



Government of Andhra Pradesh

COMMON SCHEDULE OF RATES
AS PER
A.P. REVISED STANDARD
DATA FOR THE YEAR 2016-17
(Effective from 1st June, 2016)

BOARD OF CHIEF ENGINEERS

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Office of the Engineer-in-Chief(I.W)
Water Resources Dept., Errummanzil, Hyderabad

Procs.No.ENC/IW/P&M/EE.1/DEE-2/AEE/ SoR 2016-17/Vol.2 dt:26.07.2016

- Sub: Schedule of Rates for the year 2016-17 (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)CE(PH) Lr.No. 146/T4/SoR/2016-17 dt:25.07.2016.
 - 3)ENC(R&B) Lr.No.SoR-II/ENC(R)/DCE(R)/EE(TEC)/DEE7/AEE2/2016 dt:26.07.2016.
 - 4)Industrial Consumer Price Index points obtained from Commissioner,Labour Department for the months of April,2016 to September,2016
 - 5)Minutes of BoCEs meeting for Schedule of Rates held on 23.07.2016.

The Government have approved A.P.Revised Standard Data vide ref 1st cited. The Schedule of Rates as per A.P.Revised Standard Data for the year 2016-17 is approved based on the following:

The ENC(R&B) vide ref. 3rd cited has furnished the draft rates for Roads & Bridge items for the year 2016-17.

The Chief Engineer, Public Health Department has furnished draft rates for Public Health works items and Public Health Materials vide ref 2nd cited.

The Engineer-in-Chief (Buildings), R&B Department 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 4th cited for finalizing the Labour rates for SoR 2016-17.

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 2016-17 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

meeting held on 16.07.2016 at 3.00 P.M. in the Godavari Conference hall, Jalasoudha Building, Hyderabad.

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.1st 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.

The attention to the following points is invited in respect of Cement Rates in the A.P. SoR 2016-17.

Important note on Cement(OPC) Rates:

The Cement rates are being finalized district-wise from the month of June,2015 onwards. However, for the sake of fixing the Cement rate in the current SoR-2016-17, the average of Cement Rates of all the 13 Districts finalized in the month of May-2016 is taken. From June-2016 onwards, district-wise rates may be adopted as per prevalent Government instructions. *The Field Engineers are directed to substitute District-wise cement rates in Basic data sheet of the soft copy for arriving estimates for works in respective districts.*

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 2016-17. Unauthorized printing & selling of the SoR is strictly prohibited.

Any discrepancies found (or) corrections required in SoR 2016-17 may be brought to the notice of undersigned for issuing corrections.

The revised rates will come into force from 1st June of 2016.

The receipt of the proceedings may be acknowledged.

Encl: SoR 2016-17 containing Part-I(Water Resources Dept. works),Part-II(Roads & Bridge works) and Part-IV (Public Health Items)

Sd/-M.V.Ravi Kumar,dt:26.07.2016,
Engineer-in-Chief(I.W.)
Chairman, BOCE(SoR)

- I) Copy communicated to the Principal Secretary to Govt.,WR Dept.,J-Block,A.P.Secretariat Buildings,Hyderabad.
- II) Copy Communicated to the following Heads of Departments along with Enclosures for information.
 - 1) Engineer-in-Chief (Admn & SR), Roads & Buildings Department
 - 2) Chief Engineer (P.H.), Public Health Department.
 - 3) Engineer-in-Chief (P.R.), Panchayath Raj Department.
 - 4) Chief Engineer (RWS) R W S, Department.
 - 5) Engineer-in-Chief (Buildings), R&B Department
 - 6) Copy of Schedule of Rates 2016-17 & 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, Dowlaishwaram and Chittoor of Water Resources Department for taking necessary action

Sd/-M.V.Ravi Kumar,dt:26.07.2016,
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) For Gates & Hoist works, the excise duty on the fabrication of work (other than materials)shall be added as per the Government Orders issued from time to time while preparing the estimate.
- 4) 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.
- 5) 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/-M.V.Ravi Kumar,dt:26.07.2016,
Engineer-in-Chief(I.W.)
Chairman, BOCE(SoR)

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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).
- 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, 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 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, Ibrahimpatnam, Vuyyuru, Jaggaiahpetta in Krishna District, Macherla, Gurajala, Challapalli in Guntur District Garividhi 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

SI No.	CATEGORY OF WORKER	S. Rate for 2016-17
1	2	3
I. SKILLED CATEGORY:		
1	Bar bender	555
2	Black smith / Tin smith / Rivetor	445
3	Blaster	510
4	Carpenter CI- I	475
5	Electrician (Licensed)	515
6	Fitter CI- I	475
7	Floor Polisher / Tile Layer	445
8	Foreman	510
9	Gauge reader	425
10	Maistry / Work Inspector with Non-technical Qualification SSLC/SSC/HSC	450
11	Mason CI- I / Brick layer CI- I	445
12	Mechanic CI- I	475
13	Operator Air compressor / DG set	445
14	Operator Batching plant	510
15	Operator Bus/Ambulance/ Lorry/ Tanker	510
16	Operator Concrete / Asphalt mixer	445
17	Operator Concrete / Asphalt paver	445
18	Operator Concrete pump / Placer/ ice plant	445
19	Operator Core drilling machine	510
20	Operator Crane/ Tower crane/ Cable way	510
21	Operator Drilling jumbo / Loco / Winch	445
22	Operator Grouting/ Guniting/ Shotcreting	445
23	Operator Jackhammer/Pneumatic tamper	445
24	Operator Pump / Ventilation fan	445
25	Operator Lathe/Drilling/Shearing machine	510
26	Operator Bending / Planing machine	445
27	Operator Road roller	445

