 1.20m below ground level and height of 2.00m above GL. The plinth beam of size of 230X300 mm shall be constructed in VRCC M20 grade at Ground level, over a bed of CC(1:4:8)-100mmthick. 450X450mm size columns in M20 grade shall be constructed for gate pillars. All the materials shall be followed as per the standards.
	Tie beam shall be provided above the brick work with 230X200mm size, fixed with MS angular of 25mm X 25mm X 4mm in "Y" shape to height of 0.60m, with embedded length of 150mm in concrete. The barbed wire fencing with 3 ply of 18 gauges shall be stretched in 4 rows (2x2). Plastering shall be done with 16mm thick in two coats i.e., base coat 12mm thick in CM(1:6)prop and 4mm thick 2nd coat CM(1:4) prop on both sides of brick work.
	Snowcem paint in two coats shall be provided for both sides of wall. The M.S ornamental gate as per the approved drawings shall be provided with minimum of 3.60mts width and 2.40mts height with enamel paint. Yard lighting shall be arranged on four corners of compound wall. If the length of the wall is increased/decreased

	<p>Note:-For every 1m increase/decrease in length of compound wall the increase/decrease in basic rates of ELSRs of the capacities from 500KL to 2500KL shall be as follows.:</p> <p>i)500 KL : 0.086%</p> <p>ii)1000 KL : 0.047%</p> <p>iii)1500 KL : 0.034%</p> <p>iv)2000 KL : 0.026%</p> <p>v)2500 KL : 0.022 %</p> <p>For intermediate capacities, interpolated percentages shall be adopted.</p>		
	<p>xiv) <b>Staff Quarter</b> shall be constructed for a minimum plinth area of 40 Sqm with the following specification: RCC framed structure with concrete grade not less than M20 design mix at the locations specified by the department at the time of execution with veranda, hall, bed room, kitchen and bath &amp;W/C with floor area of 40.00sqmts excluding balconies and staircases.</p>		
	<p>MS hollow door frame with cold rolled processed steel sheet 1.25mm thick bright CRCA conforming to IS 4351/76, Flush door shutters with solid bond wood bond board doors shall be provided. N.C.L. Windows centre fixed both sides open able shutter window 1.35 X 1.35mts outer frame section 48 x50mm shutter frame section with a size of 48 X20 mm mullion section of size 48 X 50mm fixed beading section of 12 X 12 mm shall be provided. Flooring with polished Kadapa stone shall be provided. Walls shall be provided with snowcem paint in two coats over primary coat. Electrical and water supply arrangement shall be provided as directed by dept officer. Water Storage tank made with plastic/polymer material of reputed make with necessary out let and inlet connection pipes shall provided. Septic tank for 5 users shall be provided.</p>		
<b>44</b>	<b>Rates for OHSRs/ELSRs including fixtures with a staging of 10 m without Seismic analysis.</b>		<b>Rs/liter</b>
a	Up to 10,000 Liters capacity	Per liter	<b>56.10</b>
b	15,000 Liters capacity	Per liter	<b>41.90</b>
c	20,000 Liters capacity	Per liter	<b>37.90</b>
d	40,000 Liters capacity	Per liter	<b>32.13</b>
e	60,000 Liters capacity	Per liter	<b>24.35</b>
f	1,00,000 Liters capacity	Per liter	<b>22.47</b>
g	2,00,000 Liters capacity	Per liter	<b>19.64</b>
h	3,00,000 Liters capacity	Per liter	<b>18.48</b>
i	4,00,000 Liters capacity	Per liter	<b>16.28</b>
j	4,50,000 Liters capacity	Per liter	<b>14.07</b>
	NOTE: -1). All concrete members shall be designed with M30 grade design mix.		
	2) For intermediate ranges proportional rates may be adopted		
	2) The above rates are applicable for Elevated Level Services Reservoirs / OHSRs with RAFT FOUNDATION and a rate of Rs.3882/- per tonne for cement and Rs.41300/- per tonne for steel.		
	3) For every Meter of staging less than 10 m, the rate shall be reduced by Rs.0.05 paisa per liter per every Meter of difference in staging		
	4) For every Meter of staging above 10 m , the rate shall be increase by Rs.0.10 paisa per liter per every Meter of additional in staging		
	5) The above rates shall be increased / decreased due to increase / decrease in the cost of cement by		

	Basic Rate x $\{(Rc-3882)/3882\} \times 0.07$ Rc = Rate of cement (Rs per Mt) at the time of preparation of estimate.		
	6)The above rates shall be increased / decreased due to increase / decrease in the cost of steel by Basic Rate x $\{(Rs-41300)/41300 \times 0.2$ Rs = Rate of steel (Rs per Mt) at the time of preparation of estimate.		
	7) Rate inclusive of three coats of epoxy paint Food Grade of best quality to inner surface of the Reservoir including roof.		
	8) The above rates shall be adopted for estimate purposes for construction of ELSR for a finished work including 2 coats of whether proof emulsion painting for external surfaces, lettering, all required fixtures, pipes, bends, valves etc., for pipe connections but excluding cost of pipes, bends and valves as per departmental designs and drawings.		
	9) The above rates are applicable for wind pressures up to 250 kg / Sq m .For decrease in wind pressure the rate has to be decreased by 5% per every 100kg/Sqm. If the ELSR / OHSR are to be designed for seismic forces also, cost shall be arrived by working out detailed quantities based on the designs.		
	10) (a)For tribal/Agency / Rural area, the above rates as arrived up to shall be increased by 10%. (b) An additional increase of 7.50% shall be allowed for OHSRs/ELSRs located in agency areas over the above rates for RWS Department works.		
	11) If the ELSR is to be designed for seismic forces also, cost shall be arrived by working out detailed quantities based on the design & difference to be paid extra.		
	12) If the ELSR is to be designed for seismic forces a) The above rates are applied up to Zone-II earth quake. b) For Zone-III earth quake the above rates are to be increased by 15 %.		
	13) The rate is arrived with the Cement & Steel rates of Rs 3882/MT and 41300/- approved by the BoCE for the month of March 2018.		
	<b>13) Fixtures include :</b>		
	a) RCC or Aluminium ladder inside 0.60 m wide.		
	b) Spiral staircase on the outside shall be provided up to 200KL. Above 200KL capacity dog legged staircase shall be provided with staircase flight width of 1.0mts and landing width of 1.20mts with S.S railing up to 1.0 height.		
	c) Lightning arrestor, including conductor and earthling etc.		
	d) RCC ventilators with copper or stainless steel fly proof mesh.		
	e) D.I Manholes frame and cover 0.60x0.60 m as per IS specifications (light duty) - 2 Nos.		
	f) Water level indicator of good quality with ebonite/ copper float approved pattern - 1 No.		
	g) The ladder shall be with M.S ladder and Verticals with HDPE of 10kg/Sqcm shall be provided for single column OHSRs only.		
	h) Minimum staging for all ELSR/OHSR shall be 10.0mts.		

	i) The increase in staging shall be at 1.0mt interval.		
	j) The railing provided to the gallery and stair case shall be with stainless steel of grade 304 for a height of 1.20mts.		
	k). The dog legged staircase shall be enclosed with brick/CRS wall on three sides and front side with M.S collapsible gate up to 1st brace level from ground level to prevent unauthorized entry.		
	l). D.I swan neck ventilators shall be provided in top dome and slab.		
	m). The above rates are exclusive of all inlet, out let connection and valves. All valves near inlet, out let and for scour of ELSRs shall be D.I valves of heavy duty conforming to the specification of SoR item No.28		
<b>45</b>	<b>Construction of Rapid Gravity Filtration Plant including all civil, mechanical and electrical works using sand as filter media, compatible with SCADA arrangements, duly following relevant IS codes in the design of plant components including trial running for 90 days etc., including chlorine contact tank &amp; consumables etc., complete.</b>		
	1) 2.0 Mld	Per liter	<b>4.42</b>
	2) 5.0 Mld	Per liter	<b>3.60</b>
	3) 10.0 Mld	Per liter	<b>3.25</b>
	4) 20.0 Mld	Per liter	<b>2.61</b>
	5) 30.00 Mld and above	Per liter	<b>2.27</b>
	NOTE :-		
	a) For Intermediate Capacities proportional rates may be adopted		
	b) The above rates are applicable with Cement @ rate of Rs.3882/-MT and Steel of Rs. 41300/MT.		
	c) The above rates shall be increased / decreased due to increase / decrease in the cost of cement by Basic Rate x $\{(Rc-3882)/3882\} \times 0.07$ Rc = Rate of cement (Rs per Mt) at the time of preparation of estimate		
	d) The above rates shall be increased / decreased due to increase / decrease in the cost of steel by Basic Rate x $\{(Rs-41300)/41300\} \times 0.2$ Rs = Rate of Steel (Rs per MT) at the time of preparation of estimate.		
	e) For Rural areas an extra allowance of 10% shall be given on basic rate		
	f) For components immersed in water Stain less Steel of Grade 304L shall be used. for other components 304 Grade steel shall be used.		
	g) Lab testing equipment of reputed make and consumables for one year. The testing equipment for conducting all laboratory tests shall be installed & training shall be imparted to the Municipal staff.		
	h) The rate is arrived with the Cement & Steel rates of approved by the BoCE for the month of March 2018.	Rs 3882/MT and 41300/-	

	The above rates of Filtration Plants shall include all the following components.
	<b>A) Civil Works</b> (All works of VRCC Shall be in M30 design mix)
	1). Stilling Chamber and Aeration cascade
	2) Pre settling tank shall be provided for 30 MLD and above capacities of WTP for a minimum of 1 hr capacity.
	3). Raw water channel with Stainless Steel Weir of SS 304 L Grade material and also with digital flow meters
	4) Flash Mixer chamber with Flash mixing arrangements including SS shaft & SS Blades with gear wheel arrangements etc, using 304 L Grade Steel.
	5-a) Clariflocculator / Flocculation tanks with the components of central driven circular clarifier with scrapper & bridge arrangements made with Stainless Steel Grade 304 L tubes /angular for durability & chemical resistant with wheel arrangements etc,
	5-b) Two numbers of Clariflocculator shall be provided for WTP's of more than 30 MLD capacity.
	6) Filter house, Chemical house, Alum store, Laboratory room, Chlorination plant room, toilet etc. (All structures shall be provided RCC roof only).Chemical house & Chlorinator rooms are to be isolated and shall be as per CPHEEO manual.
	7) Wash water tank of suitable capacity shall be constructed at minimum clearance of 2.00m, above the roof slab of Filter beds / any other structure, and the minimum residual head at the top of under drain system shall not be less than 8.0 meters.
	8) Chlorine contact tank
	9) All the Doors and Windows shall be of Best Teak wood/Aluminium / UPVC make, except entrance door. The entrance door including shutter in filter house shall be with best teak wood of minimum size of 2.40 X 2.40 mts. a) Main Doors of all individual Buildings shall be made of Best Teak wood b) Other Internal Doors of the buildings shall be of Compressed wood/ Aluminium/ UPVC materials. c) Ventilators shall be provided for each building/structure of suitable size as per NBC standards.
	10) a) All pipes in Plant shall be of D.I., D/F materials. All Connecting pipes of the plant components such as from Flash mixer to Clariflocculator/ Clarifier/Flocculation tank, to Filter beds, sludge disposal pipes shall be of D.I., D/F material. The size of sludge disposal pipe shall be minimum of 450 mm dia. with D.I D/F pipe and minimum length of 100 meters. b) All the Valves in Plant shall be heavy duty and as per the specification of SoR item No.28
	11) The Pipe gallery way for Clear water/ Back wash water/ pipe connections shall be sufficiently spaced for easy operation & maintenance and inspection, as per standard norms.
	12) The bottom level of the wash water control chamber must be above G.L so as to dispose the wash water and sludge from Clariflocculator by gravity to disposal point.
	Additional specifications

	13) Railing for all the components (Clarifloculator, Filter House, Staircase etc.,) shall be provided with Stainless Steel of grade 304 for a height of 1.00m, with 40mm dia. pipe for top horizontals, 25mm dia. for middle row and 40mm dia. verticals spaced at interval of not more than 1.00m c/c.
	14) Inspection / Path ways in filter beds: Middle pathway: Minimum of 1.50m, Side pathway: Minimum of 1.20m
	15) Flooring in the buildings (Filter house, Chemical House, Chlorinator Room, Laboratory) shall be provided with Non-skid tiles of approved make & quality, as per standard specifications.
	16) The basement of the Filtration plant building shall be minimum of 1.20m above the existing nearby Road top level.
	17) Minimum head room of 2.00m shall be provided, at the alum mixing chambers in alum store for inspection & maintenance.
	18) The minimum width of entrance hall for the Filter House shall be 4.50m, and Laboratory of min size .of 3.30 X 4.50m.
	18) b) For various components of the WTP should be designed by considering the uplift pressure also.
	19) a) High efficient Air Blowers shall be installed to the design requirement with low noise pollution, environmental pollution as per PCB guide lines & Testing of blowers as per I.S Standards at site. b) The Piping from Blower to Filter Beds shall be GI and submerged pipe in water shall be HDPE.
	20) UPVC pipes shall be provided for under drain system. Filter pipe manifolds shall be assembled with HDPE pipes.
	21) Alum storage capacity shall be designed for minimum period of 90 days. Consumables shall be provided for 2115 Running Hours of WTP.
	22) <b>Chlorinator</b> : Vacuum type chlorinator shall be provided with following specifications: a) Vacuum operated solution feeding type Vacuum Regulator, Rotometer, Rate setting Valve, built-in NRV, Gas Overflow out let by man folding to mount the system with the unit. b) The unit shall consist of Ejector with necessary accessories such as Check Valve, Drain Valve and Vacuum relief Valves - for control of chlorinator dosage. c) The Accessories and manifolds shall be chlorine resistant and made of carbon steel seam less pipes, copper tube with brass fittings of suitable size & dimensions, with diaphragm sealed chlorine pressure gauge arrangements
	d) Water Booster Pump of pumping capacity ranging from 2 cum/hr to 12 cum/hr, with Head ranging from 16 to 35 m e) The water & solution carrying pipes shall be made of UPVC material of suitable size incl. all specials such as Tee's , Bends, couplings & NRVs and also Pressure Gauges of suitable range. f) Chlorine Gas Leak detector with alarm indicator. The installation includes all necessary accessories, civil and mechanical works, manifold header installations, injector fixing, connection with UPVC pipes, solution piping's, fixing of motors as per standard specifications and commissioning of Chlorination Plant to the required demand, with a defect liability period of 1 year. The chlorinator of may be of any reputed make or any make of Metito/Toshocow-Jesco

	Siemens Industrial Devices. g) Life breathing apparatus. h) Chlorine escape BA set
	i) 2 to 10 MLD Plants - 1Kg/hr Chlorinator- For Post Chlorination
	ii) 10 MLD to 20 MLD Plants - 2 Kg/hr Chlorinator - For Post Chlorination.
	iii) 20 MLD to 50 MLD Plants - 5 Kg/hr Chlorinator - For Post Chlorination.
	<b>B) Mechanical Equipment</b>
	1) Alum dosing equipment with SS 304 material made stirrers & paddles for chemical resistance. (Alum tanks must be bound with corrosion resistant material (HDPE Lining, Bitumen Coating, tiles etc)
	2) Flash mixer equipment with SS 304 material made stirrers & paddles for chemical resistance.
	3) Filtration plant equipment instrumentation and piping.
	4) Clariflocculation equipment (with stainless steel blades) with rotating bridge arrangement etc.,
	5) Pneumatic tyre wheel shall be provided for the bridge clariflocculator.
	6) Wash water tank fittings and pump sets with 100% stand by.
	7) Air blower with motor of 100% stand by and pipe connections made with of SS pipes confirming to SS 304 Grade, in filter bed region.
	8) Chlorination equipment and pipe connections with chlorinator of 100% standby.
	9) Spares & Tools for 2 years.
	10) Gaseous Chlorination with cylinders has to be provided with protection measures.
	<b>C) Electrical Equipment</b>
	1) Necessary power supply wiring to motors and switches bus bar connections as per IE Rules
	2) Internal wiring and illumination and fittings and fixtures for internal and external lighting exhaust fans, ceiling fans etc.
	3) Erecting mechanical and electrical equipment, trial run for 90 days at 23.50 hours per day testing the treated water as per CPHEEO standards and maintenance of records and imparting training to staff.
	4) Supply of 6 - Sets of completion plans and maintenance manual and brochures.
	5) All cables shall be of copper material, Cable ducts shall be covered with MS / Aluminium cheque plate.
	6) Min LUX levels inside the treatment plant shall be maintained.
	7) Yard lighting shall be provided as per norms.
	<b>D) Equipment for Flow measurements</b>
	1) Equipment for measuring Conductivity, Turbidity, Ph value, Residual Chlorine with recording & data storage facility (Computer based) & Alarm by SMS or other methods.

	2) Off - Site Supervisory and Data Acquisition (OSSADA) system for Raw water & Clear water flows by installing Digital Flow meters to measure the flows at Raw water Channel and at each filter bed individually and combined for measuring the quantities of water treated with a facility to record and store the readings & also to send messages to the assigned designatories about the variations/ deficiencies in the flow including alerts for back wash requirements of filter beds, and recovery of data for the past 360 days. All the Digital Flow Meters & Pressure Gauges shall be provided of standard approved make. The equipment shall have the following specifications.
	<b>Hardware:</b>
	i) Wall mounted Sensor House for measuring Raw water & Clear water flow from Filter bed outlets with accessories consists of
	ii) Electrode Type: General type, Scraper type or replaceable type Electrode made with material of SS external Ultra Touch Sensors as per requirement.
	iii) Customized Application Requirement : Sensors with Interface logic control board with serial interfaces, including accessories such as Add-on port, external DC Power Socket, On - sensor Board Buffer, Timer, RS485 Communication, Analog to Digital Sensing Sensor Circuit, 32 Sensors Sensing Tags, Interval Power Supply System , LCD 16c/2L, Filter Bed Working Status Indication LED, Filter Bed Wash Indication Button and memory of Data Storage for 30Days , status of Filter Bed Level indicator, Rating, Reading on LCB Display, Menu Driven Data for sending to Onsite Big Display, operated with Battery Power of any reputed make or any equivalent make.
	iv) Customized Application Requirement: Power Sensors Interface logic control board with support 8 Power Sensing tags, Central System Interfacing Communication, On - board analog to Digit Convert Integrate Circuit of any reputed make or any equivalent make.
	v) Customized Application Requirement: Centralized System with two serial interfaces, 3 No's of Add-On ports, One external DC Power Socket, On - Board Buffer, On - Board Timer, On - Board RS485 Communication, On - Board RS 232 Communication, On - Board GPRS/GSM Module, On - Board Voice Chip, On - Board Power Sensing Module, LCD 16c/2L, Filter Bed Wash Precaution Indication with Stop Button, Memory of Data Storage for 30 Days, Total Bed Rating, Reading display on LCD Display, Menu Driven, Menu Navigate Keypad, sending data to the Web Server, Communication with GPRS , operated with Battery Power of any reputed make or any equivalent make.
	<b>Software:</b>
	The software shall be designed with Web Domain with Data Base Server and Web Name as per the directions of the Departmental Authorities.
	The application of Software for Web design & Desktop shall meet the following requirements:
	i) Onsite Display: Letters with size of 1.5' seven Segment LED Display with Interface for each Filter Bed, for Onsite Display, by displaying the Bed Levels, Ratings, Readings in 3 Columns, for each bed of the plant in successive rows and cumulative results at the bottom of the screen.

	ii) Off Site Display: Letters with size of 1.5' seven Segment LED Display with Interface GPRS/GSM Modules Offsite Display, with Display of Bed Total Rating, Total Cumulative Reading as specified on On-site Display Features.
	The system shall have also the features of Onsite Bed Wash Voice Precautions for Bed Levels, Readings, Ratings, Bed Capacity Readings and Ratings and Bed Low Level Triggering, before & after Bed wash.
	The software shall also have the features of sending messages to the mobiles of the Departmental designatories indicating Bed Low Levels, Power Supply timings, Bed Wash timings and its status, Power Supply timings and its status Grid View Table, Motor Working time and its status Grid View Table, all trigger events and schedule information and including all Snap View Reports, all Daily, Monthly, Yearly Reports, all Power Working Reports, all Power Events Information etc.,.

### 1. S o R FOR R.C.C. PLAIN ENDED PIPES

Sl. No.	Description				
1	Manufacture, Supply and Delivery of R.C.C. Plain ended pipes conforming to B.I.S 458/2003 ,Ex-factory, excluding transportation and all taxes.				
	Size	Unit	SoR For 2018-19		
			NP - 2 Class	NP - 3 Class	NP - 4 Class
	80 mm dia.	Meter	<b>129</b>		
	100 mm dia.	Meter	<b>150</b>		
	150 mm dia.	Meter	<b>177</b>		
	200 mm dia.	Meter	<b>211</b>		
	225 mm dia.	Meter	<b>229</b>		
	250 mm dia.	Meter	<b>242</b>		
	300 mm dia.	Meter	<b>349</b>	<b>834</b>	<b>846</b>
	350 mm dia.	Meter	<b>435</b>	<b>978</b>	<b>997</b>
	400 mm dia.	Meter	<b>502</b>	<b>1077</b>	<b>1103</b>
	450 mm dia.	Meter	<b>615</b>	<b>1240</b>	<b>1254</b>
	500 mm dia.	Meter	<b>671</b>	<b>1338</b>	<b>1552</b>
	600 mm dia.	Meter	<b>996</b>	<b>2035</b>	<b>2416</b>
	700 mm dia.	Meter	<b>1270</b>	<b>2527</b>	<b>3248</b>
	800 mm dia.	Meter	<b>1561</b>	<b>3343</b>	<b>4228</b>
	900 mm dia.	Meter	<b>1977</b>	<b>4201</b>	<b>5285</b>
	1000 mm dia.	Meter	<b>2423</b>	<b>5131</b>	<b>7257</b>
	1100 mm dia.	Meter	<b>2838</b>	<b>6177</b>	<b>8413</b>
	1200 mm dia.	Meter	<b>3385</b>	<b>7280</b>	<b>9839</b>
	1400 mm dia.	Meter	<b>4647</b>	<b>9372</b>	<b>13576</b>
	1600 mm dia.	Meter	<b>5339</b>	<b>12179</b>	<b>16155</b>
	1800 mm dia.	Meter	<b>7038</b>	<b>16177</b>	<b>21682</b>

Note : All prices are ex-works.

The above rates of RCC Plain ended pipes are based on the following raw materials

CostCement. Rs.3882/- per MT (Excluding all taxes and freight).

Steel (M.S. Rods) - Rs.41500/- per MT. (Excluding all taxes and freight).

The revised cost of RCC pipes due to increase / decrease in the cost of raw materials shall be as per the following formula.

Revised Cost =Cost as per the above table +R1+R2

R1= Variation (increase / decrease) in cost (Rs. per Meter) due to change in the Cost of M.S. Rods = (S2-S1)/1000 X Ws.

R2= Variation (increase / decrease) in cost (Rs. per Meter) due to change in the Cost of Cement = (C2-C1)/1000 X Wc.

S1 = Rs. 41500/- , S2 = Cost of M S Rods (Rs. perMT Excluding all taxes and freight) at the time of preparation of estimate.

C1 = Rs3882/- C2 = Cost of Cement (Rs. perMT Excluding all taxes and freight) at the time of preparation of estimate.

Ws=Weight of MS Rods required (Kg.) per Meter of pipe as per IS:458/2003.

Wc= Weight of Cement required (Kg.) per Meter of pipe.

## 2. S o R FOR R.C.C. COLLARS

Sl.No.	Description				
1	Manufacture, Supply and Delivery of R.C.C. Collars conforming to B.I.S. 458/2003 (rate per each collar) suitable for R.C.C. Plain ended pipes including transportation but excluding all taxes.				
	Size	Unit	SoR For 2018-19		
			NP - 2 Class	NP - 3 Class	NP - 4 Class
	80 mm dia.	Each	<b>40</b>		
	100 mm dia.	Each	<b>41</b>		
	150 mm dia.	Each	<b>41</b>		
	200 mm dia.	Each	<b>58</b>		
	225 mm dia.	Each	<b>62</b>		
	250 mm dia.	Each	<b>68</b>		
	300 mm dia.	Each	<b>89</b>	<b>126</b>	<b>126</b>
	350 mm dia.	Each	<b>111</b>	<b>160</b>	<b>160</b>
	400 mm dia.	Each	<b>122</b>	<b>182</b>	<b>182</b>
	450 mm dia.	Each	<b>193</b>	<b>244</b>	<b>244</b>
	500 mm dia.	Each	<b>218</b>	<b>290</b>	<b>290</b>
	600 mm dia.	Each	<b>297</b>	<b>380</b>	<b>380</b>
	700 mm dia.	Each	<b>387</b>	<b>508</b>	<b>508</b>
	800 mm dia.	Each	<b>545</b>	<b>651</b>	<b>651</b>
	900 mm dia.	Each	<b>653</b>	<b>759</b>	<b>759</b>
	1000 mm dia.	Each	<b>763</b>	<b>947</b>	<b>947</b>
	1100 mm dia.	Each	<b>932</b>	<b>1202</b>	<b>1202</b>
	1200 mm dia.	Each	<b>1131</b>	<b>1505</b>	<b>1505</b>
	1400 mm dia.	Each	<b>1458</b>	<b>1906</b>	<b>1906</b>
	1600 mm dia.	Each	<b>1866</b>	<b>2439</b>	<b>2439</b>
	1800 mm dia.	Each	<b>1882</b>	<b>3138</b>	<b>3138</b>

The above rates of RCC Collars suitable to plain ended pipes are based on the following raw materials cost. Cement. Rs.3882/- per MT(Excluding all taxes and freight).

Steel (M.S. Rods) - Rs.41500/- per MT.(Excluding all taxes and freight).

The revised cost of RCC collars due to increase / decrease in the cost of rawmaterials shall be asper the following formula.

Revised Cost =Cost as per the above table +R1+R2

R1= Variation (increase / decrease) in cost (Rs. per each)due to change in the cost of M.S.

Rods =(S2-S1)/1000 X Ws.

R2= Variation (increase /decrease) in cost (Rs. per each) due to change in thecost of Cement = (C2-C1)/1000 X Wc.

S1 = Rs. 41500/- , S2 = Cost of M S Rods (Rs. per MT excluding all taxes and freight) at the time ofpreparation of estimate.

C1 = Rs.3882/-,

C2 = Cost of Cement (Rs. per MT excluding all taxes and freight) at the time of preparation of estimate

Ws=Weight of MS Rods required (Kg.) per each collar.

Wc= Weight of Cement required (Kg.) per each collar.

### 3. S o R FOR R.C.C. S/S PIPES (Non - Pressure)

Sl. No.	Description				
1	Manufacture, Supply and Delivery of R.C.C. Socket and Spigot pipes conforming to B.I.S. 458/2003 at ex-factory (rate per meter of effective length) Excluding transportation and all taxes.				
	Size	Unit	SoR For 2018-19		
			NP - 2 Class	NP - 3 Class	NP - 4 Class
	80 mm dia.	Meter	163		
	100 mm dia.	Meter	185		
	150 mm dia.	Meter	214		
	200 mm dia.	Meter	263		
	225 mm dia.	Meter	285		
	250 mm dia.	Meter	303		
	300 mm dia.	Meter	427	1077	1139
	350 mm dia.	Meter	550	1317	1339
	400 mm dia.	Meter	604	1460	1484
	450 mm dia.	Meter	754	1610	1621
	500 mm dia.	Meter	870	1842	2004
	600 mm dia.	Meter	1218	2586	2616
	700 mm dia.	Meter	1578	3312	3403
	800 mm dia.	Meter	2034	4390	4429
	900 mm dia.	Meter	2585	5522	5597
	1000 mm dia.	Meter	3161	6185	5576
	1100 mm dia.	Meter	3662	7310	7596
	1200 mm dia.	Meter	4128	8635	8896
	1400 mm dia.	Meter	5948	11434	12632
	1600 mm dia.	Meter	7363	14871	15039
	1800 mm dia.	Meter	8159	19756	20209

Note: All the prices are ex-works. The above rates of RCC S/S Non-Pressure pipes are based on the following raw materials cost.

Cement. Rs.3882/- per MT,(Excluding all taxes and freight).

Steel (M.S. Rods) – Rs.41500/- per MT. (Excluding all taxes and freight).

The revised cost of RCC pipes due to increase / decrease in the cost of raw materials shall be as per the following formula.

Revised Cost =Cost as per the above table +R1+R2

R1= Variation (increase / decrease) in cost (Rs. per Meter) due to change in the cost of M.S. Rods = (S2-S1)/1000 X Ws.

R2= Variation (increase / decrease) in cost (Rs. per Meter) due to change in the cost of Cement = (C2-C1)/1000 X Wc.

S1 = Rs. 41500/- , S2 = Cost of M S Rods (Rs. per MT excluding all taxes and freight) at the time of preparation of estimate.

C1 = Rs. 3882/- , C2 = Cost of Cement (Rs. per MT excluding all taxes and freight) at the time of preparation of estimate

Ws=Weight of MS Rods required (Kg.) per Meter of pipe as per IS: 458/2003.

WC= Weight of Cement required (Kg.) per Meter of pipe.

#### 4. S o R FOR R.C.C. S/S PIPES (Pressure)

Sl.No.	Description				
1	Manufacture, Supply and Delivery of R.C.C. Socket and Spigot pipes conforming to B.I.S. 458/2003 Ex-factory (rate per meter of effective length) Excluding transportation and all taxes.				
	Size	Unit	SoR For 2018-19		
			P1 - Class	P2 - Class	P3 - Class
	80 mm dia.	Meter	219	245	280
	100 mm dia.	Meter	245	294	340
	150 mm dia.	Meter	338	437	541
	200 mm dia.	Meter	392	564	745
	225 mm dia.	Meter	441	641	828
	250 mm dia.	Meter	483	681	862
	300 mm dia.	Meter	647	976	1211
	350 mm dia.	Meter	806	1365	1756
	400 mm dia.	Meter	958	1814	2330
	450 mm dia.	Meter	1011	2151	2852
	500 mm dia.	Meter	1364	2317	3227
	600 mm dia.	Meter	1868	3461	4456
	700 mm dia.	Meter	2499	4542	5630
	800 mm dia.	Meter	3123	5351	6770
	900 mm dia.	Meter	3758	6260	
	1000 mm dia.	Meter	4784	7145	
	1100 mm dia.	Meter	5754		
	1200 mm dia.	Meter	6708		

Note: All the prices are ex-works.

The above rates of RCC S/S Pressure pipes are based on the following raw materials cost.

Cement. Rs.3882/- per MT,(Excluding all taxes and freight).

Steel (M.S. Rods) - Rs.41500/- per MT. (Excluding all taxes and freight).

The revised cost of RCC pipes due to increase / decrease in the cost of raw materials shall be as per the following formula.

Revised Cost =Cost as per the above table +R1+R2

R1= Variation (increase / decrease) in cost (Rs. per Meter)due to change in the cost of M.S. Rods = (S2-S1)/1000 X Ws.

R2= Variation (increase / decrease) in cost (Rs. per Meter)due to change in the cost of Cement = (C2-C1)/1000 X Wc.

S1 = Rs. 41500/-

S2 = Cost of M S Rods (Rs. per MT excluding all taxes and freight) at the time of preparation of estimate.

C1 = Rs. 3882/-, C2 = Cost of Cement (Rs.per MT excluding all taxes and freight) at the time of preparation of estimate

Ws=Weight of MS Rods required (Kg) per Meter of pipe as per IS: 458 /2003.WC= Weight of Cement required (Kg) per Meter of pipe.

## 5. S o R FOR RUBBER RINGS TO SUIT R.C.C. S/S PIPES

Sl. No.	Description				
1	Manufacture, Supply and Delivery of Rubber rings to suit R.C.C.Socket and Spigot pipes conforming to B.I.S 5382/ 1985 (rate per each rubber ring) including transportation but excluding all taxes. The Rubber Rings shall be tested at the factory premises confirming to B.I.S. 5382/1985.				
	Size	Unit	SoR For 2018-19		
			NP - 2 Class	NP - 3 Class	NP - 4 Class
	80 mm dia.	Each	26		
	100 mm dia.	Each	32		
	150 mm dia.	Each	57		
	200 mm dia.	Each	67		
	225 mm dia.	Each	73		
	250 mm dia.	Each	82		
	300 mm dia.	Each	100	129	129
	350 mm dia.	Each	116	154	154
	400 mm dia.	Each	128	175	175
	450 mm dia.	Each	145	198	198
	500 mm dia.	Each	189	227	227
	600 mm dia.	Each	248	329	329
	700 mm dia.	Each	248	394	394
	800 mm dia.	Each	428	478	478
	900 mm dia.	Each	536	646	646
	1000 mm dia.	Each	627	780	780
	1100 mm dia.	Each	754	999	999
	1200 mm dia.	Each	1208	1256	1256
	1400 mm dia.	Each	1328	1382	1382
	1600 mm dia.	Each	1654	1686	1686
	1800 mm dia.	Each	2060	2154	2154
2	Manufacture, Supply and Delivery of Rubber rings to suit R.C.C. Socket and Spigot pipes conforming to B.I.S 5382/ 1985 (rate per each rubber ring) including transportation but excluding all taxes. The Rubber Rings shall be tested at the factory premises confirming to B.I.S. 5382/1985.				
	Size		P1-Class	P2-Class	P3-Class
	80 mm dia.	Each	26	26	26
	100 mm dia.	Each	32	33	33
	150 mm dia.	Each	57	57	57
	200 mm dia.	Each	67	67	67
	225 mm dia.	Each	73	75	77
	250 mm dia.	Each	82	85	86
	300 mm dia.	Each	100	106	110
	350 mm dia.	Each	116	132	145
	400 mm dia.	Each	128	175	178
	450 mm dia.	Each	145	200	205
	500 mm dia.	Each	189	227	237

	600 mm dia.	Each	248	280	285
	700 mm dia.	Each	338	370	394
	800 mm dia.	Each	428	474	474
	900 mm dia.	Each	536	598	
	1000 mm dia.	Each	627	722	
	1100 mm dia.	Each	754		
	1200 mm dia.	Each	1208		

## 6. S o R FOR CONVEYANCE OF R.C.C. PLAIN ENDED PIPES

Sl.No.	Description	Rate up to 5 Kms Lead including Loading, unloading and stacking	Rate for every additional 1 KM lead or part thereof.	Rate up to 5 Kms Lead including Loading, unloading and stacking	Rate for every additional 1 KM lead or part thereof.
1	Conveyance of R.C.C plain ended pipes on all weathered roads including loading, unloading and stacking (per Meter) SoR for 2018-19				
		NP - 2 Class		NP - 3 Class & NP - 4 Class	
	80 mm dia.	3.81	0.17		
	100 mm dia.	5.07	0.17		
	150 mm dia.	7.61	0.32		
	200 mm dia.	10.14	0.32		
	225 mm dia.	11.41	0.51		
	250 mm dia.	12.68	0.51		
	300 mm dia.	17.76	0.68	49.45	1.36
	350 mm dia.	25.36	1.52	53.26	1.52
	400 mm dia.	27.90	1.69	63.40	2.02
	450 mm dia.	36.77	2.02	68.47	2.36
	500 mm dia.	39.31	2.36	74.81	2.36
	600 mm dia.	57.05	3.71	112.84	5.24
	700 mm dia.	72.27	5.24	125.52	6.08
	800 mm dia.	84.95	5.24	150.88	6.08
	900 mm dia.	97.62	5.24	197.79	11.48
	1000 mm dia.	144.54	10.80	238.36	11.48
	1100 mm dia.	158.48	10.80	258.65	12.49
	1200 mm dia.	180.04	11.48	289.08	12.49
	1400 mm dia.	216.81	11.48	393.05	13.00
	1600 mm dia.	251.05	11.48	471.65	13.00
	1800 mm dia.	289.08	11.48	628.87	18.24

**7. S o R FOR CONVEYANCE OF R.C.C. S/S PIPES**

Sl. No.	Description	Rate upto 5 Kms Lead including Loading, unloading & stacking	Rate for every additional 1 KM lead or part thereof.	Rate upto 5 Kms Lead including Loading, unloading and stacking	Rate for every additional 1 KM lead or part thereof.
1	Conveyance of R.C.C. Socket and Spigot pipes on all-weather roads including loading, unloading and stacking (per Meter of effective length)				
	Size	NP - 2 & P1 Class		NP – 3 & NP - 4 Class	
	80 mm dia.	5.07	0.16		
	100 mm dia.	5.07	0.30		
	150 mm dia.	8.88	0.30		
	200 mm dia.	11.41	0.61		
	225 mm dia.	12.68	0.61		
	250 mm dia.	13.95	1.38		
	300 mm dia.	22.83	1.53	59.98	1.84
	350 mm dia.	26.62	1.69	65.21	2.14
	400 mm dia.	26.62	1.99	80.86	4.00
	450 mm dia.	38.04	2.14	88.68	4.00
	500 mm dia.	41.84	2.31	97.81	4.30
	600 mm dia.	54.52	4.00	131.71	6.13
	700 mm dia.	67.19	4.30	177.35	12.12
	800 mm dia.	92.55	6.59	209.96	12.12
	900 mm dia.	138.20	11.82	242.56	12.12
	1000 mm dia.	157.22	11.82	255.60	12.12
	1100 mm dia.	177.50	12.12	273.86	12.12
	1200 mm dia.	197.79	12.12	306.46	12.42
	1400 mm dia.	245.97	12.12	410.79	12.42
	1600 mm dia.	291.62	12.42	485.13	13.35
	1800 mm dia.	361.34	12.42	646.83	18.26
		P2 – Class		P3 – Class	
	80 mm dia.	5.07	0.16	5.07	0.16
	100 mm dia.	5.07	0.30	5.07	0.30

	150 mm dia.	8.88	0.30	8.88	0.30
	200 mm dia.	11.41	0.61	15.21	1.38
	225 mm dia.	15.21	1.38	17.76	1.53
	250 mm dia.	16.48	1.53	21.55	1.69
	300 mm dia.	31.69	1.84	36.77	1.99
	350 mm dia.	39.31	2.14	50.72	2.31
	400 mm dia.	46.91	2.31	67.19	4.00
	450 mm dia.	59.59	3.84	83.69	4.00
	500 mm dia.	67.19	4.00	101.43	5.99
	600 mm dia.	88.76	4.00	147.07	7.67
	700 mm dia.	133.12	8.13	214.27	12.12
	800 mm dia.	176.24	11.51	273.86	12.12
	900 mm dia.	214.27	12.12		
	1000 mm dia.	263.72	12.42		