SI No.	CATEGORY OF WORKER	S. Rate for 2016-17
1	2	3
28	Operator Shovel / Scraper / Dozer	510
29	Operator Spillway / Sluice gate	445
30	Operator Crusher / Conveyor / Mucker	445
31	Operator Tipper / Dumper / Transit mixer	510
32	Operator Concrete vibrator	445
33	Operator Vibratory plain / pad foot roller	445
34	Operator Wagon drill / Drifter	510
35	Painter CI- I	510
36	Plumber / Pipe fitter	510
37	Sarang / Khalasi	445
38	Spun pipe moulder	445
39	Stone chiseller CI- I / Stone cutter CI- I	445
40	Struct. steel Fabricator / Marker / Erector	550
41	Welder / Gas Cutter	445
42	Welder (X-ray quality)	510
II. SEMI SKILLED CATEGORY:		
1	Asphalt Sprayer / Boiler attendant	400
2	Bhisti	400
3	Boatman with boat	415
4	Carpenter CI- II / Erector shuttering	400
5	Cartman with double bullock cart	465
6	Cartman with single bullock cart	435
7	Chavali / Navagani	400
8	Crowbarman / Jumper man	400
9	Fitter CI- II	400
10	Gang man / Head / Survey mazdoor	400
11	Gardener / Trained mali	400
12	Air compressor / DG set	400
13	Helper Batching plant	400
14	Helper Blasting	400

SI No.	CATEGORY OF WORKER	S. Rate for 2016-17
1	2	3
15	Helper Bus/ Ambulance/ Lorry/ Tanker	400
16	Helper Bending/Shearing/Planing machine	400
17	Helper Carpenter	400
18	Helper Concrete / Asphalt mixer	400
19	Helper Concrete / Asphalt paver	400
20	Helper Core drilling machine	400
21	Helper Crane/ Tower crane/ Cable way	400
22	Helper Drilling jumbo / Loco / Winch	400
23	Helper Fitter / Fabrication/Electrician	400
24	Helper Grouting/ Guniting/ Shotcreting	400
25	Helper Jack hammer / Pneumatic tamper	400
26	Helper Laboratory / Instrumentation	400
27	Helper Road roller	400
28	Helper Shovel / Scraper / Dozer	400
29	Helper Crusher / Conveyor / Mucker	400
30	Helper Tipper / Dumper/ Transit mixer	400
31	Helper Vibrator	400
32	Helper Vibratory plain/ pad foot roller	400
33	Helper Wagon drill/ Drifter	400
34	Lineman Electric / Telephone	400
35	Mason CI- II / Brick layer CI-II	400
36	Mechanic CI- II	400
37	Painter CI- II	400
38	Patkari / Neeraganti / Sowdy	400
39	Stone Chiseller CI- II	400
40	Stone breaker / Hammer man	400
41	Valve man / Canal sluice operator	400
III. UN-SKILLED CATEGORY:		
1	Cement / Asphalt handling mazdoor	350
2	Civic worker	350
3	Man mazdoor	350

SI No.	CATEGORY OF WORKER	S. Rate for 2016-17
1	2	3
4	Woman mazdoor	350
5	Watchman	350
IV.	OTHER CATEGORY:	
1	Care-taker / conductor / Lift Attender	420
2	Cook / Mess man	420
3	Dhobi	420
4	Diploma Engineer / Surveyor	645
5	Diver with headgear	520
6	Graduate / Laboratory Assistant	520
7	Graduate Engineer/ Geologist	860
8	Horticulture Assistant / Photographer	425
9	ITI certificate holder / Tracer / Printer	520
10	Literate mazdoor	405
11	Stenographer / Computer Operator	565
12	Telephone / Wireless Operator	510
13	Typist / Job Typist	510
14	CAD operator with Diploma in Engineering/General degree with CAD certificate	690
15	Jeep Driver	505
16	Data Processing Operator	690

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 : 2016-17
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 all taxes, 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.

SI No.	DESCRIPTION OF MATERIAL	UNIT	S. Rate for 2016-17
1	2	3	4
1	Acetylene gas	cum	335
2	Asphalt 80/100 Grade	Kg	46
3	Binding wire	Kg	60
4	Burnt stone slab 10 cm thick	sqm	320
5	Cement 43 Gr/53 Gr Note: As per Monthly rate fixed by Sub-Committee.	tonne	5350 (Avg. Rate of 13 Dists. for 5/2016)
6	Chequered plate	Kg	63
7	Coarse aggregate 10-4.75 mm(excluding Seigniorage charges)	cum	900
8	Coarse aggregate 20-10 mm(excluding Seigniorage charges)	cum	1225
9	Coarse aggregate 40-20 mm(excluding Seigniorage charges)	cum	1175
10	Coarse aggregate 80-40 mm(excluding Seigniorage charges)	cum	650
	The aggregate rates mentioned above (from SI.No.7 to SI.No.10) are exclusive of Seigniorage charges but 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	45

SI No.	DESCRIPTION OF MATERIAL	UNIT	S. Rate for 2016-17
1	2	3	4
12	Copper sheet 16 SWG	kg	695
13	Coursed rubble stone 30 x 30 x 45 cm(excluding Seigniorage charges)	Each	23
14	Coursed rubble stone 30 x 30 x 60 cm(excluding Seigniorage charges)	Each	26
15	Curing Compound	Ltr	130
16	D – cord	Rm	8
17	Delay - noiseless trunk	Each	19
18	Detonating fuse coil	Rm	9
19	Detonating shock tube / Cord relays	Rm	40
20	Detonator delay type	Each	20
21	Detonator electric	Each	11
22	Detonator ordinary	Each	7
23	Empty cement bag	Each	5
24	Explosive ANFO	kg	48
25	Explosive ANFO high strength booster	kg	73
26	Explosive small dia (Kelvex-220 or equivalent)	kg	70
27	(a)Fine aggregate/ sand(un- screened) for Concrete & Filtering items (excluding Seigniorage charges)	cum	95
	(b)Fine aggregate/Sand(unscreened)for filling(excluding Seigniorage charges)		
28	Fine aggregate /Sand (Screened) for Mortar ,Plastering items and Sand blasting items(excluding Seigniorage charges) (Rs.70 is added towards screening Charges)	cum	165
29	Geo-textile (filter fabric) 160 gsm	sqm	110
30	Geo-textile (filter fabric) 200 gsm	sqm	130
31	Geo-textile (filter fabric) 250 gsm	sqm	150
32	G I Pipe 100 mm dia B Class	Rm	735
33	G I Pipe 15 mm dia A class	Rm	100
34	G I pipe 25 mm dia A class	Rm	160
35	G I pipe 40 mm dia B class	Rm	270

SI No.	DESCRIPTION OF MATERIAL	UNIT	S. Rate for 2016-17
1	2	3	4
36	G I pipe 50 mm dia A class	Rm	310
37	G I Pipe 80 mm dia B Class	Rm	500
38	G.I Bolts / Nuts and Washers	kg	100
39	G.I sheet (plain)	tonne	63000
40	Hariyala turfing sods	sqm	28
41	Hectometer stone one line dressed	Each	260
42	Hemp yarn	kg	72
43	Honne wood planks	cum	54000
44	Hume pipe with collar 150 mm dia	Rm	275
45	Hume pipe with collar 300 mm dia	Rm	600
46	J- Bolts 30 cm long	Each	37
47	Jungle wood planks	cum	23000
48	Khandki stone 15 to 20 cm height	Each	12
49	Khandki stone 20 to 25 cm height	Each	15
50	Khandki stone 25 to 30 cm height	Each	17
51	Kilometer stone one line dressed	Each	480
52	LDPE sheet (Geo membrane) 500 micron thick	sqm	92
53	LDPE sheet (Geo membrane) 750 micron thick	sqm	135
54	LDPE sheet (Geo membrane) 1000 micron thick	sqm	185
55	M S Bolts / Nuts / Washers	kg	80
56	Murum(including loading charges but excluding Seigniorage charges)	cum	165
57	Oxalic acid	Ltr	80
58	Oxygen gas	cum	42
59	PVC sealing strip	Rm	45
60	PVC water stopper 310 mm wide	Rm	470
61	PVC pipe of 100 mm dia	Rm	170
62	Reinforcement steel (HYSD/TMT)(Fe-415) Note: As per Monthly rate fixed by Sub-Committee	tonne	34,000(Rate for 5/2016)

SI No.	DESCRIPTION OF MATERIAL	UNIT	S. Rate for 2016-17
1	2	3	4
63	Resin bond Cement capsule	Each	50
64	Rough stone 20 x 20 x 75 cm (Including Loading charges but excluding Seigniorage Charges)	Each	23
65	Shahabad stone slab (including loading charges but excluding Seigniorage charges)	sqm	235
66	Stone chips (at dump yard/Spoil)(including loading charges but excluding Seigniorage charges)	cum	185
67	Stone chips (at quarry)(including loading charges but excluding Seigniorage charges)	cum	350
68	Structural steel angle / channel / beam / bars Note: As per Monthly rate fixed by Sub-Committee	tonne	37,500(Rate for 5/2016)
69	Structural steel plate / flats Note: As per Monthly rate fixed by Sub-Committee	tonne	37,400(Rate for 5/2016)
70	Super Plasticizer (Conplast RP-264 or equivalent)	kg	55
71	Synthetic Enamel paint 1st quality	Ltr	260
72	Synthetic adhesive (Resin + Hardener)	Kg	360
73	Tar felt joint filler board 12 mm thick	sqm	415
74	Tar felt joint filler board 20 mm thick	sqm	630
75	Through stones 20 x 20 x 30 to 45 cm (including loading charges but excluding Seigniorage charges)	Each	22
76	Through stones 25 x 25 x 45 to 60 cm long (including loading charges but excluding Seigniorage charges)	Each	39
77	Through stones 30 x 30 x 65 to 75 cm long (including loading charges but excluding Seigniorage charges)	Each	59
78	Un-coursed rubble stones (at dump yard /Spoil) (including loading charges but excluding Seigniorage charges)	cum	155
79	Un-coursed rubble stones (at quarry)(including loading charges but excluding Seigniorage charges)	cum	318
80	Water proofing compound	kg	80
81	Welding electrodes 4 mm dia	Each	13
82	Wire brush	Each	41

SI No.	DESCRIPTION OF MATERIAL	UNIT	S. Rate for 2016-17
1	2	3	4
83	Wire mesh 20 gauge	sqm	235
84	Zinc chromate red oxide primer paint	Ltr	180
85	inorganic zinc silicate	Ltr	620
86	solvent less coal tar epoxy paint	Ltr	260
87	Zinc phosphate primer	Ltr	223
88	Allkyd based iron oxide paint	Ltr	185
89	a) Cost of hdpe (90mm dia)	Rm	230
	b) light black MS casing pipe 100 mm dia (4mm thick)	Rm	480
90	welded steel wire fabric 100X100X5 mm size	Kg	185
91	Protective Mastic	Ltr	480
92	Solventless coal tar epoxy (brown)	Ltr	300

**ADDITIONAL MATERIALS FOR GATES & HOISTS
FOR THE YEAR: 2016-17**

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.