## 8. S o R FOR A.C. PIPES

Sl.No	Description					
1	2					
1	Manufacture, Supply of A.C.Pressure pipes (Mazza process) as per BISNo: 1592/2003as amended from time to time duly marked with BIS mark, including cost of material, incidental handling, loading and packing charges , but exclusive of transportation, unloading,stacking at departmental stores, and excluding all taxes. The pipes shall be tested at factory premises confirming to IS Code 1592/2003.					
	Size	Unit	SoR For 2018-19			
			Class - 15	Class - 20	Class - 25	
	80 mm dia.	Rate/Meter	192	209	262	
	100 mm dia.	Rate/Meter	253	321	394	
	125 mm dia.	Rate/Meter	330	411	515	
	150 mm dia.	Rate/Meter	464	577	725	
	200 mm dia.	Rate/Meter	770	983	1248	
	250 mm dia.	Rate/Meter	977	1264	1582	
	300 mm dia.	Rate/Meter	1367	1777	2269	
	350 mm dia.	Rate/Meter	1666	2165	2728	
	400 mm dia.	Rate/Meter	2167	2831	3514	
	450 mm dia.	Rate/Meter	2567	3405	4264	
	500 mm dia.	Rate/Meter	3173	4166	5232	
	600 mm dia.	Rate/Meter	4510	5886	7501	
	700 mm dia.	Rate/Meter	5980	8111	10488	
	750 mm dia.	Rate/Meter	6814	9362	12002	
	800 mm dia.	Rate/Meter	7798	10608	13614	
	850 mm dia.	Rate/Meter	8746	11935	15331	
	900 mm dia.	Rate/Meter	9750	13332	17149	
	1000 mm dia.	Rate/Meter	12036	16369	21088	
2	Lowering, laying and jointing of AC pressure pipes with AC couplings or CID joints complete with Rubber rings in readymade trenches true to alignment and gradient including filling with water lead upto 500 mts and testing to required pressure including all sundries but excluding cost of jointing materials and conveyance from source of supply as per BISNo. 6530/1972					
	80 mm dia.	Rate/Meter	51	51	51	
	100 mm dia.	Rate/Meter	74	74	74	
	125 mm dia.	Rate/Meter	81	81	81	
	150 mm dia.	Rate/Meter	97	97	97	
	200 mm dia.	Rate/Meter	128	128	128	
	250 mm dia.	Rate/Meter	153	153	153	
	300 mm dia.	Rate/Meter	188	188	188	
	350 mm dia.	Rate/Meter	318	318	318	
	400 mm dia.	Rate/Meter	480	480	480	
	450 mm dia.	Rate/Meter	583	583	583	
	500 mm dia.	Rate/Meter	740	740	740	
	600 mm dia.	Rate/Meter	796	796	796	
	700 mm dia.	Rate/Meter	888	888	888	
	750 mm dia.	Rate/Meter	988	988	988	
	800 mm dia.	Rate/Meter	1040	1040	1040	

	850 mm dia.	Rate/Meter		1110	1110	1110
	900 mm dia.	Rate/Meter		1210	1210	1210
	1000 mm dia.	Rate/Meter		1246	1246	1246
	<p>1. The above rates of AC Pipes are based on the Cement cost of RS 3882/- per MT (Excluding all taxes and freight).</p> <p>2. The above rates of AC pipes are based on the Fiber cost of Rs 78,500/- per M.T (Excluding all taxes &amp; Freight)</p> <p>For any Increase/ Decrease in the rate of cement, the price of AC pipe per Rmt shall be increased/decreased as under.</p> <p><math>W \times 0.85 \times IC</math> Where W = Weight of pipe in Kg's/Rmt  IC = Increase/Decrease in cost of cement/Kg</p> <p>For any increase/decrease in the rate of fiber, the price of AC pipe per Rmt shall be increased/Decreased as under :</p> <p><math>W \times 0.15 \times IF</math> Where : W=: Weight of pipe in Kg's/Rmt  IF = Increase /Decrease in cost of fiber/Kg</p>					
Note:	<p>1) The Fiber rates are to be obtained from A.C. Pipe manufacturer of "Mazza" process.</p> <p>2) The cement rate shall be communicated by the sub-committee of Board of Chief engineers.</p>					
	<p>Transportation of AC pressure pipes at site of work anywhere in Andhra Pradesh on motor able roads for full truck loads including transit insurance, unloading, and stacking at site of work etc. Complete (AC Couplings and Rubber rings are to be supplied free of transportation charges).</p>					<p>5% on the basic cost of corresponding AC Pressure pipes.</p>

## 9. S o R FOR A.C. COUPLINGS

Sl. No.	Description					
1	Manufacture, Supply of A.C Couplings suitable to A.C.Pressure pipes (Mazza process) as per BIS: 1592/2003 excluding cost of rubber rings to suit AC pressure pipes including cost of material, incidental handling, packing, transportation and unloading at site transit risk, but excluding all taxes and testing of joints as per ISCode.					
	Size	Unit	SoR For 2018-19			
				Class - 15	Class - 20	Class – 25
	80 mm dia.	Rate/Each		93	101	115
	100 mm dia.	Rate/Each		121	130	156
	125 mm dia.	Rate/Each		152	167	200
	150 mm dia.	Rate/Each		177	221	273
	200 mm dia.	Rate/Each		326	354	451
	250 mm dia.	Rate/Each		380	478	609
	300 mm dia.	Rate/Each		495	641	825
	350 mm dia.	Rate/Each		643	830	1060
	400 mm dia.	Rate/Each		990	1292	1657
	450 mm dia.	Rate/Each		1185	1564	2009
	500 mm dia.	Rate/Each		1414	1892	2417
	600 mm dia.	Rate/Each		1728	2166	2769
	700 mm dia.	Rate/Each		2289	3081	4007
	750 mm dia.	Rate/Each		2582	3530	4557
	800 mm dia.	Rate/Each		2929	3972	5140
	850 mm dia.	Rate/Each		3264	4443	5761
	900 mm dia.	Rate/Each		3611	4939	6412
	1000 mm dia.	Rate/Each		4407	6005	7826

1. The above rates of AC Coupling are based on the Cement cost of RS 3882/- per MT (Excluding all taxes and freight).
2. The above rates of AC Coupling are based on the Fiber cost of Rs 78,500/- per M.T (excluding all taxes & Fright)

For any Increase/ Decrease in the rate of cement, the price of AC Coupling per Each shall be increased/decreased as under.

$W \times 0.85 \times IC$  Where W = Weight of Coupling in Kgs/each

IC = Increase/Decrease in cost of cement/kg

For any increase/decrease in the rate of fiber, the price of AC Coupling per each shall be increased/Decreased as under:

$W \times 0.15 \times IF$  Where: W = Weight of Coupling in Kgs/Each

IF = Increase /Decrease in cost of fiber/kg

The Fiber rates are to be obtained from A.C. Pipe manufacturer of “Mazza” process.

**10. S o R FOR RUBBER RINGS TO SUIT A.C. COUPLINGS**

Sl. No.	Description					
1	Schedule of rate for supply of Rubber rings manufactured as per BIS: 5382/1988 with BIS Mark embossed per each set suitable for A.C. Couplings including cost of material, incidental, handling, packing and transportation and unloading at site transit risk etc., but excluding all taxes. The Rubber Rings shall be tested at the factory premises confirming to B.I.S 5382/1988					
	Size	Unit	SoR for 2018-19			
				Class - 15	Class - 20	Class - 25
	80 mm dia.	Each Set		75	75	75
	100 mm dia.	Each Set		91	91	91
	125 mm dia.	Each Set		119	119	119
	150 mm dia.	Each Set		150	150	150
	200 mm dia.	Each Set		156	156	156
	250 mm dia.	Each Set		180	180	180
	300 mm dia.	Each Set		180	180	180
	350 mm dia.	Each Set		205	205	205
	400 mm dia.	Each Set		251	251	251
	450 mm dia.	Each Set		294	294	294
	500 mm dia.	Each Set		340	340	340
	600 mm dia.	Each Set		385	385	385
	700 mm dia.	Each Set		800	800	800
	750 mm dia.	Each Set		831	831	831
	800 mm dia.	Each Set		892	892	892
	850 mm dia.	Each Set		994	994	994
	900 mm dia.	Each Set		1045	1045	1045
	1000 mm dia.	Each Set		1158	1158	1158

**11. S o R FOR PRE-STRESSED (NON-CYLINDER) CONCRETE PIPES FOR THE YEAR 2018-19**

Sl.No.	Description							
1	Manufacture, Supply, Delivery of Pre-stressed (Non-cylinder) concrete pipes conforming to IS 784/2001 ex-factory excluding transportation, taxes For the following Field/Site Test Pressures. (The manufacture shall design the pipes as per the IS Code 784-2001)							
	Size	Unit	SoR for 2018-19.					
			6 Kg/cm2	8 Kg/cm2	10 Kg/cm2	12 Kg/cm2	14 Kg/cm2	16 Kg/cm2
	350 MM DIA.	Meter	2465	2473	2483	2493	2544	2634
	400 MM DIA.	Meter	2644	2663	2692	2725	2774	2815
	450 MM DIA.	Meter	2770	2791	2821	2874	2950	3013
	500 MM DIA.	Meter	3007	3018	3040	3102	3167	3263
	600 MM DIA.	Meter	3448	3471	3503	3611	3729	3842
	700 MM DIA.	Meter	3920	3980	4101	4230	4360	4561
	800 MM DIA.	Meter	4756	4884	5005	5185	5355	5693
	900 MM DIA.	Meter	5467	5637	5798	6069	6299	6808
	1000 MM DIA.	Meter	6456	6666	6886	7107	7346	7966
	1100 MM DIA.	Meter	7265	7495	7766	8035	8305	9055
	1200 MM DIA.	Meter	8163	8493	8793	8994	9553	10474
	1300 MM DIA.	Meter	9300	9660	10020	10370	11430	11870
	1400 MM DIA.	Meter	10817	11247	11668	12377	13183	13822
	1500 MM DIA.	Meter	12250	12750	13221	14480	14939	16819
	1600 MM DIA.	Meter	13801	14342	14881	16381	16948	18739
	1700 MM DIA.	Meter	14884	15505	16125	17694	19704	20595
	1800 MM DIA.	Meter	16460	17531	18471	20326	21256	23530
	1900 MM DIA.	Meter	17598	18583	20206	21388	23283	25663
	2000 MM DIA.	Meter	19326	20558	21613	23776	26827	27916
2	Cost of laying jointing, testing to hydrostatic field test pressure including cost of rubber rings, cost of transportation of water and emptying pipe line after completion of field testing etc.							
	350 MM DIA.	Meter	276	276	276	276	276	276

	400 MM DIA.	Meter	<b>298</b>	<b>298</b>	<b>298</b>	<b>298</b>	<b>298</b>	<b>298</b>
	450 MM DIA.	Meter	<b>345</b>	<b>345</b>	<b>345</b>	<b>345</b>	<b>345</b>	<b>345</b>
	500 MM DIA.	Meter	<b>366</b>	<b>366</b>	<b>366</b>	<b>366</b>	<b>366</b>	<b>366</b>
	600 MM DIA.	Meter	<b>450</b>	<b>450</b>	<b>450</b>	<b>450</b>	<b>450</b>	<b>450</b>
	700 MM DIA.	Meter	<b>529</b>	<b>529</b>	<b>529</b>	<b>529</b>	<b>529</b>	<b>529</b>
	800 MM DIA.	Meter	<b>597</b>	<b>597</b>	<b>597</b>	<b>597</b>	<b>597</b>	<b>597</b>
	900 MM DIA.	Meter	<b>655</b>	<b>655</b>	<b>655</b>	<b>655</b>	<b>655</b>	<b>655</b>
	1000 MM IA	Meter	<b>757</b>	<b>757</b>	<b>757</b>	<b>757</b>	<b>757</b>	<b>757</b>
	1100 MM IA	Meter	<b>849</b>	<b>849</b>	<b>849</b>	<b>849</b>	<b>849</b>	<b>849</b>
	1200 MMDIA.	Meter	<b>942</b>	<b>942</b>	<b>942</b>	<b>942</b>	<b>942</b>	<b>942</b>
	1300 MM DIA.	Meter	<b>1067</b>	<b>1067</b>	<b>1067</b>	<b>1067</b>	<b>1067</b>	<b>1067</b>
	1400 MM DIA.	Meter	<b>1207</b>	<b>1207</b>	<b>1207</b>	<b>1207</b>	<b>1207</b>	<b>1207</b>
	1500 MM DIA.	Meter	<b>1309</b>	<b>1309</b>	<b>1309</b>	<b>1309</b>	<b>1309</b>	<b>1309</b>
	1600 MM DIA.	Meter	<b>1466</b>	<b>1466</b>	<b>1466</b>	<b>1466</b>	<b>1466</b>	<b>1466</b>
	1700 MM DIA.	Meter	<b>1596</b>	<b>1596</b>	<b>1596</b>	<b>1596</b>	<b>1596</b>	<b>1596</b>
	1800 MM DIA.	Meter	<b>1690</b>	<b>1690</b>	<b>1690</b>	<b>1690</b>	<b>1690</b>	<b>1690</b>
	1900 MM DIA.	Meter	<b>1783</b>	<b>1783</b>	<b>1783</b>	<b>1783</b>	<b>1783</b>	<b>1783</b>
	2000 MM DIA.	Meter	<b>1878</b>	<b>1878</b>	<b>1878</b>	<b>1878</b>	<b>1878</b>	<b>1878</b>
3	Conveyance of pre-stressed (Non-cylinder) concrete pipes and accessories including loading at factory, un-loading at site and stacking for the following sizes.(minimum distance of 100 km to be considered if the distance is less by 100 km from factory to site)							
	350 MM DIA.	Per K.M/M	<b>1.58</b>	<b>1.58</b>	<b>1.58</b>	<b>1.58</b>	<b>1.58</b>	<b>1.58</b>
	400 MM DIA.	Per K.M/M	<b>1.58</b>	<b>1.58</b>	<b>1.58</b>	<b>1.58</b>	<b>1.58</b>	<b>1.58</b>
	450 MM DIA.	Per K.M/M	<b>1.93</b>	<b>1.93</b>	<b>1.93</b>	<b>1.93</b>	<b>1.93</b>	<b>1.93</b>
	500 MM DIA.	Per K.M/M	<b>2.06</b>	<b>2.06</b>	<b>2.06</b>	<b>2.06</b>	<b>2.06</b>	<b>2.06</b>
	600 MM DIA.	Per K.M/M	<b>2.30</b>	<b>2.30</b>	<b>2.30</b>	<b>2.30</b>	<b>2.30</b>	<b>2.30</b>
	700 MM DIA.	Per K.M/M	<b>3.75</b>	<b>3.75</b>	<b>3.75</b>	<b>3.75</b>	<b>3.75</b>	<b>3.75</b>
	800 MM DIA.	Per K.M/M	<b>3.75</b>	<b>3.75</b>	<b>3.75</b>	<b>3.75</b>	<b>3.75</b>	<b>3.75</b>

	900 MM DIA.	Per K.M/M	<b>3.75</b>	<b>3.75</b>	<b>3.75</b>	<b>3.75</b>	<b>3.75</b>	<b>3.75</b>
	1000 MM DIA.	Per K.M/M	<b>6.04</b>	<b>6.04</b>	<b>6.04</b>	<b>6.04</b>	<b>6.04</b>	<b>6.04</b>
	1100 MM DIA.	Per K.M/M	<b>6.04</b>	<b>6.04</b>	<b>6.04</b>	<b>6.04</b>	<b>6.04</b>	<b>6.04</b>
	1200 MM DIA.	Per K.M/M	<b>11.59</b>	<b>11.59</b>	<b>11.59</b>	<b>11.59</b>	<b>11.59</b>	<b>11.59</b>
	1300 MM DIA.	Per K.M/M	<b>11.72</b>	<b>11.72</b>	<b>11.72</b>	<b>11.72</b>	<b>11.72</b>	<b>11.72</b>
	1400 MM DIA.	Per K.M/M	<b>11.72</b>	<b>11.72</b>	<b>11.72</b>	<b>11.72</b>	<b>11.72</b>	<b>11.72</b>
	1500 MM DIA.	Per K.M/M	<b>11.72</b>	<b>11.72</b>	<b>11.72</b>	<b>11.72</b>	<b>11.72</b>	<b>11.72</b>
	1600 MM DIA.	Per K.M/M	<b>13.17</b>	<b>13.17</b>	<b>13.17</b>	<b>13.17</b>	<b>13.17</b>	<b>13.17</b>
	1700 MM DIA.	Per K.M/M	<b>13.17</b>	<b>13.17</b>	<b>13.17</b>	<b>13.17</b>	<b>13.17</b>	<b>13.17</b>
	1800 MM DIA.	Per K.M/M	<b>13.41</b>	<b>13.41</b>	<b>13.41</b>	<b>13.41</b>	<b>13.41</b>	<b>13.41</b>
	1900 MM DIA.	Per K.M/M	<b>14.01</b>	<b>14.01</b>	<b>14.01</b>	<b>14.01</b>	<b>14.01</b>	<b>14.01</b>
	2000 MM DIA.	Per K.M/M	<b>14.01</b>	<b>14.01</b>	<b>14.01</b>	<b>14.01</b>	<b>14.01</b>	<b>14.01</b>
4	Cost of Machine End pair (Socket +Spigot) for providing M.S Specials on PSC pipelines excluding cost of M.S Special including cost and conveyance to site etc., complete.							
	350 MM DIA.	Per Pair	<b>9900</b>	<b>9900</b>	<b>9900</b>	<b>9900</b>	<b>9900</b>	<b>9900</b>
	400 MM DIA.	Per Pair	<b>11400</b>	<b>11400</b>	<b>11400</b>	<b>11400</b>	<b>11400</b>	<b>11400</b>
	450 MM DIA.	Per Pair	<b>12800</b>	<b>12800</b>	<b>12800</b>	<b>12800</b>	<b>12800</b>	<b>12800</b>
	500 MM DIA.	Per Pair	<b>14300</b>	<b>14300</b>	<b>14300</b>	<b>14300</b>	<b>14300</b>	<b>14300</b>
	600 MM DIA.	Per Pair	<b>17100</b>	<b>17100</b>	<b>17100</b>	<b>17100</b>	<b>17100</b>	<b>17100</b>
	700 MM DIA.	Per Pair	<b>20100</b>	<b>20100</b>	<b>20100</b>	<b>20100</b>	<b>20100</b>	<b>20100</b>
	800 MM DIA.	Per Pair	<b>23000</b>	<b>23000</b>	<b>23000</b>	<b>23000</b>	<b>23000</b>	<b>23000</b>
	900 MM DIA.	Per Pair	<b>25900</b>	<b>25900</b>	<b>25900</b>	<b>25900</b>	<b>25900</b>	<b>25900</b>
	1000 MM DIA.	Per Pair	<b>28600</b>	<b>28600</b>	<b>28600</b>	<b>28600</b>	<b>28600</b>	<b>28600</b>
	1100 MM DIA.	Per Pair	<b>31500</b>	<b>31500</b>	<b>31500</b>	<b>31500</b>	<b>31500</b>	<b>31500</b>

	1200 MM DIA.	Per Pair	<b>34400</b>	<b>34400</b>	<b>34400</b>	<b>34400</b>	<b>34400</b>	<b>34400</b>
	1300 MM DIA.	Per Pair	<b>37100</b>	<b>37100</b>	<b>37100</b>	<b>37100</b>	<b>37100</b>	<b>37100</b>
	1400 MM DIA.	Per Pair	<b>43700</b>	<b>43700</b>	<b>43700</b>	<b>43700</b>	<b>43700</b>	<b>43700</b>
	1500 MM DIA.	Per Pair	<b>51300</b>	<b>51300</b>	<b>51300</b>	<b>51300</b>	<b>51300</b>	<b>51300</b>
	1600 MM DIA.	Per Pair	<b>57100</b>	<b>57100</b>	<b>57100</b>	<b>57100</b>	<b>57100</b>	<b>57100</b>
	1700 MM DIA.	Per Pair	<b>64100</b>	<b>64100</b>	<b>64100</b>	<b>64100</b>	<b>64100</b>	<b>64100</b>
	1800 MM DIA.	Per Pair	<b>73300</b>	<b>73300</b>	<b>73300</b>	<b>73300</b>	<b>73300</b>	<b>73300</b>
	1900 MM DIA.	Per Pair	<b>84700</b>	<b>84700</b>	<b>84700</b>	<b>84700</b>	<b>84700</b>	<b>84700</b>
	2000 MM DIA.	Per Pair	<b>101900</b>	<b>101900</b>	<b>101900</b>	<b>101900</b>	<b>101900</b>	<b>101900</b>
5	Cost of M.S Flanges including cost of bolts, nuts, rubber packing etc., complete and flange thickness confirming to is:7322-1985 and flange dimensions confirming to is:1538-1993 excluding cost of ms specials including cost and conveyance to site, vat etc., complete.							
	Dia.meter and thickness	Unit	Rate	Diameter and thickness	Unit	Rate		
	80 mm dia. x 15 mm thick	Each Flange	<b>700</b>	500mm dia.x 20 mm thick	Each Flange	<b>7150</b>		
	100 mm dia. x 15 mm thick	Each Flange	<b>970</b>	600 mm dia.x 20 mm thick	Each Flange	<b>9010</b>		
	125 mm dia. x 15 mm thick	Each Flange	<b>1160</b>	700 mm dia.x 25 mm thick	Each Flange	<b>12740</b>		
	150 mm dia. x 15 mm thick	Each Flange	<b>1540</b>	750 mm dia.x 25 mm thick	Each Flange	<b>14020</b>		
	200 mm dia. x 15 mm thick	Each Flange	<b>1930</b>	800 mm dia.x 25 mm thick	Each Flange	<b>15690</b>		
	250 mm dia. x 15 mm thick	Each Flange	<b>2510</b>	900 mm dia.x 25 mm thick	Each Flange	<b>18010</b>		
	300 mm dia. x 15 mm thick	Each Flange	<b>2840</b>	1000 mm dia.x 25 mm thick	Each Flange	<b>21230</b>		
	350 mm dia. x 18 mm thick	Each Flange	<b>4140</b>	1050 mm dia.x 25 mm thick	Each Flange	<b>22490</b>		
	400 mm dia. x 18 mm thick	Each Flange	<b>5170</b>	1100 mm dia.x 25 mm thick	Each Flange	<b>24310</b>		
	450 mm dia. x 18 mm thick	Each Flange	<b>6320</b>	1200 mm dia.x 32 mm thick	Each Flange	<b>32290</b>		

Note: a) The above rate of PSC pipes are based on the HT wire cost of Rs.52,500/-MT (Excluding all taxes and freight).and cement price of Rs3882/- per MT (Excluding all taxes and freight).