SI No.	DESCRIPTION OF MATERIAL	UNIT	S. Rate for 2016-17
1	2	3	4
1	Alloy steel (IS : 1570-carbon steel) shafts	Kg	235
2	Alloy steel (IS : 1570-stainless steel) pins	Kg	450
3	Bolt / Nut / Washer (hot dipped galvanized)	Kg	140
4	Bolt / Nut / Washer (stainless steel)	Kg	365
5	Bronze/Aluminum alloy(IS:305)bearings/bushes	Kg	970
6	Cast iron blocks	Kg	85
7	Cast steel drums / gears	Kg	235
8	Cast steel pinions	Kg	225
9	Cast steel wheels / pulleys / hubs / rollers / Retainers	Kg	190
10	Chemical for de-greasing/ de-rusting/phosphate	Ltr	130
11	Coal tar epoxy paint	Ltr	215
12	Forged steel hooks / shackles	Kg	280
13	MS pipe 200 / 300 mm dia	Kg	175
14	MS pipe 32 mm dia	Rm	185
15	MS pipe 25 mm dia	Rm	150
16	Rubber bottom seal (IS : 11855) (100mmX14 mm)	Rm	780
17	Rubber side seal (music note type Teflon claded) (IS : 11855) (36ØX113mmX14mm)	Rm	1670
18	Rubber side seal (music note type uncladed) (IS : 11855) (36ØX113mmX14mm)	Rm	1210
19	Rubber side seal Z-type (IS : 11855) (36ØX120mmX19mm)	Rm	1600

SI No.	DESCRIPTION OF MATERIAL	UNIT	S. Rate for 2016-17
1	2	3	4
20	Rubber corner seal (Teflon claded) (IS : 11855) (36Ø)	Each	1630
21	Rubber corner seal (un claded) (IS : 11855) (36Ø)	Each	1150
22	Stainless steel plates / flats	Kg	275
23	Welding electrode 4 mm dia x 450 mm (radiographic low hydrogen)	Each	15
24	Welding electrode 4 mm dia x 450 mm (stainless steel)	Each	23
25	Wire rope 6x37 constn (IS : 2266)	Kg	200
26	Zinc	Kg	178
27	Zinc rich (zinc content : 90 %) epoxy primer	Ltr	700

**MATERIALS FOR POWER SUPPLY WORKS FOR
THE YEAR : 2016-17**

SI No.	Description of Material	Unit	S. Rate for 2016-17
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	Flouscent tube light 40 W	Each	
5	Flouscent 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 THEYEAR: 2016-17GUIDE LINES FOR FIXING CAPITAL COST OF MACHINERY / EQUIPMENT:

1 The Capital cost of machinery / equipment shall be for new machinery / equipment and shall be inclusive of all taxes, 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.

SI No:	DESCRIPTION OF MACHINERY / EQUIPMENT	UNIT	S. Rate for 2016-17
1	2	3	4
1	Agitator car / Transit mixer 2 cum (excluding tyres)	Each	21,50,000
	tyres and tubes 6 sets		86,000
2	Air compressor 5 cmm electric	Each	7,10,000
3	Air compressor 7 cmm diesel	Each	9,50,000
4	Air compressor 7 cmm electric	Each	8,65,000
5	Air compressor 8.5 cmm diesel	Each	10,85,000
6	Air compressor 8.5 cmm electric	Each	11,20,000
7	Air compressor 15 cmm electric	Each	13,70,000
8	Angle Dozer 90 hp	Each	54,75,000
9	Batching plant 0.5 cum with accessories(6 Cum/hr)	Each	12,00,000
10	Batching plant 2 x 1.00 cum with accessories (15 Cum/hr)	Each	42,45,000
11	Batching plant 2 x 1.50 cum with accessories (50 Cum/hr)	Each	65,00,000
12	Bending machine	Each	5,30,000
13	Clamp shell and hoisting ropes	Each	30,000
14	Concrete bucket 1.5 cum	Each	56,000
15	Concrete hand mixer 45/30 ltr	Each	15,500
16	Concrete mixer 300/200 ltr(diesel)	Each	1,50,000
17	Concrete mixer 300/200 ltr (electric)	Each	1,45,000
18	Concrete mixer 600/400 ltr(diesel)	Each	2,60,000
19	Concrete mixer 600/400 ltr (electric)	Each	2,55,000

SI No:	DESCRIPTION OF MACHINERY / EQUIPMENT	UNIT	S. Rate for 2016-17
1	2	3	4
20	Concrete paver 100 Sqm / hr	Each	23,61,000
21	Convey mucker (excluding tyres)	Each	38,55,000
	tyres and tubes 6 sets		86,000
22	Core drilling machine	Each	11,00,000
23	Diesel generating set 30 KVA	Each	4,95,000
24	Diesel generating set 50 KVA	Each	6,40,000
25	Diesel Loco 45 hp	Each	21,20,000
26	Dewatering pump 5 hp diesel	Each	40,000
27	Dewatering pump 5 hp electric	Each	24,500
28	Dewatering pump 10 hp diesel	Each	60,000
29	Dewatering pump 10 hp electric	Each	55,000
30	Dewatering pump 20 hp diesel	Each	1,90,000
31	Dewatering pump 20 hp electric	Each	1,00,000
32	Drifter	Each	10,58,000
33	Drilling jumbo (excluding tyres)	Each	13,02,000
	tyres and tubes 6 sets		86,000
34	Dumper 4.5 cum (excluding tyres)	Each	14,50,000
	tyres and tubes 6 sets		86,000
35	Geophysical Ele.resistivity meter	Each	4,75,000
36	Grouting pump	Each	1,02,000
37	Guniting / sand blasting equipment	Each	2,80,000
38	Ice plant with accessories 30 t / day	Each	22,80,000
39	Jack hammer	Each	65,000
40	Needle vibrator 40 mm petrol	Each	20,000
41	Needle vibrator 40 mm electric	Each	21,000
42	Needle vibrator 60 mm petrol	Each	21,500
43	Needle vibrator 60 mm electric	Each	25,500
44	Planing machine 4 m stroke	Each	7,80,000
45	Plate shearing machine up to 12 mm	Each	4,25,000