The rates may be revised depending upon the increase/decrease in the cost of HT wire and Cement. as per the following method.  
The cost of HT wire may be obtained from reputed firms like SAIL/TATA/ SS Ltd. etc.,

Revised Cost = Cost as per the above table + R1 + R2.

R1 = Variation (increase / decrease) in cost (Rs. per meter) due to change in the cost of HT Wire =  $(H2-H1)/1000 \times Wh$ .

R2 = Variation (increase / decrease) in cost (Rs. per meter) due to change in the cost of Cement =  $(C2-C1)/1000 \times Wc$ .

H1 = Rs. 52,500/- H2 = Cost of HT Wire (Rs. per MT excluding all taxes and freight) at the time of preparation of estimate.

C1 = Rs. 3882/- C2 = Cost of Cement (Rs. per MT excluding all taxes and freight) at the time of preparation of estimate

Wh = Weight of HT Wire required (Kg.) per meter of pipe.

Wc = Weight of Cement required (Kg.) per meter of pipe.

The rates for MS flanges are considering landed price of MS Plates of Rs.49000/- per MT.(Excluding all taxes and freight). Price variation to be released on actual weight of flange.

**Note: 1)** The above formula for calculation of revised cost to be used for preparation of Estimates only.

**12. S o R FOR PRE-STRESSED (CYLINDER) CONCRETE PIPES FOR THE YEAR 2018-19**

S. No.	Description										
1	Pre-stressed (Cylinder type ) concrete pipes conforming to IS 784/2001 @ ex-factory cost of pipes, excluding transportation, laying, jointing, testing, bends, tees, specials, all taxes for the following Field/Site Test Pressures.(The manufacture shall design the pipes as per the IS Code 784-2001)										
	Size	Unit	SoR For 2018-19								
			4 Kg/cm2	6 Kg/cm2	8 Kg/cm2	10 Kg/cm2	12 Kg/cm2	14 Kg/cm2	16 Kg/cm2	18 Kg/cm2	20 Kg/cm2
	400 MM DIA.	Meter	4613	4613	4613	4633	4683	4712	4770	4810	4848
	450 MM DIA.	Meter	4919	4919	4879	4978	5017	5076	5145	5193	5232
	500 MM DIA.	Meter	5225	5225	5274	5333	5382	5441	5520	5588	5646
	600 MM DIA.	Meter	5986	6065	6133	6202	6271	6339	6455	6553	6612
	700 MM DIA.	Meter	6815	6913	7001	7098	7186	7283	7441	7547	7675
	800 MM DIA.	Meter	8031	8139	8255	8373	8489	8617	8793	8950	9095
	900 MM DIA.	Meter	9132	9279	9434	9581	9737	9894	10319	10523	10768
	1000 MM DIA.	Meter	10986	11171	11357	11542	11737	11923	12487	12761	13044
	1100 MM DIA.	Meter	12190	12415	12639	12863	13097	13332	14015	14318	14663
	1200 MM DIA.	Meter	13555	13818	14091	14363	14637	14910	15733	16108	16487
	1300 MM DIA.	Meter	14841	15524	15846	16167	16489	17122	17773	18254	18771
	1400 MM DIA.	Meter	17056	17456	17866	18317	19138	19639	20408	20617	21482
	1500 MM DIA.	Meter	20057	20487	20917	21346	22173	22651	23283	24247	24783
	1600 MM DIA.	Meter	22834	23322	23809	24705	25252	25868	26933	27537	28152
	1700 MM DIA.	Meter	24526	25081	25637	26661	27264	28565	29247	29941	30635
	1800 MM DIA.	Meter	29137	29752	30832	31514	32205	33661	34422	35201	35980
	1900 MM DIA.	Meter	31130	31823	33030	33795	35352	36201	39652	40622	41592
	2000 MM DIA.	Meter	32858	34126	34974	35823	37534	38490	39424	40388	41355

2	Cost of laying jointing, testing to hydrostatic field test pressure including cost of site welding and fixing of polypropylene diaper cloth, cost of transportation of water and emptying pipe line after completion of field testing etc.										
	400 MM DIA.	Meter	<b>581</b>								
	450 MM DIA.	Meter	<b>684</b>								
	500 MM DIA.	Meter	<b>745</b>								
	600 MM DIA.	Meter	<b>871</b>								
	700 MM DIA.	Meter	<b>993</b>								
	800 MM DIA.	Meter	<b>1140</b>								
	900 MM DIA.	Meter	<b>1284</b>								
	1000 MM DIA.	Meter	<b>1407</b>								
	1100 MM DIA.	Meter	<b>1595</b>								
	1200 MM DIA.	Meter	<b>1740</b>								
	1300 MM DIA.	Meter	<b>1863</b>								
	1400 MM DIA.	Meter	<b>2052</b>								
	1500 MM DIA.	Meter	<b>2276</b>								
	1600 MM DIA.	Meter	<b>2464</b>								
	1700 MM DIA.	Meter	<b>2774</b>								
	1800 MM DIA.	Meter	<b>2941</b>								
	1900 MM DIA.	Meter	<b>3208</b>								
	2000 MM DIA.	Meter	<b>3416</b>								
3	Conveyance of Pre-stressed (Cylinder type) concrete pipes and accessories including loading at factory, un-loading at site and stacking for the following sizes. (minimum distance of 100 km to be considered if the distance is less by 100 km from factory to site)										
	400 MM DIA.	Per KM/M	<b>1.33</b>								
	450 MM DIA.	Per KM/M	<b>1.33</b>								
	500 MM DIA.	Per KM/M	<b>1.93</b>								

600 MM DIA.	Per KM/M	<b>2.17</b>								
700 MM DIA.	Per KM/M	<b>3.51</b>								
800 MM DIA.	Per KM/M	<b>3.51</b>								
900 MM DIA.	Per KM/M	<b>3.51</b>								
1000 MM DIA.	Per KM/M	<b>5.55</b>								
1100 MM DIA.	Per KM/M	<b>5.55</b>								
1200 MM DIA.	Per KM/M	<b>10.87</b>								
1300 MM DIA.	Per KM/M	<b>10.87</b>								
1400 MM DIA.	Per KM/M	<b>10.87</b>								
1500 MM DIA.	Per KM/M	<b>10.87</b>								
1600 MM DIA.	Per KM/M	<b>10.87</b>								
1700 MM DIA.	Per KM/M	<b>13.17</b>								
1800 MM DIA.	Per KM/M	<b>13.17</b>								
1900 MM DIA.	Per KM/M	<b>13.17</b>								
2000 MM DIA.	Per KM/M	<b>13.89</b>								

Note: The rates of PCCP pipes which were incorporated in the SSR are based on the following raw materials cost.

HT Wire: - Rs.52, 500/- (excluding all taxes & freight)

HR Coil (Hot Rolled): - Rs.45500/- (excluding all taxes & freight)

Cement Cost Rs. 3882/- per MT (excluding all taxes & freight)

The rates may be revised depending upon the increase/ decrease in the cost of raw materials (landed price) as per the following method.

Revised Cost = Cost as per the above table + R1 + R2 + R3.

R1 = Variation (increase / decrease) in cost (Rs. per meter) due to change in the cost of HT Wire =  $(H2 - H1) / 1000 \times W_h$ .

R2 = Variation (increase / decrease) in cost (Rs. per meter) due to change in the cost of HR Coil =  $(R2 - R1) / 1000 \times W_r$ .

R3 = Variation (increase / decrease) in cost (Rs. per meter) due to change in the cost of Cement =  $(C2 - C1) / 1000 \times W_c$ .

H1 = Rs. 52,500/- H2 = Cost of HT Wire (Rs. per MT excluding all taxes and freight) at the time of preparation of estimate.

R1 = Rs. 45,500/- R2 = Cost of HR Coil (Rs. per MT excluding all taxes and freight) at the time of preparation of estimate.

C1 = Rs. 3882/- C2 = Cost of Cement (Rs. per MT excluding all taxes and freight) at the time of preparation of estimate

W<sub>h</sub> = Weight of HT Wire required (Kg.) per Meter of pipe.

W<sub>c</sub> = Weight of Cement required (Kg.) per Meter of pipe.

W<sub>r</sub> = Weight of HR Coil required (kg) per Meter of pipe.

**Note: 1)** The above formula for calculation of revised cost to be used for preparation of Estimates only.

**13. S o R FOR BAR WRAPPED STEEL CYLINDRICAL (BWSC) PIPES FOR THE YEAR 2018-19**

S.No.	Description											
1	Bar Wrapped Steel Cylindrical (BWSC) pipes conforming to IS 15155 - 2002, ex-factory excluding transportation and all taxes., for bar wrapped steel cylindrical pipes for the following Field/Site Test Pressures.(The manufacture shall design the pipes as per the IS Code 784-2001)											
	Size	Unit	4 -12 Kg/cm <sup>2</sup>	14 Kg/cm <sup>2</sup>	16 Kg/cm <sup>2</sup>	18 Kg/cm <sup>2</sup>	20 Kg/cm <sup>2</sup>	22 Kg/cm <sup>2</sup>	24 Kg/cm <sup>2</sup>	26 Kg/cm <sup>2</sup>	28 Kg/cm <sup>2</sup>	30 Kg/cm <sup>2</sup>
	250 MM DIA.	Meter	2314	2314	2314	2314	2314	2314	2573	2654	2753	2823
	300 MM DIA.	Meter	2579	2579	2579	2579	2579	2688	3088	3199	3318	3438
	350 MM DIA.	Meter	3454	3454	3524	3724	3924	4112	4302	4503	4753	4933
	400 MM DIA.	Meter	3779	3878	3915	4177	4421	4683	4736	5234	5506	5700
	450 MM DIA.	Meter	3737	3834	3865	4125	4366	4625	4634	5134	5393	5633
	500 MM DIA.	Meter	4150	4165	4429	4729	5050	5325	5675	6355	6683	7111
	600 MM DIA.	Meter	5110	5460	5899	6319	6770	7237	7771	8271	8748	9258
	700 MM DIA.	Meter	6234	6814	7393	7974	8632	9308	9929	10773	11353	11943
	800 MM DIA.	Meter	7538	8277	9028	9851	10779	11586	12606	13332	14151	15091
	900 MM DIA.	Meter	9070	9985	10916	11925	12967	14182	15231	16148	17376	18766
	1000 MM DIA.	Meter	10776	11917	13202	14446	15631	16965	18071	19545	21158	22528
	1100 MM DIA.	Meter	14035	14335	15714	17239	19015	20275	22037	23507	25238	27138
	1200 MM DIA.	Meter	15304	16365	18035	19759	21524	23514	25664	27731	29620	31560
2	Cost of laying jointing, testing to hydrostatic field test pressure including cost of site welding and fixing of polypropylene dia.per cloth, cost of transportation of water and emptying pipe line after completion of field testing.											

	250 MM DIA.	Meter	<b>396</b>									
	300 MM DIA.	Meter	<b>466</b>									
	350 MM DIA.	Meter	<b>552</b>									
	400 MM DIA.	Meter	<b>616</b>									
	450 MM DIA.	Meter	<b>616</b>									
	500 MM DIA.	Meter	<b>772</b>									
	600 MM DIA.	Meter	<b>948</b>									
	700 MM DIA.	Meter	<b>1106</b>									
	800 MM DIA.	Meter	<b>1257</b>									
	900 MM DIA.	Meter	<b>1478</b>									
	1000 MM DIA.	Meter	<b>1634</b>									
	1100 MM DIA.	Meter	<b>1921</b>									
	1200 MM DIA.	Meter	<b>2149</b>									
3	Conveyance of Bar Wrapped Steel Cylindrical (BWSC) pipes and accessories including loading at factory, un-loading at site and stacking for the following sizes. (minimum distance of 100 km to be considered if the distance is less by 100 km from factory to site)											
	250 MM DIA.	Per KM/M	<b>0.72</b>									
	300 MM DIA.	Per KM/M	<b>0.72</b>									
	350 MM DIA.	Per KM/M	<b>0.97</b>									

Public Health Items												
400 MM DIA.	Per KM/M	<b>1.21</b>										
450 MM DIA.	Per KM/M	<b>1.58</b>										
500 MM DIA.	Per KM/M	<b>1.93</b>										
600 MM DIA.	Per KM/M	<b>2.06</b>										
700 MM DIA.	Per KM/M	<b>2.30</b>										
800 MM DIA.	Per KM/M	<b>3.02</b>										
900 MM DIA.	Per KM/M	<b>3.27</b>										
1000 MM DIA.	Per KM/M	<b>3.75</b>										
1100 MM DIA.	Per KM/M	<b>8.37</b>										
1200 MM DIA.	Per KM/M	<b>11.68</b>										

Note: The above rates of BWSC pipes are based on the following raw materials' cost.

HR coil - Rs.45,500/- per MT(Excluding all taxes and freight).

HT Wire rods - Rs.52,500/- per MT (Excluding all taxes and freight).

Cement Cost Rs. 3882/-per MT(Excluding all taxes and freight).

The rates may be revised depending upon the increase/ decrease in the cost of raw materials (landed price) as per the following method.

Revised Cost =Cost as per the above table +R1+R2+R3.

R1= Variation (increase / decrease) in cost (Rs. per meter) due to change in the cost of HR Plate  $=\frac{(H2-H1)}{1000} \times W_h$ .

R2= Variation (increase / decrease) in cost (Rs. per meter) due to change in the cost of wire rods  $=\frac{(W2-W1)}{1000} \times W_w$ .

R3= Variation (increase / decrease) in cost (Rs. per meter) due to change in the cost of Cement  $=\frac{(C2-C1)}{1000} \times W_{cH1}$  = Rs. 45,500/- H2 = Cost of

HR Plate (Rs. per MT excluding all taxes and freight) at the time of preparation of estimate.  
Wire rods (Rs. per MT excluding all taxes and freight) at the time of preparation of estimate.  
Cement (Rs. perMT excluding all taxes and freight) at the time of preparation of estimate  
meter of pipe.  
Wc= Weight of Cement required (Kg.) per Meter of pipe.  
Ww = Weight of wire rods required (kg) per meter of pipe.

Public Health Items  
W1 = Rs. 52,500/- W2 = Cost of  
C1 = Rs. 3882/- C2 = Cost of  
Wh=Weight of HR Plate required (Kg.) per

Note: 1) The above formula for calculation of revised cost to be used for preparation of Estimates only.

**14. S o R FOR M.S. PIPES FOR THE YEAR 2018-19**

Sl.No.	Description	Unit	Thickness in mm	Rate
1	Manufacture, supply and delivery of M.S Spirally Welded Pipes conforming to IS: 3589/2001 including in lining with cement mortar (1:2) 15mm thick using 4 numbers of 6mm dia. M.S. Rings at each end of the pipe and out coating with cement mortar (1:3) 30mm thick by short crating or gunetting duly providing wire mesh of size 50x50x3mm including cost of all materials, labor charges, transportation to anywhere in AP, but excluding all taxes.			
	500 mm dia.	Meter	8.00	<b>9333</b>
	600 mm dia.	Meter	8.00	<b>11094</b>
	700 mm dia.	Meter	8.00	<b>12935</b>
	700 mm dia.	Meter	10.00	<b>15975</b>
	800 mm dia.	Meter	8.00	<b>14834</b>
	800 mm dia.	Meter	10.00	<b>17136</b>
	800 mm dia.	Meter	12.00	<b>20231</b>
	900 mm dia.	Meter	8.00	<b>16566</b>
	900 mm dia.	Meter	10.00	<b>19151</b>
	900 mm dia.	Meter	12.00	<b>21742</b>
	1000 mm dia.	Meter	8.00	<b>18577</b>
	1000 mm dia.	Meter	10.00	<b>21436</b>
	1000 mm dia.	Meter	12.00	<b>24215</b>
	1000 mm dia.	Meter	14.00	<b>27909</b>
	1100 mm dia.	Meter	8.00	<b>21313</b>
	1100 mm dia.	Meter	10.00	<b>24935</b>
	1100 mm dia.	Meter	12.00	<b>28084</b>
	1100 mm dia.	Meter	14.00	<b>32387</b>
	1100 mm dia.	Meter	16.00	<b>36705</b>
	1200 mm dia.	Meter	8.00	<b>23768</b>

	1200 mm dia.	Meter	10.00	<b>27968</b>
	1200 mm dia.	Meter	12.00	<b>31418</b>
	1200 mm dia.	Meter	14.00	<b>34866</b>
	1200 mm dia.	Meter	16.00	<b>39504</b>
	1200 mm dia.	Meter	18.00	<b>44155</b>
	1300 mm dia.	Meter	8.00	<b>26259</b>
	1300 mm dia.	Meter	10.00	<b>30181</b>
	1300 mm dia.	Meter	12.00	<b>34207</b>
	1300 mm dia.	Meter	14.00	<b>37929</b>
	1300 MM DIA.	Meter	16.00	<b>41667</b>
	1300 MM DIA.	Meter	18.00	<b>46560</b>
	1300 MM DIA.	Meter	20.00	<b>51468</b>
	1400 MM DIA.	Meter	8.00	<b>28209</b>
	1400 MM DIA.	Meter	10.00	<b>32420</b>
	1400 MM DIA.	Meter	12.00	<b>36497</b>
	1400 MM DIA.	Meter	14.00	<b>40504</b>
	1400 MM DIA.	Meter	16.00	<b>44518</b>
	1400 MM DIA.	Meter	18.00	<b>49739</b>
	1400 MM DIA.	Meter	20.00	<b>54972</b>
	1400 MM DIA.	Meter	22.00	<b>60219</b>
	1500 MM DIA.	Meter	8.00	<b>30170</b>
	1500 MM DIA.	Meter	10.00	<b>34674</b>
	1500 MM DIA.	Meter	12.00	<b>39066</b>
	1500 MM DIA.	Meter	14.00	<b>43349</b>
	1500 MM DIA.	Meter	16.00	<b>47647</b>
	1500 MM DIA.	Meter	18.00	<b>51948</b>
	1500 MM DIA.	Meter	20.00	<b>57399</b>
	1500 MM DIA.	Meter	22.00	<b>62865</b>
	1500 MM DIA.	Meter	24.00	<b>68344</b>
	1600 MM DIA.	Meter	8.00	<b>32168</b>
	1600 MM DIA.	Meter	10.00	<b>36804</b>
	1600 MM DIA.	Meter	12.00	<b>41356</b>