SI No:	DESCRIPTION OF MACHINERY / EQUIPMENT	UNIT	S. Rate for 2016-17
1	2	3	4
46	Pneumatic placer 0.5 cum	Each	5,80,000
47	Pneumatic tamper	Each	85,000
48	Pug cutting machine	Each	16,000
49	Pusher leg	Each	52,000
50	Road roller diesel 10 t	Each	8,50,000
51	Shovel 0.50 cum 75 hp	Each	37,50,000
52	Shovel 0.85 cum 110 hp	Each	63,80,000
53	Stationery derrick crane 5 t	Each	6,53,000
54	Tipper 5 cum (excluding tyres)	Each	16,25,000
	tyres and tubes 6 sets		86,000
55	Tipping tub 1.5 cum	Each	2,40,000
56	Tower crane 5 tonne	Each	74,75,000
57	Transformer 250 KVA	Each	4,25,000
58	Truck 10 t (excluding tyres)	Each	14,75,000
	tyres and tubes 6 sets		86,000
59	Truck mounted derrick crane 5 t (excluding tyres)	Each	19,60,000
	tyres and tubes 6 sets		86,000
60	Upright drilling machine	Each	56,000
61	Ventilation fan 20 hp	Each	2,60,000
62	Vibratory pad foot roller 8 t	Each	29,50,000
63	Wagon drill	Each	6,50,000
64	Water tanker 8000 ltr (excluding tyres)	Each	14,22,000
	tyres and tubes 6 sets		86,000
65	Welding set	Each	48,000
66	Winch 35 hp electric	Each	3,75,000
67	Hydraulic Truck Crane 30T	Each	1,44,84,250
	tyres and tubes 6 sets		1,85,220
68	Hydraulic Truck Crane 16T	Each	1,03,90,875
	tyres and tubes 6 sets		1,85,220

SI No:	DESCRIPTION OF MACHINERY / EQUIPMENT	UNIT	S. Rate for 2016-17
1	2	3	4
69	Heavy Duty Airless Spray Painting Equipment	Each	4,87,770
70	Concrete Placer Pump(25 Cum/hr)(Electric)	Each	34,04,430

ACCESSORIES TO MACHINERY / EQUIPMENT FOR THE YEAR : 2016-17

SI No.	DESCRIPTION OF MATERIAL	UNIT	S Rate for 2016-17
1	2	3	4
1	Casing shoe bit	Each	10500
2	Diamond core bit BX size	Each	10600
3	Diamond core bit NX size	Each	12720
4	Double tube core barrel	Each	13568
5	Extension drill rod with coupling sleeve	Rm	2120
6	Jack hammer drill rod 1.5 m	Each	4028
7	Jack hammer drill rod 2.5 m	Each	6254
8	Nozzle for Guniting / sand blasting gun	Each	700
9	Paving Cylinder	Each	28080
10	Rails 30R (30 kg / m)	tonne	51500
11	Reamer shell	Each	5150
12	T.C. Cross bit 50 mm dia	Each	5000
13	T.C. Cross bit 75 mm dia	Each	10000
14	T.C. Cross bit 100 mm dia	Each	12000
15	Tyres and Tubes for truck	Set	18000
16	Wire rope 16 mm dia	Rm	265
17	Excavation of drain with Excavator	cum	35

AGGREGATE CRUSHING & PROCESSING PLANT

SI No.	DESCRIPTION OF MATERIAL	UNIT	S Rate for 2016-17
1	2	3	4
1	Jaw crusher 900 x 500 mm (120 tph) with 50 hp motor	Each	
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	These items are no where being used in the Standard Data. Hence this may be deleted from SoR
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 : 2016-17

- 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.

SI No.	DESCRIPTION OF MATERIAL	UNIT	S Rate for 2016-17
1	2	3	4
1	Air hose 25 mm dia	Rm	185
2	Air hose 50 mm dia	Rm	300
3	Demand charges (HT-I : General-11 KV category) on power supply	KVA / month	371
4	Diesel	Ltr	57.70
5	Electric power (HT-I(A):General -11 KV) Category including tax	Kwhr	6.26
6	Excise duty on Gates / Hoist supplies	%	0%
7	Insurance charges on machinery	% / annum	1%
8	Interest on capital cost	% / annum	11.00%

SI No.	DESCRIPTION OF MATERIAL	UNIT	S Rate for 2016-17
1	2	3	4
9	Lubricants	Ltr	260
10	Petrol	Ltr	68.45
11	Rivets	Kg	100
12	Road tax on transport vehicles	Rs./annum	As per RTA
13	Shalimastic sealing compound	Kg	94
14	Shutter oil	Ltr	50
15	Structural steel fabrication	Kg	24
16	Sundries (Lump sum for un quantified inputs)	LS	30
17	Water hose (pressure) 20 mm dia	Rm	185
18	Steel wedges	LS	16
19	Elbows / Nipple / Plugs etc.,	LS	17
20	Soldering materials	LS	17
21	Steam circulation arrangement	LS	17
22	Fuel charges (gas for heating)	LS	17
23	Vulcanizing materials	LS	17
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	14500
29	Grease	Kg	275
30	Welding holder set (cable / holder / gloves / mask etc)	Each	7800
31	Use rate of ropes	LS	150