	1600 MM DIA.	Meter	14.00	<b>45921</b>
	1600 MM DIA.	Meter	16.00	<b>50496</b>
	1600 MM DIA.	Meter	18.00	<b>55081</b>
	1600 MM DIA.	Meter	20.00	<b>60852</b>
	1600 MM DIA.	Meter	22.00	<b>66640</b>
	1600 MM DIA.	Meter	24.00	<b>72440</b>
	1600 MM DIA.	Meter	26.00	<b>78253</b>
	1700 MM DIA.	Meter	8.00	<b>34046</b>
	1700 MM DIA.	Meter	10.00	<b>39091</b>
	1700 MM DIA.	Meter	12.00	<b>43922</b>
	1700 MM DIA.	Meter	14.00	<b>48768</b>
	1700 MM DIA.	Meter	16.00	<b>53619</b>
	1700 MM DIA.	Meter	18.00	<b>58486</b>
	1700 MM DIA.	Meter	20.00	<b>64610</b>
	1700 MM DIA.	Meter	22.00	<b>70753</b>
	1700 MM DIA.	Meter	24.00	<b>76902</b>
	1700 MM DIA.	Meter	26.00	<b>83073</b>
	1700 MM DIA.	Meter	28.00	<b>89253</b>
	1800 MM DIA.	Meter	8.00	<b>36071</b>
	1800 MM DIA.	Meter	10.00	<b>41378</b>
	1800 MM DIA.	Meter	12.00	<b>46490</b>
	1800 MM DIA.	Meter	14.00	<b>51617</b>
	1800 MM DIA.	Meter	16.00	<b>56745</b>
	1800 MM DIA.	Meter	18.00	<b>61894</b>
	1800 MM DIA.	Meter	20.00	<b>67050</b>
	1800 MM DIA.	Meter	22.00	<b>73408</b>
	1800 MM DIA.	Meter	24.00	<b>79781</b>
	1800 MM DIA.	Meter	26.00	<b>86164</b>
	1800 MM DIA.	Meter	28.00	<b>92564</b>
	1800 MM DIA.	Meter	30.00	<b>98975</b>
	1900 MM DIA.	Meter	8.00	<b>36978</b>
	1900 MM DIA.	Meter	10.00	<b>43390</b>
	1900 MM DIA.	Meter	12.00	<b>48777</b>

	1900 MM DIA.	Meter	14.00	<b>54181</b>
	1900 MM DIA.	Meter	16.00	<b>59595</b>
	1900 MM DIA.	Meter	18.00	<b>65024</b>
	1900 MM DIA.	Meter	20.00	<b>70456</b>
	1900 MM DIA.	Meter	22.00	<b>77131</b>
	1900 MM DIA.	Meter	24.00	<b>83820</b>
	1900 MM DIA.	Meter	26.00	<b>90524</b>
	1900 MM DIA.	Meter	28.00	<b>97240</b>
	1900 MM DIA.	Meter	30.00	<b>103972</b>
	1900 MM DIA.	Meter	32.00	<b>110712</b>
	2000 MM DIA.	Meter	8.00	<b>38700</b>
	2000 MM DIA.	Meter	10.00	<b>45403</b>
	2000 MM DIA.	Meter	12.00	<b>51072</b>
	2000 MM DIA.	Meter	14.00	<b>56755</b>
	2000 MM DIA.	Meter	16.00	<b>62449</b>
	2000 MM DIA.	Meter	18.00	<b>68156</b>
	2000 MM DIA.	Meter	20.00	<b>73867</b>
	2000 MM DIA.	Meter	22.00	<b>79553</b>
	2000 MM DIA.	Meter	24.00	<b>86439</b>
	2000 MM DIA.	Meter	26.00	<b>93337</b>
	2000 MM DIA.	Meter	28.00	<b>100251</b>
	2000 MM DIA.	Meter	30.00	<b>107175</b>
	2000 MM DIA.	Meter	32.00	<b>114114</b>
	2000 MM DIA.	Meter	34.00	<b>121065</b>
	2100 MM DIA.	Meter	8.00	<b>40651</b>
	2100 MM DIA.	Meter	10.00	<b>47689</b>
	2100 MM DIA.	Meter	12.00	<b>53639</b>
	2100 MM DIA.	Meter	14.00	<b>59588</b>
	2100 MM DIA.	Meter	16.00	<b>65573</b>
	2100 MM DIA.	Meter	18.00	<b>71557</b>
	2100 MM DIA.	Meter	20.00	<b>77552</b>
	2100 MM DIA.	Meter	22.00	<b>83562</b>
	2100 MM DIA.	Meter	24.00	<b>90792</b>
	2100 MM DIA.	Meter	26.00	<b>98034</b>

	2100 MM DIA.	Meter	28.00	<b>105291</b>
	2100 MM DIA.	Meter	30.00	<b>112559</b>
	2100 MM DIA.	Meter	32.00	<b>119843</b>
	2100 MM DIA.	Meter	34.00	<b>127139</b>
	2100 MM DIA.	Meter	36.00	<b>134445</b>
	2200 MM DIA.	Meter	8.00	<b>42370</b>
	2200 MM DIA.	Meter	10.00	<b>49701</b>
	2200 MM DIA.	Meter	12.00	<b>55934</b>
	2200 MM DIA.	Meter	14.00	<b>62172</b>
	2200 MM DIA.	Meter	16.00	<b>68427</b>
	2200 MM DIA.	Meter	18.00	<b>74686</b>
	2200 MM DIA.	Meter	20.00	<b>80964</b>
	2200 MM DIA.	Meter	22.00	<b>87254</b>
	2200 MM DIA.	Meter	26.00	<b>102354</b>
	2200 MM DIA.	Meter	28.00	<b>109923</b>
	2200 MM DIA.	Meter	30.00	<b>117504</b>
	2200 MM DIA.	Meter	32.00	<b>125100</b>
	2200 MM DIA.	Meter	34.00	<b>132712</b>
	2200 MM DIA.	Meter	36.00	<b>140334</b>
	2200 MM DIA.	Meter	38.00	<b>147971</b>
	2300 MM DIA.	Meter	10.00	<b>47649</b>
	2300 MM DIA.	Meter	12.00	<b>58498</b>
	2300 MM DIA.	Meter	16.00	<b>70375</b>
	2300 MM DIA.	Meter	18.00	<b>78092</b>
	2300 MM DIA.	Meter	20.00	<b>84649</b>
	2300 MM DIA.	Meter	22.00	<b>91212</b>
	2300 MM DIA.	Meter	26.00	<b>104474</b>
	2300 MM DIA.	Meter	28.00	<b>112646</b>
	2300 MM DIA.	Meter	30.00	<b>120878</b>
	2300 MM DIA.	Meter	32.00	<b>129952</b>
	2300 MM DIA.	Meter	34.00	<b>137257</b>
	2300 MM DIA.	Meter	36.00	<b>145496</b>
	2300 MM DIA.	Meter	38.00	<b>153793</b>
	2300 MM DIA.	Meter	40.00	<b>162047</b>

	2400MM DIA.	Meter	10.00	<b>54000</b>
	2400 MM DIA.	Meter	12.00	<b>60789</b>
	2400 MM DIA.	Meter	14.00	<b>68519</b>
	2400 MM DIA.	Meter	16.00	<b>75335</b>
	2400 MM DIA.	Meter	18.00	<b>82154</b>
	2400 MM DIA.	Meter	20.00	<b>88994</b>
	2400 MM DIA.	Meter	22.00	<b>96684</b>
	2400 MM DIA.	Meter	26.00	<b>104922</b>
	2400 MM DIA.	Meter	28.00	<b>112168</b>
	2400 MM DIA.	Meter	30.00	<b>119427</b>
	2400 MM DIA.	Meter	32.00	<b>126697</b>
	2400 MM DIA.	Meter	34.00	<b>133977</b>
	2400 MM DIA.	Meter	36.00	<b>141273</b>
	2400 MM DIA.	Meter	38.00	<b>148577</b>
	2400 MM DIA.	Meter	40.00	<b>149629</b>
	2400 MM DIA.	Meter	42.00	<b>156952</b>
	2500 MM DIA.	Meter	10.00	<b>56288</b>
	2500 MM DIA.	Meter	14.00	<b>70436</b>
	2500 MM DIA.	Meter	16.00	<b>77527</b>
	2500 MM DIA.	Meter	18.00	<b>84631</b>
	2500 MM DIA.	Meter	20.00	<b>91744</b>
	2500 MM DIA.	Meter	22.00	<b>98871</b>
	2500 MM DIA.	Meter	28.00	<b>124514</b>
	2500 MM DIA.	Meter	30.00	<b>133091</b>
	2500 MM DIA.	Meter	34.00	<b>146080</b>
	2500 MM DIA.	Meter	36.00	<b>155231</b>
	2500 MM DIA.	Meter	38.00	<b>164439</b>
	2500 MM DIA.	Meter	40.00	<b>173660</b>
	2500 MM DIA.	Meter	42.00	<b>182928</b>
	2500 MM DIA.	Meter	44.00	<b>192146</b>
	2500 MM DIA.	Meter	46.00	<b>201422</b>
	2600 MM DIA.	Meter	12.00	<b>60119</b>
	2600 MM DIA.	Meter	14.00	<b>73008</b>

	2600 MM DIA.	Meter	16.00	<b>80381</b>
	2600 MM DIA.	Meter	18.00	<b>87763</b>
	2600 MM DIA.	Meter	20.00	<b>95158</b>
	2600 MM DIA.	Meter	22.00	<b>102561</b>
	2600 MM DIA.	Meter	32.00	<b>146940</b>
	2600 MM DIA.	Meter	34.00	<b>155858</b>
	2600 MM DIA.	Meter	36.00	<b>164784</b>
	2600 MM DIA.	Meter	38.00	<b>173726</b>
	2600 MM DIA.	Meter	40.00	<b>182682</b>
	2600 MM DIA.	Meter	42.00	<b>191652</b>
	2600 MM DIA.	Meter	44.00	<b>200634</b>
	2600 MM DIA.	Meter	46.00	<b>209628</b>
	2600 MM DIA.	Meter	48.00	<b>218638</b>
2	Cost of Laying, Jointing, Hydrostatic Filed Test Pressure, Including Cost of Site Welding, Jointing Materials And Cost of Transportation of Water Including Emptying Pipe Line After Completion Of Field Testing			
	400 MM DIA.	Meter		<b>682</b>
	500 MM DIA.	Meter		<b>849</b>
	600 MM DIA.	Meter		<b>1044</b>
	700 MM DIA.	Meter		<b>1212</b>
	800 MM DIA.	Meter		<b>1383</b>
	900 MM DIA.	Meter		<b>1626</b>
	1000 MM DIA.	Meter		<b>1795</b>
	1100 MM DIA.	Meter		<b>2112</b>
	1200 MM DIA.	Meter		<b>2366</b>
	1300 MM DIA.	Meter		<b>2719</b>
	1400 MM DIA.	Meter		<b>3130</b>
	1500 MM DIA.	Meter		<b>3540</b>
	1600 MM DIA.	Meter		<b>3731</b>
	1700 MM DIA.	Meter		<b>3946</b>
	1800 MM DIA.	Meter		<b>4463</b>
	1900 MM DIA.	Meter		<b>5201</b>
	2000 MM DIA.	Meter		<b>6531</b>
	2100 MM DIA.	Meter		<b>7472</b>
	2200 MM DIA.	Meter		<b>8393</b>
	2300 MM DIA.	Meter		<b>10239</b>

	2400 MM DIA.	Meter		<b>12521</b>
	2500 MM DIA.	Meter		<b>14542</b>
	2600 MM DIA.	Meter		<b>16370</b>

The above rates of MS Spiral pipes are based on the following raw materials cost.

MS Plates = Rs49,000/- Per MT.(Excluding all taxes and freight).

The rates may be revised depending upon the increase/decrease in the cost of raw materials (landed price) as per the following method.

Revised Cost = Cost of the pipe as per the above table +R<sub>1</sub>

$R_1 = (M_2 - M_1) / 1000 \times W_m$

M<sub>1</sub> = Rs 49,000/-

M<sub>2</sub> = Cost of MS Plates at the time of preparation of estimate excluding all taxes and freight

W<sub>m</sub> = Weight of MS Plates in Kg's per meter of pipe

**15. S.S. RATES FOR H.D.P.E PIPES FOR THE YEAR 2018-19. (PE - 80 Grade)**

Sl.No	Description	4.0 kg/sqcm
1	Manufacture, Supply, & Delivery of HDPE pipes conforming to IS 4984 - 1995 including transportation to anywhere in A.P, excluding all taxes (Supply up to 90 mm dia. in coil & above 90 mm dia. straight Length)	
	Rate per Meter	
	OD 40 mm	<b>38</b>
	OD 50 mm	<b>56</b>
	OD 63 mm	<b>76</b>
	OD 75 mm	<b>104</b>
	OD 90 mm	<b>150</b>
	OD 110 mm	<b>225</b>
	OD 125 mm	<b>288</b>
	OD 140 mm	<b>358</b>
	OD 160 mm	<b>469</b>
	OD 180 mm	<b>592</b>
	OD 200 mm	<b>723</b>
	OD 225 mm	<b>917</b>
	OD 250 mm	<b>1135</b>
	OD 280 mm	<b>1414</b>
	OD 315 mm	<b>1798</b>
	OD 355 mm	<b>2342</b>
	OD 400 mm	<b>3035</b>
	OD 450 mm	<b>3858</b>
	OD 500 mm	<b>4738</b>
	OD 560 mm	<b>5867</b>
	OD 630 mm	<b>7421</b>
	OD 710 mm	<b>9430</b>
	OD 800 mm	<b>11935</b>
	OD 900 mm	<b>15123</b>
	OD 1000 mm	<b>18624</b>

Note: - Reliance Industries Resin cost adopted for the above rates are

For PE - 80 grade Rs.107795/- per MT. (Excluding all taxes).

The variation in cost of HDPE pipes due to increase / decrease in raw material cost shall be allowed as per the following price variation formula.

$P2 = P1 + (A2 - A1) / 1000 \times M \times 0.95$  (for increase in raw material cost)

$P2 = P1 - (A1 - A2) / 1000 \times M \times 0.95$  (for decrease in raw material cost)

P2 = Revised pipe price in Rs. per Meter (Excluding all taxes).

P1 = Existing pipe price in Rs. per Meter (Excluding all taxes).

A2 = Revised price of raw material Rs. per MT excluding all taxes.

A1 = Existing price of raw material Rs. Per MT excluding all taxes

M = Weight of pipe in Kg's per Meter as per weight chart.

The above formula for calculation of revised cost to be used for preparation of Estimates only.

**16. S o R FOR H.D.P.E PIPES FOR THE YEAR 2018-19. (PE - 100 Grades)**

Sl. No.	Description	6.0 kg/ sqcm	8.0 kg/ sqcm	10.0 kg/ sqcm	12.5 kg/ sqcm	16.0 kg/ sqcm
<b>1</b>	<b>Manufacture, Supply, &amp; Delivery of HDPE Pipes conforming to IS 4984 - 1995 including transportation to anywhere in A.P, excluding all taxes (Supply up to 90 mm dia. in coil &amp; above 90 mm dia. straight length.)</b>					
	<b>Rate per Meter</b>					
	OD 20 mm					23
	OD 25 mm					41
	OD 32 mm			42	47	66
	OD 40 mm		54	64	72	102
	OD 50 mm	66	81	99	113	158
	OD 63 mm	99	125	151	176	246
	OD 75 mm	140	178	213	255	349
	OD 90 mm	197	254	304	363	505
	OD 110 mm	298	378	450	553	752
	OD 125 mm	380	488	586	733	967
	OD 140 mm	477	610	735	926	1218
	OD 160 mm	625	796	956	1197	1585
	OD 180 mm	786	1006	1210	1523	1997
	OD 200 mm	973	1244	1492	1891	2466
	OD 225 mm	1256	1605	1931	2377	3117
	OD 250 mm	1545	1983	2384	2948	3851
	OD 280 mm	1936	2482	2981	3684	4834
	OD 315 mm	2454	3143	3778	4646	6113
	OD 355 mm	3079	3939	4739	5718	7815
	OD 400 mm	4054	5179	6219	8119	10080
	OD 450 mm	5039	6461	7772	10266	12676
	OD 500 mm	6231	7967	9587	12678	15167
	OD 560 mm	7241	9268	11081	14212	
	OD 630 mm	9131	11726	14038	16842	

	OD 710 mm	11614	14858	17830		
	OD 800 mm	14738	18866	22705		
	OD 900 mm	18670	23882			
	OD 1000 mm	23023				

Note: Reliance Industries Resin cost adopted for the above rates are

For PE - 100 grade Rs.108382/-per MT. (Excluding all taxes).

The variation in cost of HDPE pipes due to increase / decrease in raw material cost shall be allowed as per the following price variation formula.

$P2 = P1 + (A2 - A1) / 1000 \times M \times 0.95$  (for increase in raw material cost)

$P2 = P1 - (A1 - A2) / 1000 \times M \times 0.95$  (for decrease in raw material cost)

P2 = Revised pipe price in Rs. per Meter (Excluding all taxes).

P1 = Existing pipe price in Rs. per Meter (Excluding all taxes).

A2 = Revised price of raw material Rs. per MT excluding all taxes

A1 = Existing price of raw material Rs. per MT excluding all taxes

M = Weight of pipe in Kg's per Meter as per weight chart.

The above formula for calculation of revised cost to be used for preparation of Estimates only.

**17.HDPE PIPES – (PE –100 Grade) SEWER LINES FOR THE YEAR 2018-19**

Sl. No	Description	6.0 kg/ sqcm	8.0 kg/ sqcm	10.0 kg/ sqcm	12.5 kg/ sqcm	16.0 kg/ sqcm
1	Manufacture, Supply, & Delivery of HDPE Pipes are conforming to IS 14333 - 2000 for using underground drainage and sewerage systems including transportation to anywhere in A.P, excluding all taxes (Supply up to 90 mm drain coil & above 90 mm dia. straight length)					
	Rate per Meter					
	OD 63mm	108	137	164	195	233
	OD 75 mm	153	196	233	278	331
	OD 90 mm	218	279	332	395	478
	OD 110 mm	315	398	475	570	680
	OD 125 mm	402	514	615	728	880
	OD 140 mm	503	640	770	917	1104
	OD 160 mm	655	836	1005	1171	1437
	OD 180 mm	826	1060	1271	1510	1818
	OD 200 mm	1023	1307	1567	1870	2241
	OD 225 mm	1290	1648	1982	2357	2839
	OD 250 mm	1592	2039	2446	2911	3497
	OD 280 mm	1990	2549	3050	3659	4392
	OD 315 mm	2520	3228	3925	4617	5553
	OD 355 mm	3192	4089	4919	5870	7045
	OD 400 mm	4218	5398	6481	7727	9267
	OD 450 mm	5324	6828	8207	9763	
	OD 500 mm	6581	8418	10122	12066	
	OD 560 mm	8228	10550	12700		
	OD 630 mm	10418	13354	16045		
	OD 710 mm	13498	17292			
	OD 800 mm	17125				
	OD 900 mm	21690				
	OD 1000 mm	26798				

Note: Reliance Industries Resin cost adopted for the above rates are

For PE - 100 grade Rs.108382/-per MT. (Excluding all taxes).

The variation in cost of HDPE pipes due to increase / decrease in raw material cost shall be

allowed as per the following price variation formula.

$$P2 = P1 + (A2 - A1) / 1000 \times M \times 0.95 \text{ (for increase in raw material cost)}$$

$$P2 = P1 - (A1 - A2) / 1000 \times M \times 0.95 \text{ (for decrease in raw material cost)}$$

P2 = Revised pipe price in Rs. per Meter excluding all taxes

P1 = Existing pipe price in Rs. per Meter excluding all taxes

A2 = Revised price of raw material Rs. per MT excluding all taxes

A1 = Existing price of raw material Rs. per MT excluding all taxes

M = Weight of pipe in Kgs per Meter as per weight chart.

The above formula for calculation of revised cost to be used for preparation of Estimates only.