MATERIALS FOR GATES AND HOISTS
FOR THE YEAR : 2016-17

SI No.	DESCRIPTION OF MATERIAL	UNIT	S Rate for 2016-17
1	Worm reducers	Each	224400
2	Electric motor 20 hp(Double Shaft)	Each	121000
3	Electric motor 17.5 hp(Double Shaft)	Each	85800
4	Electric motor 12.5 hp(Double Shaft)	Each	72600
5	Electric motor 5 hp(Double Shaft)	Each	33000
6	Electric motor 3 hp (Double Shaft)	Each	23100
7	Electric motor 2 hp (Double Shaft)	Each	12100
8	Floating shaft 300 mm dia	Kg	180
9	Manual operating system	Each	28820
10	Gate position indicator	Each	195800
11	Ele-magnetic brake	Each	35200
12	Electric cable / switch / control panel etc	LS	50380
13	Wire rope sockets	Each	4620

**Materials other than covered under WR Work
items For the year 2016-17**
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 all taxes, 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 2016-17
1	2	3	4
M-002	Quarried stone 150 - 200 mm size for Hand Broken (Excluding Seigniorage charges)	Cum	147
M-003	Boulder with minimum size of 300 mm for Pitching (Excluding Seigniorage charges)	Cum	164
M-004	Coarse sand for filling (Excluding Seigniorage charges)	Cum	Rate as per item no.27(b) of material of WRD
M-005	Coarse sand for mortar(Excluding Seigniorage charges)	Cum	Rate as per item no.27(a) of material of WRD
M-006	Fine Sand (Excluding Seigniorage charges)	Cum	Rate as per item no.28 of material of WRD
M-007	Murum (Excluding Seigniorage charges)	Cum	Rate as per item no.56 of Material rates of WRD.
M-008	Gravel/Quarry spall(Excluding Seigniorage Charges)	Cum	103
M-009	Granular Material or hard murum for GSB works	Cum	Deleted
M-010	Granular Material or hard murum for GSB works(Excluding Seigniorage charges)	Cum	92
M-011	Fly ash conforming to IS: 3812 (Part II & I)	Cum	72
	For item No.M-012 to M-055 the note shall be as follows 1) The rates mentioned are exclusive of Seigniorage charges but inclusive of 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)		

Sl. No.	Description	Unit	S. Rate for 2016-17
1	2	3	4
M-012	Filter media/Filter Material as per Table 300-3 (MoRT&H Specification) (excluding Seigniorage Charges)	Cum	345
M-013	Close graded Granular sub-base Material 53 mm to 9.5 mm (excluding Seigniorage Charges)	Cum	667
M-014	Close graded Granular sub-base Material 37.5 mm to 9.5 mm (excluding Seigniorage Charges)	Cum	685
M-015	Close graded Granular sub-base Material 26.5 mm to 9.5 mm (excluding Seigniorage Charges)	Cum	711
M-016	Close graded Granular sub-base Material 9.5 mm to 4.75 mm (excluding Seigniorage Charges)	Cum	592
M-017	Close graded Granular sub-base Material 9.5 mm to 2.36 mm (excluding Seigniorage Charges)	Cum	582
M-018	Close graded Granular sub-base Material 4.75mm to 2.36 mm (excluding Seigniorage Charges)	Cum	510
M-019	Close graded Granular sub-base Material 4.75mm to 75 micron mm((excluding Seigniorage Charges)	cum	489
M-020	Close graded Granular sub-base Material 2.36 mm (excluding Seigniorage Charges)	Cum	489
M-021	Stone crusher dust finer than 3mm with not more than 10% passing 0.075 sieve. (excluding Seigniorage Charges)	Cum	357
M-022	Coarse graded Granular sub-base Material 2.36 mm & below (excluding Seigniorage Charges)	Cum	438
M-023	Coarse graded Granular sub-base Material 4.75mm to 75 micron mm (excluding Seigniorage Charges)	cum	474
M-024	Coarse graded Granular sub-base Material 4.75 mm to 2.36 mm (excluding Seigniorage Charges)	Cum	474
M-025	Coarse graded Granular sub-base Material 9.5 mm to 4.75 mm (excluding Seigniorage Charges)	Cum	561
M-026	Coarse graded Granular sub-base Material 26.5 mm to 4.75 mm (excluding Seigniorage Charges)	Cum	619
M-027	Coarse graded Granular sub-base Material 26.5 mm to 9.5 mm (excluding Seigniorage Charges)	Cum	620
M-028	Coarse graded Granular sub-base Material 37.5 mm to 9.5 mm (excluding Seigniorage Charges)	Cum	685
M-029	Coarse graded Granular sub-base Material 53 mm to 26 .5mm (excluding Seigniorage Charges)	Cum	850
M-030	Aggregates below 5.6 mm(excluding Seiniorage Charges)	Cum	557
M-031	Aggregates 22.4 mm to 2.36 mm (excluding Seiniorage Charges)	Cum	914
M-032	Aggregates 22.4 mm to 5.6 mm (excluding Seiniorage Charges)	Cum	1040
M-033	Aggregates 45 mm to 2.8 mm (excluding Seiniorage Charges)	Cum	667

Sl. No.	Description	Unit	S. Rate for 2016-17
1	2	3	4
M-034	Aggregates 45 mm to 22.4 mm (excluding Seinorage Charges)	Cum	Rate as per item no.9 of Material rates of WRD.
M-035	Aggregates 53 mm to 2.8 mm (excluding Seinorage Charges)	Cum	914
M-036	Aggregates 53 mm to 22.4 mm (excluding Seinorage Charges)	Cum	872
M-037	Aggregates 63 mm to 2.8 mm (excluding Seinorage Charges)	Cum	714
M-038	Aggregates 63 mm to 45 mm (excluding Seinorage Charges)	Cum	662
M-039	Aggregates 90 mm to 45 mm (excluding Seinorage Charges)	Cum	Rate as per item no.10 of Material rates of WRD.
M-040	Aggregates 10 mm to 5 mm (excluding Seinorage Charges)	Cum	Rate as per item no.7 of Material rates of WRD.
M-041	Aggregates 11.2 mm to 0.09 mm (excluding Seinorage Charges)	Cum	704
M-042	Aggregates 13.2 mm to 0.09 mm(excluding Seinorage Charges)	Cum	798
M-043	Aggregates 13.2 mm to 5.6 mm (excluding Seinorage Charges)	Cum	919
M-044	Aggregates 13.2 mm to 10 mm(excluding Seinorage Charges)	Cum	1029
M-045	Aggregates 20 mm to 10 mm (excluding Seinorage Charges)	Cum	Rate as per item no.8 of Material rates of WRD.
M-046	Aggregates 25 mm to 10 mm (excluding Seinorage Charges)	Cum	1129
M-047	Aggregates 19 mm to 6 mm (excluding Seinorage Charges)	Cum	1040
M-048	Aggregates 37.5 mm to 19 mm(excluding Seinorage Charges)	Cum	1103
M-049	Aggregates 37.5 mm to 25 mm(excluding Seinorage Charges)	Cum	1145
M-050	Aggregates 6 mm nominal size(excluding Seinorage Charges)	Cum	735
M-051	Aggregates 10 mm nominal size(excluding Seinorage Charges)	Cum	935
M-052	Aggregates 13.2/12.5 mm nominal size(excluding Seinorage Charges)	Cum	1097
M-053	Aggregates 20 mm nominal size(excluding Seinorage Charges)	Cum	1365
M-054	Aggregates 25 mm nominal size(excluding Seinorage Charges)	Cum	1313

Sl. No.	Description	Unit	S. Rate for 2016-17
1	2	3	4
M-055	Aggregates 40 mm nominal size(excluding Seiniorage Charges)	Cum	845
M-056	AC pipe 100 mm dia	Metre	Rate as per PH item
M-057	Acrylic polymer bonding coat	Litre	474
M-058	Aluminum Paint	Litre	330
M-059	Aluminum alloy plate 2mm Thick	Sqm	381
M-060	Aluminum alloy/Galvanized steel	Tonne	70,931
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	968
M-062	Aluminum studs 100 x 100 mm fitted with lens reflectors	No's	As per local market rate
M-063	Barbed wire	Kg	80
M-064	Bearing (Cost of parts)	No's	570
M-065	Bearing (Cast steel rocker bearing assembly of 250 tonne)	No's	785
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 ³	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	7.5
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)(Excluding taxes)	Tonne	
M-075	Bitumen (80-100 grade) (Excluding taxes)	Tonne	

Sl. No.	Description	Unit	S. Rate for 2016-17
1	2	3	4
M-076	Bitumen (Cutback)	Tonne	As per rates fixed by R&B Dept based on refinery rates
M-077	Bitumen (emulsion)(Excluding taxes)	Tonne	
M-078	Bitumen (modified graded)	Tonne	
M-079	Brick	Each	As per Building SSR
M-080	C.I. shoes for the pile	Kg	54
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	165
M-084	Compressible Fibre Board(20mm thick)	Sqm	541
M-085	Connectors/ Staples	Each	82
M-086	Copper Plate(12m long x 250mmwide)	Kg	327.50
M-087	Corrosion resistant Structural steel	Tonne	59,225
M-088	Corrugated sheet, 3 mm thick, "Tie" beam section railing	Kg	206
M-089	Credit for excavated rock found suitable for use	Cum	194
M-090	Curing compound	Liter	130
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(Excluding Seigniorage Charges)	Cum	50
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	361
M-096	Epoxy mortar	Kg	118
M-097	Epoxy primer	Kg	613
M-098	Epoxy resin-hardner mix for prime coat	Kg	633
M-099	Flag of red color cloth 600 x 600 mm	Each	25

Sl. No.	Description	Unit	S. Rate for 2016-17
1	2	3	4
M-100	Flowering Plants	Each	40
M-101	Galvanized MS flat clamp	No's	195
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	180
M-103	Galvanized structural steel plate 200 mm wide, 6 mm thick, 24 m long	Kg	932
M-104	Gelatin 80%	Kg	73
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	23
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	Rate as per PH items
M-115	HDPE pipes 90mm dia	Metre	

Sl. No.	Description	Unit	S. Rate for 2016-17
1	2	3	4
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	40000
M-120	Joint Sealant Compound	Kg	75
M-121	Jute netting, open weave, 2.5 cm square opening for seeding and Mulching	Sqm	90
M-122	LDO for steam curing	Litre	65
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	46,865
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	20
M-130	Nuts and bolts	Kg	100
M-131	Paint	Litre	255
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	

Sl. No.	Description	Unit	S. Rate for 2016-17
1	2	3	4
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	55
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	275
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	190
M-147	Quick setting compound	Kg	35
M-148	Random Rubble Stone(Including Loading Charges but excluding Seignorage Charges)	Cum	252
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 2016-17

Sl. No.	Description	Unit	S. Rate for 2016-17
1	2	3	4
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	7
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	80
M-162	Seeds(Grass)	Kg	18
M-163	Cost of Selected earth (Excluding Seignorage Charges)	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(Including Loading Charges but excluding Seigniorage charges)	Cum	2236
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	288
M-175	Steel pipe 50 mm external dia as per IS:1239	Metre	561
M-176	Steel wire rope 20 mm	Kg	185
M-177	Steel wire rope 40 mm	Kg	211
M-178	Strip seal expansion joint	Metre	Rate as per local competitive quotations