**18. S o R FOR H.D.P.E- (PE –100 Grade) FITTINGS FOR THE YEAR 2018-19.**

I	Manufacture, Supply, & Delivery of HDPE (PE –100 Grade) fittings conforming to IS 4984 - 1995 including transportation to anywhere in A.P. Excluding all taxes.	
I (a)	PIPE ENDS LONG NECK	Rate per Each
	OD 50 mm	76
	OD 63 mm	96
	OD 75 mm	116
	OD 90 mm	161
	OD 110 mm	223
	OD 125 mm	401
	OD 140 mm	375
	OD 160 mm	524
	OD 180 mm	798
	OD 200 mm	1026
	OD 225 mm	1179
	OD 250 mm	1381
	OD 280 mm	1542
	OD 315 mm	1778
	OD 355 mm	3718
	OD 400 mm	4954
	OD 450 mm	8242
	OD 500 mm	9173
(b)	MS FLANGES	Rate per Each
	OD 50 mm	93
	OD 63 mm	117
	OD 75 mm	149
	OD 90 mm	161
	OD 110 mm	169
	OD 125 mm	232
	OD 140 mm	251
	OD 160 mm	331
	OD 180 mm	466
	OD 200 mm	604
	OD 225 mm	757
	OD 250 mm	893
	OD 280 mm	1013
	OD 315 mm	1191
	OD 355 mm	2017
	OD 400 mm	2502
	OD 450 mm	3266
	OD 500 mm	3740
(c)	END CAPS	Rate per Each

	OD 50 mm	55
	OD 63 mm	66
	OD 75 mm	83
	OD 90 mm	111
	OD 110 mm	126
	OD 125 mm	175
	OD 140 mm	204
	OD 160 mm	312
	OD 180 mm	506
	OD 200 mm	554
	OD 225 mm	577
	OD 250 mm	820
	OD 280 mm	840
	OD 315 mm	1148
	OD 355 mm	1772
	OD 400 mm	3095
	OD 450 mm	4977
	OD 500 mm	9173
(d)	<b>REDUCERS</b>	<b>Rate per Each</b>
	OD 50 mm x 63 mm	76
	OD 63 mm x 75 mm	111
	OD 75 mm x 90 mm	182
	OD 90 mm x 110 mm	250
	OD 110 mm x 125 mm	382
	OD 125 mm x 140 mm	529
	OD 140 mm x 160 mm	738
	OD 160 mm x 180 mm	1022
	OD 180 mm x 200 mm	1320
	OD 200 mm x 225 mm	1621
	OD 225 mm x 250 mm	2209
	OD 250 mm x 280 mm	3137
	OD 280 mm x 315 mm	4436
	OD 315 mm x 355 mm	5088
	OD 355 mm x 400 mm	7178
	OD 400 mm x 450 mm	7447
	OD 450 mm x 500 mm	9548

(e)	<b>TEES</b>	<b>Rate per Each</b>
	OD 50 mm	106
	OD 63 mm	168
	OD 75 mm	204
	OD 90 mm	359

	OD 110 mm	425
	OD 125 mm	639
	OD 140 mm	881
	OD 160 mm	1517
	OD 180 mm	2057
	OD 200 mm	2833
	OD 225 mm	4022
	OD 250 mm	5507
	OD 280 mm	7711
	OD 315 mm	10989
	OD 355 mm	15671
	OD 400 mm	22953
	OD 450 mm	32603
	OD 500 mm	44776
(f)	BENDS Rate per Each	
	OD 50 mm	66
	OD 63 mm	148
	OD 75 mm	194
	OD 90 mm	330
	OD 110 mm	435
	OD 125 mm	642
	OD 140 mm	846
	OD 160 mm	1262
	OD 180 mm	1811
	OD 200 mm	2453
	OD 225 mm	3481
	OD 250 mm	4770
	OD 280 mm	6878
	OD 315 mm	9513
	OD 355 mm	13186
	OD 400 mm	19892
	OD 450 mm	29242
	OD 500 mm	39644

II	Providing and Fixing electro Fusion Ferrule Tapping saddle manufactured from virgin resin of PE-80/PE-100 having blue/black color using food grade compounded raw material with quality assurance certificate from quality agencies like CIPET etc. For usage in drinking water system and having working pressure of 10 bar. The cost shall include testing of all materials, labor all taxes (central & state), inspection charges, transportation up to site, transit insurance, loading, unloading, stacking, providing and fixing etc. Complete as specified and directed by the Departmental Engineers.	
	SIZE	Rate Each
	(Main pipe outer dia. meter in mm & Tapping size in Inches)	
	63x1/2"	967
	63 x3/4"	967
	63 x1"	967
	63 x1/2"	967
	75 x1/2"	967
	75 x3/4"	967
	75 x1	967
	90 x1/2"	967
	90 x3/4"	967
	90 x1"	967
	90 x 1 1/4"	1254
	90 x 1 1/2"	1254
	90 x2"	1254
	110x1/2"	967
	110 x3/4"	967
	110 x1"	967
	110 x 1 1/4"	1254
	110x1 1/2"	1254
	110x2"	1254
	160 x1/2"	967
	160 x3/4"	967
	160 x1"	967
	160 x 1 1/4"	1371
	160 x 1 1/2"	1371
	160 x 2"	1371
	200 x 1/2"	1371
	200 x 3/4"	1371

	200 x 1"	1371
	200 x 1 1/4"	1973
	200 x 2"	1973
	250 x 1/2"	1390
	250 x 3/4"	1390
	250 x 1"	1390
	250 x 1 1/4"	2009
	250 x 1 1/2"	2009
	250 x 2"	2009
	315 x 1/2"	1655
	315 x 3/4"	1655
	315x1"	1655
	315x1 1/4"	2248
	315x1 1/2"	2248
	315x2"	2248

**19. S o R FOR Double Wall Corrugated (DWC) Pipes FOR THE YEAR 2018-19**

S.No.	Description	Unit	SoR RATES 2018-19
1	2	3	4
I	Manufacture, supply, & delivery of (DWC) structured wall polyethylene/polypropylene piping system with non smooth external annular corrugated and smooth internal surface (Double Wall) for non pressure sewage & Drainage application pipes of standard length 6 m, grade conforming to IS 16098 (part-II: 2013) excluding transportation to anywhere in A.P, excluding all taxes.	Meter	
	Inner Dia. (mm)		
	Stiffness Class SN-8		
	100		158.00
	135		236.00
	150		279.00
	170		337.00
	200		463.00
	250		715.00
	300		961.00
	400		1,650.00
	500		2,535.00
	600		4,370.00
	800		7,245.00
	1000		11,799.00

**20. SoR FOR PVC PIPES FOR THE YEAR 2018-19**

Sl. No.	Description	TEST PRESSURE		
		4.0 Kgs/cm <sup>2</sup>	6 Kgs/cm <sup>2</sup>	10 Kgs/cm <sup>2</sup>
1	Manufacture, Supply and Delivery of Unplasticised PVCs Pipes for potable water supplies conforming to IS : 4985/2000 (3 <sup>rd</sup> revision) with bell ends (Socket) as per specification in light Grey/Natural Ivory Grey/ Any other Color (except White) inclusive of transportation to the sub-divisional stores anywhere in AP excluding all taxes.			
	DIA. IN MM	Rate/Meter		
	20			16
	25			24
	32			36
	40		34	55
	50		51	85
	63	56	80	121
	75	81	111	176
	90	112	160	249
	110	162	231	371
	125	211	295	485
	140	264	380	603
	160	348	492	789
	180	443	635	1011
	200	539	772	1231
	225	722	1042	1657
	250	836	1275	2010
	280	1095	1610	2545
	315	1386	2024	3214
	355	1815	2636	
	400	2289	3353	

**Note:**

The resin cost adopted for the above rates is Rs.77,650/- per MT (excluding all taxes)

The variation in cost of PVC pipes due to increase / decrease in raw material cost shall be allowed subject to the following price variation formula.

The price variation formula to be adopted is as follows:

$$P2 = P1 + (A2 - A1) / 1000 \times M \times 0.95 \text{ (for increase in raw material cost)}$$

$$P2 = P1 - (A1 - A2) / 1000 \times M \times 0.95 \text{ (for decrease in raw material cost)}$$

P2 = Revised pipe price in Rs. PerMeter, P1 = Existing pipe price in Rs. PerMeter

A2 = Revised price of raw material Rs. Per MT,

A1 = Existing price of raw material Rs. Per MT

M = Weight of pipe in Kgs per Meter as per weight chart.

The above formula for calculation of revised cost to be used for preparation of Estimates only.

**21. SoR FOR NON- PRESSURE P.V.C.U PIPES FOR THE YEAR 2018-19**

S. No	Description	
1	Manufacture, Supply, & Delivery of Unplasticised Non-pressure polyvinyl chloride(PVC-U) pipes of dark (any shade of brown) for use in underground drainage & sewerage system conforming to IS 15328/2003) <u>with solvent cement jointing</u> as per specification inclusive of transportation to the sub-divisional stores anywhere in A.P, excluding all taxes	
	Pipe Series (S25)	Rate per Meter
	OD 160 mm	293
	OD 200 mm	445
	OD 250mm	690
	OD 315 mm	1089
	Pipe Series (S20)	
	OD 125 mm	226
	OD 160 mm	363
	OD 200 mm	550
	OD 250mm	857
	OD 315 mm	1346
	Pipe Series (S16.5)	
	OD 110 mm	199
	OD 125 mm	269
	OD 160 mm	421
	OD 200 mm	654
	OD 250mm	1014
	OD 315 mm	1601

**Note:** The resin cost adopted for the above rates is Rs.77,650/- per MT (Excluding all taxes).

The variation in cost of PVC pipes due to increase / decrease in raw material cost shall be allowed subject to the following price variation formula.

The price variation formula to be adopted is as follows:

$$P2 = P1 + (A2 - A1) / 1000 \times M \times 0.95 \text{ (for increase in raw material cost)}$$

$$P2 = P1 - (A1 - A2) / 1000 \times M \times 0.95 \text{ (for decrease in raw material cost)}$$

P2 = Revised pipe price in Rs. perMeter

P1 = Existing pipe price in Rs. perMeter

A2 = Revised price of raw material Rs. per MT

A1 = Existing price of raw material Rs. per MT

M = Weight of pipe in Kg's per Meter as per weight chart.

The above formula for calculation of revised cost to be used for preparation of Estimates only.

## 22. SoR FOR NON- PRESSURE P.V.C.U PIPES FOR THE YEAR 2018-19

S. No	Description	
1	Manufacture, supply, & delivery of un-plasticized Non-Pressure Polyvinyl Chloride(PVC-U) pipes of dark (any shade of Brown) for use in underground drainage & sewerage system conforming to IS 15328/2003) <u>with Elastomeric Seal Ring Joints</u> (Ringtite PVC Pipes)as per specification inclusive of transportation to the Sub-Divisional stores anywhere in A.P, excluding all taxes	
	Pipe Series (S25)	Rate per Meter
	OD 160 mm	312
	OD 200 mm	474
	OD 250mm	737
	OD 315 mm	1160
	Pipe Series (S20)	
	OD 125 mm	243
	OD 160 mm	384
	OD 200 mm	584
	OD 250mm	911
	OD 315 mm	1430
	Pipe Series (S16.5)	
	OD 110 mm	212
	OD 125 mm	286
	OD 160 mm	449
	OD 200 mm	691
	OD 250mm	1075
	OD 315 mm	1697

**Note:** The resin cost adopted for the above rates is Rs.77,650/- per MT (Excluding all taxes). The variation in cost of PVC pipes due to increase / decrease in raw material cost shall be allowed subject to the following price variation formula.

The price variation formula to be adopted is as follows:

$$P2 = P1 + (A2 - A1) / 1000 \times M \times 0.95 \text{ (for increase in raw material cost)}$$

$$P2 = P1 - (A1 - A2) / 1000 \times M \times 0.95 \text{ (for decrease in raw material cost)}$$

P2 = Revised pipe price in Rs. perMeter

P1 = Existing pipe price in Rs. perMeter

A2 = Revised price of raw material Rs. per MT

A1 = Existing price of raw material Rs. per MT

M = Weight of pipe in Kg's per Meter as per weight chart.

The above formula for calculation of revised cost to be used for preparation of Estimates only.

### 23. SoR FOR CENTRIFUGALLY CAST (SPUN)IRON PRESSURE PIPES

Sl. No.	Description	Unit	S.S. Rates for 2018-19		
I	Socket and Spigot Centrifugally Cast (Spun) Iron pressure pipes for water, Gas and Sewage conforming to specification No: IS 1536/1989 (third revision) with amdt. No: 1 & 2 in standard lengths of 3.66 m, 4 m, 4.5m, 5 m, 5.5 m & 6 m and details given below, suitable either for lead jointing or rubber gasket (push on) jointing at purchasers option at ex-factory excluding transportation and all taxes.				
	Nominal dia. (in MM)		LA Class	A Class	B Class
	80	Rmt	840	913	978
	100	Rmt	1041	1146	1222
	125	Rmt	1344	1468	1579
	150	Rmt	1626	1782	1914
	200	Rmt	2378	2580	2784
	250	Rmt	3205	3489	3763
	300	Rmt	4133	4518	4881
	350	Rmt	5206	5647	6107
	400	Rmt	6336	6923	7453
	450	Rmt	7640	8393	9027
	500	Rmt	8943	9743	10510
	600	Rmt	11918	13011	14052
	700	Rmt	15381	16804	18100
	750	Rmt	17225	18833	20370
	800	Rmt	19283	21010	22660
	900	Rmt	23487	25626	27684
	1000	Rmt	28217	30825	33214
II	Conveyance of Centrifugally Cast (Spun) Iron Pressure Pipes and accessories including loading at Factory, un-loading at site and stacking for the following sizes. (The Minimum distance/lead in Km for destination below 100 Km to be taken as 100 Km)				
	SIZE IN MM UNIT		LA	A	B
	80 Per KM/RMT		0.29	0.29	0.29
	100 Per KM/RMT		0.29	0.29	0.29
	125 Per KM/RMT		0.44	0.44	0.44
	150 Per KM/RMT		0.44	0.44	0.44
	200 Per KM/RMT		0.74	0.74	0.74
	250 Per KM/RMT		0.89	0.89	0.89

	300 Per KM/RMT		1.17	1.17	1.17
	350 Per KM/RMT		1.61	1.61	1.61
	400 Per KM/RMT		1.90	1.90	1.90
	450 Per KM/RMT		2.20	2.20	2.20
	500 Per KM/RMT		2.63	2.63	2.63
	600 Per KM/RMT		2.63	2.63	2.63
	700 Per KM/RMT		2.63	2.63	2.63
	750 Per KM/RMT		4.38	4.38	4.38
	800 Per KM/RMT		7.45	7.45	7.45
	900 Per KM/RMT		7.45	7.45	7.45
	1000 Per KM/RMT		7.45	7.45	7.45

**Note:**Price Variation Formula due to Increase / Decrease in the cost of pig iron.

$$P2 = P1 + (R2 - R1) / 1000 * M * 1.0$$

Where M= Weight of pipe in kg perMeter.

P2 = Revised rate of pipe in Rs. per Rmt

P1 = Rate of pipe in Rs. per Rmt as per above table.

R2 = Price of Pig Iron (Rs per MT excluding all taxes) at the time of preparation of estimate.

R1 = Price of Pig Iron (Rs per MT excluding all taxes) at the time of preparation of SSR =Rs. 31000/-

The above formula for calculation of revised cost to be used for preparation of Estimates only.

**24.S o R FOR DUCTILE IRON PRESSURE PIPES FOR THE YEAR 2018-19**

Sl. No.	Description	Unit	Class of Pipe	
1	Centrifugally cast (Spun) Ductile Iron pressure pipes for water, gas and sewage with <u>Socket Spigot ends</u> conforming to IS.: 8329/2000 in standard working lengths of 4, 5 5.5 & 6 meter for classification K9 & K7 suitable for push-on-joint (rubber gasket d jointing) with cement mortar lining inside the pipes with outside zinc coating. Rates are ex-factory, excluding transportation and all taxes.			
	Nominal Dia. in mm	Rmt	K7	K9
	100	Rmt	842	1007
	150	Rmt	1210	1499
	200	Rmt	1651	1992
	250	Rmt	2202	2641
	300	Rmt	2811	3375
	350	Rmt	3623	4273
	400	Rmt	4346	5097
	450	Rmt	5266	6157
	500	Rmt	6204	7091
	600	Rmt	8331	9466
	700	Rmt	10590	11943
	750	Rmt	11992	13559
	800	Rmt	13143	14732
	900	Rmt	16203	18125
	1000	Rmt	19077	21284
	1100	Rmt		22994
	1200	Rmt		26896
2	Centrifugally cast (Spun) Ductile Iron pressure pipes for water, gas and sewage with <u>plain ends</u> conforming to IS:8329/2000in standard working lengths of 4, 5, 5.5 & 6 meter for classification K9 & K7 with cement mortar lining inside the pipes with outside zinc coating. Rates are ex-factory, excluding transportation and all taxes.			
	Nominal Dia. in mm		K7	K9
	100	Rmt	748	959
	150	Rmt	1107	1414
	200	Rmt	1533	1918
	250	Rmt	1994	2547
	300	Rmt	2642	3253
	350	Rmt	3332	4042
	400	Rmt	4027	4875
	450	Rmt	4816	5762

	500	Rmt	5742	6876
	600	Rmt	7594	8875
	700	Rmt	10029	11259
	750	Rmt	11214	12578
	800	Rmt	12403	13901
	900	Rmt	15013	16792
	1000	Rmt	17830	19983
	1100	Rmt		21302
	1200	Rmt		22422

3

Centrifugally cast (Spun) Ductile Iron pressure pipes with flanged (welded) ends for water, gas, sewage conforming to IS: 8329/2000 in standard working lengths of 1,2,3, 4, 5 mts for classification K9 with cement mortar lining inside the pipes with outside zinc coating. Rates are ex-factory, excluding transportation and all taxes.

	Nominal Dia. in mm	Unit	1.0 Mt. Length	2.0 Mt. Length	3.0 Mt. Length	4.0 Mt. Length	5.0 Mt. Length
	100	Each	3321	4269	5214	6162	8187
	150	Each	5325	7127	6279	6927	8109
	200	Each	7071	9535	8979	10038	11781
	250	Each	9236	12526	12017	13606	15995
	300	Each	11569	15731	15812	17961	21135
	350	Each	18153	23310	19881	22696	26712
	400	Each	22341	28565	28342	31249	36221
	450	Each	26979	34325	34776	37844	43838
	500	Each	32740	41357	41668	45194	52264
	600	Each	46365	57708	50149	54247	61513
	700	Each	55185	69581	69078	73994	84937
	800	Each	68016	85845	84068	90654	104528
	900	Each	81087	102636	103680	111891	129032
	1000	Each	104114	129748	124237	134361	159475
	1100	Each	120935	147180	150986	160750	184196

4	Conveyance of Ductile Iron Pressure Pipes and accessories including loading at Factory, un-loading at site and stacking for the following sizes			Class		WELDED DOUBLE FLANGED PIPES
	SIZE IN MM	UNIT	K7	K9	K9	
	100	Per KM/RMT	0.23	0.23	0.35	
	150	Per KM/RMT	0.35	0.35	0.46	
	200	Per KM/RMT	0.35	0.46	0.69	
	250	Per KM/RMT	0.46	0.58	0.92	

	300	Per KM/RMT	0.69	0.69	1.16
	350	Per KM/RMT	0.81	0.92	1.39
	400	Per KM/RMT	0.92	1.04	1.62
	450	Per KM/RMT	1.16	1.27	1.96
	500	Per KM/RMT	1.39	1.50	2.31
	600	Per KM/RMT	1.96	1.96	3.00
	700	Per KM/RMT	2.89	2.89	4.39
	750	Per KM/RMT	3.47	3.47	5.31
	800	Per KM/RMT	5.89	5.89	8.78
	900	Per KM/RMT	5.89	5.89	8.78
	1000	Per KM/RMT	5.89	5.89	8.78
	1100	Per KM/RMT	5.89	5.89	8.78
	1200	Per KM/RMT	6.30	6.30	
5	Supply and Delivery of Polyethylene (PE) Sleeves for Ductile Iron Pipes used to guard the pipe against corrosion.				
	DIA. IN MM				
	100 MM DIA.		RMT		45.00
	150 MM DIA.		RMT		55.00
	200 MM DIA.		RMT		70.00
	250 MM DIA.		RMT		81.00
	300 MM DIA.		RMT		89.00
	350 MM DIA.		RMT		100.00
	400 MM DIA.		RMT		140.00
	450 MM DIA.		RMT		140.00
	500 MM DIA.		RMT		169.00
	600 MM DIA.		RMT		169.00
	700 MM DIA.		RMT		220.00
	750 MM DIA.		RMT		220.00
	800 MM DIA.		RMT		220.00
	900 MM DIA.		RMT		250.00
	1000 MM DIA.		RMT		250.00
	1100 MM DIA.		RMT		308.00
6	Additional price for HAC(high alumina cement mortar lining)				
	DIA. IN MM				
	100 MM DIA.		RMT		67.00
	150 MM DIA.		RMT		88.00
	200 MM DIA.		RMT		108.00
	250 MM DIA.		RMT		129.00

300 MM DIA.	RMT	138.00
350 MM DIA.	RMT	157.00
400 MM DIA.	RMT	216.00
450 MM DIA.	RMT	216.00
500 MM DIA.	RMT	266.00
600 MM DIA.	RMT	266.00
700 MM DIA.	RMT	341.00
750 MM DIA.	RMT	341.00
800 MM DIA.	RMT	341.00
900 MM DIA.	RMT	389.00
1000 MM DIA.	RMT	389.00
1100 MM DIA.	RMT	389.00
1200 MM DIA.	RMT	389.00

**Note:** Price Variation Formula due to Increase / Decrease in the cost of pig iron.

$P2 = P1 + (R2 - R1) / 1000 * M * 0.96$ , Where

M = Weight of pipe in kg per Meter as per I.S.8329-2000.

P2 = Revised rate of pipe in Rs. per Rmt.

P1 = Rate of pipe in Rs. per Rmt. as per above table.

R2 = Price of Pig Iron(Rs per MT)) at the time of preparation of estimate.

R1 = Price of Pig Iron(Rs per MT) at the time of preparation

OfSoR =Rs.31000/- (Excluding all taxes).

The above formula for calculation of revised cost to be used for preparation of Estimates only.

**25. S o R FOR DUCTILE IRON FITTINGS FOR THE YEAR 2018-19**

Sl. No.	Description	Unit	Rate
	Centrifugally cast (spun) Ductile Iron Fittings conforming to IS:9523/2000 having dimensions as per table. The rates mentioned here under are for fittings, zinc coated externally with inside mortar lining (with finishing as per class 13/IS 9523/2000) ( ex-works) Excluding Transportation and all Taxes.		
I	DI double socket branch flange Tee		
	Up to 500 x 500 mm dia.	Kg	115.64
	Above 500 x 500 mm dia.	Kg	128.64
II	DI All Socket Tees		
	Up to 300 x 300 mm dia.	Kg	115.64
	Above 300 x 300 mm dia.	Kg	128.64
III	DI Double socket Tapers (Reducer)		
	Up to 500 x 450 mm dia.	Kg	115.64
	Above 500 x 450 mm dia.	Kg	128.64
IV	DI Flanged Socket		
	Up to 500 mm dia.	Kg	115.64
	Above 500 mm dia.	Kg	128.64
V	DI Flanged Spigot		
	Up to 500 mm dia.	Kg	115.64
	Above 500 mm dia.	Kg	128.64
VI	DI Double Socket Duck Foot Bend		
	Up to 300mm dia.	Kg	115.64
	Above 300mm dia.	Kg	128.64
VII	DI Double Flange Duck/Foot bend		
	Up to 300 mm dia.	Kg	115.64
	Above 300 mm dia.	Kg	128.64
VIII	DI All socket Cross.		
	Up to 300 x 300 mm dia.	Kg	115.64
	Above 300 x 300 mm dia.	Kg	128.64
IX	DI All Flange Tee		
	Up to 500 x 500 mm dia.	Kg	115.64
	Above 500 x 500 mm dia.	Kg	128.64
X	DI All Flange Cross		
	Up to 300 x 300 mm dia.	Kg	115.64
	Above 300 x 300 mm dia.	Kg	128.64

XI	DI Double Flange Reducer		
	Up to 500 x 450 mm dia.	Kg	115.64
	Above 500 x 450 mm dia.	Kg	128.64
XII	Blank Flange		
	Up to 500 mm dia.	Kg	115.64
	Above 500 mm dia.	Kg	128.64
XIII	Mechanical Joints		
	Up to 300 mm dia.	Kg	115.64
	Above 300 mm dia.	Kg	128.64
XIV	DI Double Socket Bends		
	Up to 500mm dia.	Kg	115.64
	Above 500 mm dia.	Kg	128.64
XV	DI Double Flanged Bends		
	Up to 500mm dia.	Kg	115.64
	Above 500 mm dia.	Kg	128.64

**26. S o R FOR RUBBER GASKETS SUITABLE FOR C.I/ D.I. S/S PIPES FOR THE  
YEAR 2018-19**

Sl. No.	Description	Unit	Rate
1	2	3	4
1	Manufacture as per BIS: 12820/89 with S.B.R. Quality Rubber confirming to BIS: 5382/85, supply and delivery of Rubber Gaskets suitable for C.I/ D.I S/S pipes anywhere in A.P. F.O.R. Destination departmental stores including cost of material, loading, incidental handling with companies standard packing, transportation, unloading & stacking but excluding all taxes.		
	80mm dia.	Each	39
	100mm dia.	Each	61
	125mm dia.	Each	73
	150mm dia.	Each	89
	200mm dia.	Each	107
	250mm dia.	Each	120
	300mm dia.	Each	183
	350mm dia.	Each	231
	400mm dia.	Each	256
	450mm dia.	Each	299
	500mm dia.	Each	416
	600mm dia.	Each	525
	700mm dia.	Each	698
	750mm dia.	Each	823
	800mm dia.	Each	987
	900mm dia.	Each	1191
	1000mm dia.	Each	1303

## 27. SoR FOR CI PIPES AND SPECIALS FOR THE YEAR 2018-19

Sl. No.	Description	Quality or sort	Rate/ Kg including packing, forwarding, Transit risk and delivery anywhere in A.P. for the year 2018-19. (Rs.)
1	Manufacture, Supply and Delivery of Cast Iron Pipes and Fittings (spls.) Conforming to IS. No. 7181/1986, 5531/1988, 3950/1979 and C.I.D Joints confirming to is No.8794/1988 at site of work anywhere in A.P. Including, loading, unloading, transportation to site of work stacking at site transit risk and package, excluding taxes and duties.	I.S. No. 7181/1986 5531/1988 3950/1979 & 8794/1988	76.63

**Foot Note:** The rate of CI pipes, CI Specials and CID Joints etc., which are to be incorporated in the SoR are based on the following raw materials cost.

**Pig Iron:** Rs.31000/- per M.T. (Excluding all taxes).

**Coke :** Rs.26,500/- per M.T. (Excluding all taxes).

The rates may be revised depending upon the increase/decrease in the cost of raw materials as per the following method. For every increase/decrease of Rs.1000/- in the cost of raw materials or part there of proportionately.

**In respect of Pig Iron:** The increase/decrease in cost of CI Specials per Kg is 3.43%.

**In respect of coke:** The increase/decrease in cost of CI Specials per Kg is 0.67%.

The above price is at site of work.

**Note-1:** The above formula for calculation of revised cost to be used for preparation of Estimates only.

**28. S o R FOR WATER HAMMER CONTROL DEVICES FOR THE YEAR 2018-19**  
**(Rate Each in Rs.)**

Sl. No.	Description	TEST PRESSURE			
		10 Kgs/cm <sup>2</sup>	15 Kgs/cm <sup>2</sup>	20 Kgs/cm <sup>2</sup>	25 Kgs/cm <sup>2</sup>
1	Manufacture, Supply and delivery of Air Cushion valves / Quick Released damped Air Valves (QRDA) as per AWWA, Ex-factory excluding transportation and all taxes.				
	DIA. IN MM	Rate/Each	Rate/Each	Rate/Each	Rate/Each
	100	70689	81294	89422	98361
	150	107425	123539	135892	149481
	200	114661	131858	145046	159550
2	Conveyance of valves and accessories including loading at factory and unloading, stacking at site of work.	5% on basic cost of valves			

**29. S o R FOR VALVES CONFORMING TO IS for normal usage 2018-19.**

Sl. No.	Description		
1	Supply, Delivery of D.I double flanged Sluice Valves conforming to IS- 14846 (with up to date amendments, if any) including gear arrangements for the following dia. as per test pressure having Body, Bonnet, Dome, Stool cover, Wedge, Stuffing box, Gland, Thrust plate, Cap/Hand wheel with D.I; Stem, Body seat ring, Wedge facing ring, Bushes, Bolts, Nuts, Pinion and Pinion shaft with Stainless steel (IS 6603) ; Wedge nut, Shoe, Channel with Leaded Tin Bronze ( IS 318 ); Gasket with Neoprene Rubber; Gland packing with Rubber; Gear, Gear housing with Cast Steel excluding all taxes and transportation, etc. complete ISI marked.		
		PN 1.0 (MPa)	PN 1.6 (MPa)
	DIA. IN MM	Rate/Each	
	450	168080	210100
	500	210980	263725
	600	270380	337975
	700	520080	375100
	800	674080	650100
	900	875380	705100
	1000	1425380	842600
	1100	1645380	960850
	1200	1865380	1094225
2	Supply, Delivery of D.I double flanged short/Long body or Wafer Type pattern Butterfly Valves for the following dia. conforming to IS 13095 (with up to date amendments, if any) manually operated having Body, Disc with D.I; Shaft, Seating ring, internal fastenings with Stainless steel (IS: 6603); External bolting with Carbon steel; Seat with Nitrite or EPDM rubber; excluding transportation and all taxes, complete.		
	DIA. IN MM	PN 2.5 (MPa) (Rate/Each)	
	50	14080	
	100	16280	
	150	23980	
	200	43780	
	250	49280	
	300	56980	
	350	69080	
	400	100980	
	450	132880	
	500	190080	
	550	210980	
	600	234080	

	650	270380	
	700	328680	
	750	344080	
	800	369380	
	850	388080	
	900	438680	
	1000	564080	
	1100	674080	
	1200	894080	
3	Supply, Delivery of D.I Double Flanged Swing Check type Reflux valves (Non Return Valves) of following dia. conforming to IS- 5312 (Pts-1&2) (with amendments up to date, if any) having Body, Cover, Door, Bearing holder with D.I; Hinge pin, Door pin, Door suspension pin with Stainless Steel (IS 6603); Body seat ring , Door face ring, Bearing bushes, Plugs for hinge pin with Leaded Tin Bronze ( IS 318 ); Bolts, Nuts with Carbon steel; Gaskets with Rubber; Hinges with Cast steel; excluding transportation and all taxes complete.		
		PN 1.0 (MPa)	PN 1.6 (MPa)
	DIA. IN MM	Rate/Each	
	50	10780	13475
	100	15180	18975
	150	21780	27225
	200	29480	36850
	250	40480	50600
	300	62480	78100
	350	74580	93225
	400	89980	112475
	450	116380	145475
	500	192280	240350
	550	212080	265100
	600	256080	320100
4	Conveyance of valves and accessories including loading at factory and unloading, stacking at site of work.	5% on basic cost of valves	

**30. S o R FOR VALVES FOR HEAVY USUAGE in WTPS, STPS, PUMP HOUSES,  
PUMPING MAINS & ELSRS 2018-19.**

Sl. No.	Description	TEST PRESSURE		
1	Supply and delivery of "Resilient Seated Soft Sealing" Gate Valves (Sluice Valves) with Body and Bonnet of Ductile Iron GGG-40/SG-400/15 or GGG-50/SG-500/7 or Equivalent as per IS1865, IS:3896-2 and Wedge fully Rubber Lined with food grade quality grade W270 grade EPDM, Replaceable Spindle Nut without gland packing with 3-O ring protection system on the Shaft and Seals of NBR. The Valves should be Vacuum tight and 100% leak proof with face to face dimensions as BS:5163 Type A/IS:14846. All the valves should be with fusion bonded Electrostatic Powder coating both inside and outside (Min 250 Microns)-RAL 5005 with Pocket Less Straight through body Passage conforming to Design standards of DIN-3202F4/BS:5163 Type A Flange drilling as per IS - 1538 excluding all taxes, duties and transportation.			
	DIA. IN MM	PN 1.0 (MPa)	PN 1.6 (MPa)	PN 2.5 (MPa)
	A) Without By-Pass			
	50	7669	7669	14403
	80	9922	9922	17758
	100	11880	12957	20134
	150	18480	20401	33584
	200	23980	29975	56644
	250	30580	38225	84135
	300	56980	70965	136471
	350	78980	98725	399358
	400	100980	126225	406201
2	Supply & Delivery of Tamper Proof DI Flanged Single Chamber Air Release Valves with body & cover made of Ductile Iron Grade GGG-40/SG-400/15 or GGG-50/SG-500/7 or Equivalent as per IS1865, IS:3896-2 with Food Grade Epoxy Powder Coating(EP-P) (Min:250 Micron) inside and Outside of Color Blue RAL 5005. All internal parts such as Float, shell, Cove Bolts etc. made of Austenitic alloy steel of SS AISI 304/316 and DN 50 float of and other components with ABS/PTFE/EPDM/NBR and generally conforming to DIN/BIS/AWWA standards (or) combination Flange drilling as per IS - 1538 and exclusive of all taxes and transportation.			
	DIA. IN MM	PN 1.0 (MPa)	PN 1.6 (MPa)	PN 2.5 (MPa)
	25	4180	5225	
	40	7480	9350	53890
	50	10780	13475	45806
	80	18480	23100	47492
	100	23980	29975	63764
	150	45980	57475	77145
	200	66538	66538	85984
	300	108680	119790	

3	Manufacture, Supply and delivery of DI D/F Tilting disc Swing Check Valves Slanted seated with maximum swing of 59 degree with metallic, corrosion proof and wear resistant seat faces, Body and Disc of ductile cast iron GGG-40/SG-400/15 or GGG-50/SG-500/7 or Equivalent as per IS1865, IS:3896-2 Shafts of stainless steel, shaft bearing of zinc free bronze and Integral body seat face & disc face with nickel-chromium overlay welding and micro finished. All the inside and outside of the body is to be coated with double coating of food grade epoxy liquid lacquer (EP-F) with minimum thickness of 150 microns, color: RAL 5005 Blue face to face dimensions according to EN 558-1/14/DIN 3202-F4, Flange dimensions according to EN1092-2/IS 1538				
	DIA. IN MM	PN 1.0 (MPa)	PN 1.6 (MPa)	PN 2.5 (MPa)	
	a) Without By-Pass				
	80	11880	14850	23760	
	100	16280	20350	32560	
	150	21780	27225	43560	
	200	27280	34100	54560	
	250	39380	49225	78760	
	300	56980	71225	113960	
	b) With By-Pass				
	350	67980	84975	135960	
	400	104280	130350	208560	
	450	149380	186725	298760	
	500	206580	258225	413160	
	550	303380	377520	606760	
	600	369380	461725	738760	
	650	438680	548350	877360	
	700	548680	685850	1097360	
	750	850850	935935		
	800	1100000	1210000		
4	Manufacture, Supply and delivery of DI D/F Butterfly Valves, Body and disc of Ductile Iron of grade GGG-40/SG-400/15 or GGG-50/SG-500/7 or Equivalent as per IS1865, IS:3896-2 Double eccentrically designed Disc., with renewable soft seal on the disc and Integral Body seat face of nickel-chromium overlay welding (Fusion Bonded) micro finished, 100 % leak tight in both directions, Medium free bearings and with minimum thickness of 250 microns Fusion bonded food grade epoxy coating and 1200mm dia. and above food grade liquid Epoxy coating of minimum 150 microns applied on both body and disc inside and outside. Face to face dimensions as per EN558-1/IS 13095 body or IS: 13095 long body design standard as per EN 593/IS 5163 Flange drilling as per EN 1092-2/ IS 1538 the Valve should be suitable for buried application.				
	DIA. IN MM	PN 1.0 (MPa)	PN 1.6 (MPa)	PN 2.5 (MPa)	PN 4.0 (MPa)
	150	19580	24475	39160	146478
	200	27280	34100	54560	178108
	250	38280	47850	76560	249581

	300	47080	58850	94160	262068
	350	65780	82225	131560	285236
	400	87780	109725	175560	436082
	450	98780	123475	197560	-
	500	127380	159225	254760	538878
	600	168080	210100	336160	590468
	700	218680	273350	437360	
	800	279180	348975	558360	
	900	328680	410850	657360	
	1000	454080	567600	908160	
	1100	674080	842600	1348160	
	1200	784080	980100	1568160	
	1400	1098680	1373350	2197360	
	1600	1367080	1708850	2734160	
	1800	2116180	2645225	4232360	
	2000	2547380	3184225	5094760	
	2200	2838880	3548600	5677760	

NOTE:-1) All the prices are ex-go down /ex-factory. Packaging and Transportation extra at 5% on basic cost. The grade of DI & conformation to specifications shall be certified by a third party Quality Control Agency approved by indenting authority at the cost of supplier.

**31. S o R FOR SFRC MAN-HOLE FRAME WITH COVERS FOR THE YEAR 2018-19.**

Sl. No.	Description	Unit	Rate
I	Manufacture as per BIS:12592 (Part 1&2) Supply & Delivery of manhole covers and frames with ISI marking anywhere in A.P., F.O.R. destination including, loading, un-loading & stacking at site but excluding all taxes.		
a)	M.D. -10 with 500mm dia.clear opening	Each	1543.00
b)	H.D.-20 with 500mm dia.clear opening	Each	1989.00
C)	H.D.-10with 560mmdia. clear opening(New item)	Each	1560.00
d)	H.D.-20 with 560mm dia.clear opening	Each	2133.00
e)	H.D.-35 with 560mm dia.clear opening.	Each	2286.00
f)	24x24 MD 10	Each	1682.00
g)	24x18 MD 10	Each	1548.00
h)	24x24 HD 20	Each	1890.00
i)	24x18 HD 20	Each	1927.00
j)	Dividers 0.9 Mtr.	Each	3957.00
II	Manufacture as per company's standard specification supply and delivery of encapsulated plastic steps for man holes anywhere in A.P. including cost of materials packing as per company's standards, loading, transportation, unloading and stacking at site of work etc, complete but excluding all taxes.	Each	166.00

**32. S o R FOR CI and M.S. DISMANTLING JOINTS FOR THE YEAR 2018-19**

Sl.No.	Description	Unit	Rate
1	Manufacture, Supply and Delivery of C.I Dismantling Joints with both side flange end suitable for installation in between flange end pipes. These rates are excluding all taxes.		
	Nominal Dia. In MM		
	50	Each	<b>4826</b>
	80	Each	<b>5282</b>
	100	Each	<b>6900</b>
	125	Each	<b>8800</b>
	150	Each	<b>9777</b>
	200	Each	<b>13864</b>
	250	Each	<b>16504</b>
	300	Each	<b>26409</b>
2	Manufacture, Supply and Delivery of M.S. Dismantling Joints with both side flange end suitable for installation in between flange end pipes. Thickness as per IS: 7322. These rates are excluding all taxes.		
	Nominal Dia. In MM		
	350	Each	<b>59,785</b>
	400	Each	<b>68,507</b>
	450	Each	<b>74,325</b>
	500	Each	<b>88,959</b>
	600	Each	<b>1,03,515</b>
	700	Each	<b>1,15,161</b>
	750	Each	<b>1,18,075</b>
	800	Each	<b>1,41,365</b>
	900	Each	<b>1,47,482</b>
	1000	Each	<b>1,76,660</b>
	1100	Each	<b>1,91,245</b>
	1200	Each	<b>2,20,420</b>
	1300	Each	<b>2,49,592</b>
	1400	Each	<b>2,79,334</b>
	1600	Each	<b>3,08,566</b>
	1800	Each	<b>3,65,405</b>
	2000	Each	<b>4,54,730</b>
3	Conveyance of joints and accessories including loading at factory and unloading, stacking at site of work.	5% on basic cost	

### 33. OTHER ITEMS FOR THE YEAR 2018-19

Sl. No.	Description	Unit	Rate
1	2	3	4
1	SUPPLY AND DELIVERY OF PIG LEAD 99.99 % PURE INCLUDING TAXES AND CONVEYANCE ETC., COMPLETE.	Per Kg	<b>287</b>
2	SUPPLY AND DELIVERY OF LEAD WOOL BEST QUALITY INCLUDING TAXES AND CONVEYANCE ETC., COMPLETE.	Per Kg	<b>168</b>
3	SUPPLY AND DELIVERY OF SPUN YARN OF BEST QUALITY INCLUDING TAXES AND CONVEYANCE ETC., COMPLETE.	Per Kg	<b>116</b>
4	SUPPLY AND DELIVERY OF RUBBER PACKING INCLUDING TAXES AND CONVEYANCE ETC., COMPLETE.		
	a) 3 mm thick	Per Kg	<b>93</b>
	b) 6 mm thick	Per Kg	<b>93</b>
5	SUPPLY AND DELIVERY OF BOLTS AND NUTS WITH DOUBLE WASHERS INCLUDING TAXES AND CONVEYANCE ETC., COMPLETE. (1/2" TO 1")	Per Kg	<b>111</b>

**34. S o R FOR TRENCH LESS TECHNOLOGY WITH PIPE JACKING METHOD FOR  
THE YEAR 2018-19**

Sl. No.	Description	Unit	Rate
1	Railway crossing/Road crossing/Canal crossing by adopting trenchless technology tunneling work through specialized pipe jacking method by erecting the equipment to true to the alignment and gradient, by hydraulic pipe jacking technique complete including tunneling, excavation in all types of soils including hard rock and construction of RCC chambers suitable to casing pipe pits, and conveyance charges of machinery and other required materials but excluding cost of encasing pipe, in co-ordination with the concerned authorities as per approved drawings and directed by the Engineer-in –Charge.		
	800 mm dia.	Rmt	<b>26000</b>
	900 mm dia.	Rmt	<b>27300</b>
	1000 mm dia.	Rmt	<b>28600</b>
	1100 mm dia.	Rmt	<b>29900</b>
	1200 mm dia.	Rmt	<b>31200</b>
	1300 mm dia.	Rmt	<b>32500</b>
	1400mm dia.	Rmt	<b>35100</b>
	1500 mm dia.	Rmt	<b>39000</b>

### 35. OTHER CONSUMABLE ITEMS FOR THE YEAR 2018-19

S. No.	Description	Unit	Proposed Rates for 2018-19				
			Visakha patnam Circle	Rajamah endravaram Circle	Guntur Circle	Nellore Circle	Ananthapuramu Circle
1	2	3	4	5	6	7	8
1	Supply, delivery and staking of Alumino-Ferric(ALUM) as per I.S 299:2012 including cost of material, conveyance , stacking at the location specified by the Department and all taxes, duties and levies etc., complete.	Per Kg	11.00	9.00	9.50	9.75	9.50
2	Supply, delivery and staking of Copper Sulphate including cost of material, conveyance , stacking at the location specified by the Department and all taxes, duties and levies etc., complete.	Per Kg	250.00	244.00	260.00	260.00	260.00
3	Supply, delivery and staking of Chlorine Gas as I.S 646:1986 in cylinders including cost of material, conveyance , stacking at the location specified by the Department and all taxes, duties and levies etc., complete.	Per Kg	19.50	17.00	25.20	25.20	25.20
4	Supply, delivery and staking of Sodium Hypochlorite Solution as per I.S 11673 : 1992 (Chlorine liquid) including cost of material, conveyance , stacking at the location specified by the Department and all taxes, duties and levies etc., complete.	Per Kg	14.00	15.50	18.00	18.00	18.00
5	Supply, delivery and staking of Bleaching powder as per I.S 1065:1989 including cost of material, conveyance , stacking at the location specified by the Department and all taxes, duties and levies etc., complete.	Per Kg	25.00	28.00	26.00	26.00	26.00

**36.S o R FORHOUSE SERVICE CONNECTIONSFOR THE YEAR 2018-19**

<b>Sl. No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate</b>
1	<b><u>House service connections (Compression Fittings)</u></b> Supply and Fixing of compression fittings shall comply with ISO 17885 2015, PN-16 rating and manufactured from virgin resin of PE-80 having blue color. Raw material must be WRAS approved as per BS 6920 for effect on water quality intended for human consumption. Compression fittings should have moulded in SS 304 threaded insert outlet with thread dimension confirming to IS 554/ISO 7. The cost shall include testing of all materials, labour all taxes(central and state), inspection charges, transportation up to site, transit insurance, loading, unloading, stacking and fixing etc, complete as specified and directed by the departmental Engineer in charge.		
	Compression male/female threaded adaptor with SS insert D20 mm X 1/2 "	Each	<b>165</b>
	Compression male/female threaded adaptor with SS insert D25 mm X 3/4 "	Each	<b>203</b>
	Compression male/female threaded adaptor with SS insert D32 mm X 1 "	Each	<b>306</b>
	Compression male/female threaded elbow with SS insert D20 mm X 1/2 "	Each	<b>176</b>
	Compression male/female threaded elbow with SS insert D25 mm X 3/4 "	Each	<b>226</b>
	Compression male/female threaded elbow with SS insert D32 mm X 1 "	Each	<b>336</b>
	Double Compression elbow 20 mm 64	Each	<b>72</b>
	Double Compression elbow 25 mm 79	Each	<b>89</b>
	Double Compression elbow 32 mm	Each	<b>126</b>
2	<b><u>House service connections (Composite strap saddle for DI/CI pipes)</u></b> Supply and fixing of composite strap saddle shall be of wrap around design pN-16 rating. Body shall be manufactured using virgin compounded PE 80/PE 100 polymer with stainless steel 304 grade stirrup plate mounted with PE straps (Engineering Plastic) with Nut bolt joint, sealing between the saddle and mains shall be obtained by using an elastomer seal (Underneath projection for self interlocking). The cost shall include testing of all materials, labour all taxes (central and state), inspection charges, transportation up to site, transit insurance, loading, unloading, stacking and fixing etc, complete as specified and directed by the departmental Engineer in charge.		
	(Main pipe outer diameter in mm & tapping size in inches)		
	100 x 1/2"	Each	<b>685</b>
	100 x 3/4"	Each	<b>709</b>
	100 x 1"	Each	<b>860</b>
	150 x 1/2"	Each	<b>979</b>
	150 x 3/4"	Each	<b>1018</b>
	150 x 1"	Each	<b>1162</b>
	200 x 1/2"	Each	<b>1034</b>

	200 x 3/4"	Each	<b>1139</b>
	200 x 1"	Each	<b>1185</b>
3	<b><u>House service connections (Regulating Brass ferrule)</u></b> The cost shall include testing of all materials, labour all taxes (central and state), inspection charges, transportation up to site, transit insurance, loading, unloading, stacking and fixing etc, complete as specified and directed by the departmental Engineer in charge.		
	1/2"	Each	<b>182</b>
	3/4"	Each	<b>300</b>
	1"	Each	<b>523</b>
4	<b><u>House service connections (PP Saddle)</u></b>		
	(Main pipe outer diameter in mm & tapping size in inches)		
	63x1/2"	Each	<b>800</b>
	63x3/4"	Each	<b>800</b>
	63x1"	Each	<b>800</b>
	75x1/2"	Each	<b>800</b>
	75x3/4"	Each	<b>800</b>
	75x1"	Each	<b>800</b>
	90x1/2"	Each	<b>800</b>
	90x3/4"	Each	<b>800</b>
	90x1"	Each	<b>800</b>
	110x1/2"	Each	<b>800</b>
	110x3/4"	Each	<b>800</b>
	110x1"	Each	<b>800</b>
	125x1/2"	Each	<b>800</b>
	125x3/4"	Each	<b>800</b>
	125x1"	Each	<b>800</b>
	140x1/2"	Each	<b>800</b>
	140x3/4"	Each	<b>800</b>
	140x1"	Each	<b>800</b>
	160x1/2"	Each	<b>800</b>
	160x3/4"	Each	<b>800</b>
	160x1"	Each	<b>800</b>
	180x1/2"	Each	<b>954</b>
	180x3/4"	Each	<b>954</b>
	180x1"	Each	<b>954</b>
	200x1/2"	Each	<b>954</b>
	200x3/4"	Each	<b>954</b>
	200x1"	Each	<b>954</b>

**37. SoR FOR ARC WELDED M.S PIPEFOR THE YEAR 2018-19**

**Manufacture, supply and delivery of submerged ARC welded M.S Pipe having bevelled ends from plate or coil conforming to IS-3589 and/or IS-5504 with its latest revision / amendment with inside 406 micron thick food grade epoxy coating and outside 3LPE coating conforming to DIN 30670 / Polyolefin Tape coating conforming to AWWA C214 for the specified thickness & inner diameter of pipe, external field joint coating with polyolefin backing and internal field joint coating with chemically cured 2 part epoxy based solvent free liquid coating material for Drinking Water NSF approved etc., complete including all labour, materials and ROU/ROW as per specification and to the satisfaction of Engineer-in-charge excluding transportation and GST.**

Inner Diameter (mm)	Outer Diameter (mm)	Thickness (mm)	MS Pipe Rate with Internal 406 micron thick food grade epoxy coating and 3LPE coating conforming to DIN 30670	MS Pipe Rate with Internal 406 micron thick food grade epoxy coating and Polyolefin Tape coating conforming to AWWA C214
500	510	5	5723	5634
500	511.20	5.60	6165	6084
500	512.60	6.30	6681	6600
500	522	11	10186	10104
600	611.60	5.80	7558	7462
600	612.60	6.30	7998	7902
600	625	12.50	13522	13424
700	712.60	6.30	9285	9204
700	714.20	7.10	10101	10024
700	728.40	14.20	17422	17390
800	814.20	7.10	11526	11440
800	816	8	12573	12494
800	836	18	24369	24365
900	916	8	14125	14040
900	917.60	8.80	15172	15093
900	920	10	16745	16677
900	935	17.50	26672	26669
1000	1017.60	8.8	16837	16752
1000	1020	10	18581	18508
1000	1040	20	33269	33296
1050	1067.60	8.80	17670	17583
1050	1070	10	19499	19423
1050	1072	11	21026	20961
1100	1117.6	8.8	18587	18412
1100	1120	10	20515	20339
1100	1122	11	22124	21947

1200	1220	10	22362	22170
1200	1222	11	24114	23922
1200	1225	12.50	26748	26556
1300	1325	12.50	28952	28744
1300	1328.40	14.20	32189	31980
1400	1425	12.50	31155	30931
1400	1428.40	14.20	34634	34410
1500	1528.40	14.20	37082	36841
1500	1532	16	41031	40792
1600	1628.40	14.20	39528	39274
1600	1632	16	43733	43480
1700	1728.40	14.20	41973	41705
1700	1732	16	46435	46169
1700	1735	17.50	50160	49898
1800	1828.40	14.20	44419	44137
1800	1832	16	49137	48859
1800	1835	17.50	53077	52801
1900	1932	16	51839	51548
1900	1935	17.50	55993	55704
1900	1940	20	62930	62646
2000	2032	16	54542	54236
2000	2035	17.50	58909	58608
2000	2040	20	66203	65907
2100	2135	16	61826	61512
2100	2140	17.50	69476	69169
2100	2144.40	20	76224	75921
2200	2235	17.50	64742	64415
2200	2240	20	72750	72429
2200	2244.40	22.20	79811	79498
2300	2340	20	76023	75691
2300	2344.40	22.20	83399	83074
2300	2350	25	92806	92489
2400	2440	20	79296	78951
2400	2444.40	22.20	86986	86648
2400	2450	25	96793	96465
2500	2540	20	82569	82213
2500	2544.40	22.20	90573	90224
2500	2550	25	100780	100441

**38. SoR FOR HDPE ELECTRICAL PIPE CONDUITS FOR THE YEAR 2018-19**

**Supply of the HDPE Electrical pipe conduits with permanent Lubricant inner layer with ribs , dimensional ratio of 13.5, deflection not greater than 5% when exposed to the normal operating temperature 90 degrees centigrade under the overburden soil pressure and other physical properties confirming to ASTM F 2160 and / or NEMA TC 7 ( The expected service life of HDPE Pipe conduit and accessories shall not be less than 50 years)including transportation and excluding GST**

<b>Diameter</b>	<b>Rate per Rmt</b>
160 mm	1221
200 mm	1981
225mm	2902
7 way ( Multi duct for ICT)	955

GOVERNMENT OF ANDHRA PRADESH  
ABSTRACT

Mines & Minerals – Amendments to Rule 10 of the Andhra Pradesh Minor Mineral Concession Rules, 1966 – Orders – Issued.

**INDUSTRIES AND COMMERCE (M.I) DEPARTMENT**

**G.O.Ms.No:100**

**Dated:31.10.2015**  
**Read the following:**

1. G.O.Ms.No. 198, Ind. & Com. (M.I) Dept., dt. 13.08.2009.
2. Director of Mines & Geology, Letter No. 7598/P-MR/2014, dated. 09.10.2015.

**ORDER:**

The following notification will be published in the Extra-Ordinary issue of the Andhra Pradesh Gazette dated. 01.11.2015.

**NOTIFICATION**

In exercise of the powers conferred by sub-section (1) of section 15 of the Mines & Minerals (Development and Regulation) Act, 1957 (Central Act 67 of 1957), the Governor of Andhra Pradesh hereby makes the following amendments to the Andhra Pradesh Minor Mineral Concession Rules, 1966 issued in G.O.Ms.No. 1172, Industries and Commerce (M.I) Department, dated. 04.09.1967 and subsequently amended from time to time.

**AMENDMENTS**

In the said rules, Under Rule 10 for Schedules I and II, the following shall be substituted, namely;

**"SCHEDULE-I"**  
**RATES OF SEIGNIORAGE FEE**

Sl. No.	Name of the Minor Mineral	Unit	Rate of Seigniorage Fee (in Rupees)
1	Building Stone	M3/MT	Rs.75 / 50 (Rupees Seventy five / Fifty)
2	Rough Stone/Boulders		
2a	Manufactured Sand		
3	Road Metal & Ballast		
3a	Dimensional Stone used for Kerbs & Cubes	MT	Rs. 110 (Rupees one hundred and ten)
4	Lime kankar/Limestone	MT	Rs. 80 (Rupees Eighty)
5	Lime shell	MT	Rs. 100 (Rupees one hundred)
6	Marble	M3/MT	Rs. 250 / 100 (Rupees Two hundred fifty / one hundred)
7	Mosaic Chips	MT	Rs. 50 (Rupees fifty)
8	Morrums /Gravel & Ord. Earth	M3/MT	Rs. 30/20 (Rupees Thirty / Twenty)

9	Ordinary Sand	M3	Rs. 50 (Rupees fifty)
10	Shingle	M3/MT	Rs. 75/50 (Rupees Seventy five / Fifty)
11	Chalacedony Pebbles	M3/MT	Rs. 75/50 (Rupees Seventy five / Fifty)
12	Fullers Earth/Bentonite	MT	Rs. 150 (Rupees one hundred and fifty)
13	Shale/Slate	MT	Rs. 150 (Rupees one hundred and fifty)
14	Rehmati	M3/MT	Rs. 30/20 (Rupees Thirty / Twenty)
15	Limestone Slabs:		
(i)	Colour	Sq.Mt/MT	Rs. 8/- (Rupees Eight) per Sq.Mt or Rs. 100/- (Rupees Hundred) per MT whichever is higher.
(ii)	White	Sq.Mt/MT	
(iii)	Black	Sq.Mt/MT	
16	Ordinary Clay, Silt and Brick Earth used in the Manufacture of Bricks including Mangalore Tiles	-	Rs. 6000/- (Rupees Six thousand) per kiln per annum for Bricks and Tiles.

17. Granite Useful for Cutting:

	Item	Unit	Super Gang Saw above 300cmX 180cm size.	Mini Gang Saw above 270cmX150cm size.	270cmX 150cm and below size.	Below 75cm size.
1	Black Granite Galaxy variety	M3	Rs. 4000/- (Rupees four thousand)	Rs. 3200/- (Rupees Three thousand two hundred)	Rs. 3000/- (Rupees Three thousand)	Rs. 1350/- (Rupees one thousand three hundred fifty)
2	Black Granite other than Galaxy variety	M3	Rs. 3000/- (Rupees Three thousand)	Rs. 2500/- (Rupees Two thousand five hundred)	Rs. 2350/- (Rupees Two thousand three hundred fifty)	Rs. 1000/- (Rupees Thousand)
3	Colour Granite Srikakulam Blue, Moon white, River white of Visakhapatnam Dist., Leptinites of Coastal Dists., Black pearl of Prakasam and Guntur Dists.,	M3	Rs. 3000/- (Rupees Three thousand)	Rs. 2500/- (Rupees Two thousand five hundred)	Rs. 2350/- (Rupees Two thousand three hundred fifty)	Rs. 1000/- (Rupees Thousand)

4	Colour Granite of other varieties	M3	Rs. 2350/- (Rupees Two thousand three hundred fifty)	Rs. 2150/- (Rupees Two thousand one hundred fifty)	Rs. 2000/- (Rupees Two thousand)	Rs. 1000/- (Rupees Thousand)
---	-----------------------------------	----	---	---	-------------------------------------	---------------------------------

**SCHEDULE-II  
Rate of Dead Rent**

Sl. No.	Name of the Minor Mineral	Rate of Dead Rent per hectare per Annum (in Rupees)
1	Black Granite	Rs.1,00,000/- (Rupees one lakh)
2	Colour Granite	Rs.1,00,000/- (Rupees one lakh)
3	Limestone other than classified as major minerals used for lime burning for Building construction purposes, marble, boulders, building stone including stone used for Road Metal, Ballast concrete & other construction purpose, Shale, Slate & Phyllites, Mosaic Chips, Fullers Earth/Bentonite & Dimensional Stone used for Cubes and Kerbs.	Rs.50,000/- (Rupees Fifty thousand)
4	Gravel, Morrum, Ordinary Earth, Shingle, Limestone Slabs used for flooring purpose Limekankar, Chalcedony Pebbles used in the building purpose Lime-shell for burning used for building purpose and Rehmati.	Rs.40,000/- (Rupees Forty thousand)

2. This order shall come into force w.e.f. 01.11.2015.

3. This order issued with the concurrence of Finance Department vide their No. 4519/PFS/2015, Dt.12.10.2015.

(BY ORDER AND IN THE NAME OF THE GOVERNOR OF ANDHRA PRADESH)

M. GIRIJA SHANKAR,  
SECRETARY TO GOVERNMENT (MINES & FP) (FAC)

To

The Commissioner of Printing, Stationary & Stores Purchase (Ptg. Wing), Hyderabad. (He is requested to publish the above Notification in the Extra-ordinary issue of Andhra Pradesh, and arrange to send 1000 copies of the same to Government in Industries & Commerce (M.I) Department).

The Director of Mines & Geology, Andhra Pradesh, Hyderabad.

The Chief Executive Officer, SERP, Hyderabad.

All the Joint Director / Deputy Director / Asst. Director of Mines & Geology through the Director of Mines & Geology, Hyderabad.

Copy to:

The Secretary to Govt, Ministry of Mines, GoI.

The Law (A) Department.

The Finance Department.

The P.S to Hon'ble Minister for Women Empowerment, Child Welfare and Disabled & Senior Citizens Welfare and Mines & Geology.

The Secretary to Govt., (Mines), CM's office.

SF/SC

//FORWARDED: BY ORDER//

SECTION OFFICER