Sl. No.	Description	Unit	S. Rate for 2016-17
1	2	3	4
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	54
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	2616
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	155
M-192	Wire mesh 50mm x 50mm size of 3mm wire	Kg	252
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	1265

Sl. No.	Description	Unit	S. Rate for 2016-17
1	2	3	4
M-196	Wooden staff for fastening of flag 25 mm dia, one m long	Each	75
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
Miscellaneous Items			
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 (including Loading charges but excluding Seigniorage charges)	Cum	145
4	Eradication of Weed growth from Drains, Canals by spraying Chemicals	Sqm	1.75
5	Thinner	Ltr	100
6	Gear Oil	Ltr	260
	New Item		
1	Cardium compound	kg	120

Conveyance Charges of Material

CONVEYANCE CHARGES OF MATERIALS AS PER SoR 2016-17
(COMMON TO ALL DEPARTMENTS).

**LEAD, LIFT, LOADING AND UNLOADING CHARGES FOR MATERIALS FOR THE
YEAR: 2016-17**

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"

A. (LEAD) CONVEYANCE CHARGES FOR MATERIALS BY HEAD LOAD FOR THE YEAR: 2016-17

SI 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	56.80	33.10	72.30
3	Total lead up to 150 m	113.60	66.30	144.60

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: 2016-17

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

SI 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/to nne	(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 litres	(Lead) charges for trucks and tippers per 1000 nos. of bric ks
1	2	3	4	5	6	7	8
1	Lead up to 1 km	31.50	30.40	19.00	44.70	18.70	50.70
2	Lead up to 2 km	44.10	42.50	26.60	62.60	26.20	70.90
3	Lead up to 3 km	58.80	58.80	36.70	86.50	35.00	94.50
4	Lead up to 4 km	71.40	71.40	44.60	105.00	42.50	114.80
5	Lead up to 5 km	84.00	84.00	52.50	123.50	50.00	135.10
6	for Every km beyond 5 km up to 30 km	12.60	12.60	7.90	18.50	7.50	20.30
7	for Every km beyond 30 km	10.50	10.50	6.60	15.40	6.30	16.90

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)

SI 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	17.30	37.80	62.40	74.80	52.00
2	Unloading	8.65	18.90	62.40	74.80	52.00

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)**

SI 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	111.00	129.90	163.70	176.00	219.10
2	Unloading	40.00	64.95	163.70	176.00	219.10

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)**

SI 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	52.00	103.90
2	Unloading	15.90	15.90

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

F. LIFT CHARGES FOR MATERIALS BY HEAD LOAD

SI 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	6.60	4.80	8.80

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 : 2016-17**

SI. N O	Description of machinery	Unit	Hire charge in Rs	Fuel charge in Rs	Crew Charge in Rs.	Total in Rs
1	2	3	4	5	6	7
1	Agitator car / Transit mixer 2 cum	Hour	758.40	872.70	283.90	1915.00
2	Air compressor 5 cmm (electric)	Hour	108.30	189.10	164.80	462.20
3	Air compressor 7 cmm (diesel)	Hour	241.30	714.00	210.90	1166.20
4	Air compressor 7 cmm (electric)	Hour	131.90	252.20	164.80	548.90
5	Air compressor 8.5 cmm (diesel)	Hour	275.60	892.50	210.90	1379.00
6	Air compressor 8.5 cmm (electric)	Hour	170.80	315.20	164.80	650.80
7	Air compressor 15 cmm (electric)	Hour	138.80	700.50	175.80	1015.10
8	Angle Dozer 90 hp	Hour	1715.50	610.50	236.60	2562.60
9	Batching plant 0.5 cum (6 Cum/hr)	Hour	114.60	84.10	340.60	539.30
10	Batching plant 2 x 1.00 cum (15 Cum/hr)	Hour	405.40	252.20	340.60	998.20
11	Batching plant 2 x 1.50 cum (50 Cum/hr)	Hour	620.70	308.20	340.60	1269.50
12	Bending machine 3000 x 12 mm	Hour	42.60	84.10	131.80	258.50
13	Clamp shell and hoisting ropes	Hour	5.40	0.00	0.00	5.40
14	Concrete bucket 1.5 cum	Hour	15.80	0.00	0.00	15.80
15	Concrete hand mixer 45 / 30 ltr	Hour	5.50	0.00	0.00	5.50
16	Concrete mixer 300 / 200 (diesel)	Hour	53.50	79.30	219.70	352.50
17	Concrete mixer 300 / 200 ltr (electric)	Hour	51.70	28.00	219.70	299.40
18	Concrete mixer 600 / 400 (diesel)	Hour	92.70	158.70	219.70	471.10
19	Concrete mixer 600 / 400 ltr (electric)	Hour	91.00	56.00	219.70	366.70
20	Concrete paver 100 sqm / hr	Hour	356.50	0.00	421.80	778.30
21	Convey mucker	Hour	822.80	195.00	175.80	1193.60
22	Core drilling machine	Hour	319.00	238.00	283.90	840.90
23	Diesel generating set 30 KVA	Hour	65.80	634.70	131.80	832.30
24	Diesel generating set 50 KVA	Hour	85.10	952.10	131.80	1169.00
25	Diesel Loco 45 hp	Hour	381.60	535.50	164.80	1081.90
26	Dewatering pump 5 hp (diesel)	Hour	10.20	79.30	111.10	200.60
27	Dewatering pump 5 hp (electric)	Hour	3.00	28.00	83.30	114.30

Sl. No	Description of machinery	Unit	Hire charge in Rs	Fuel charge in Rs	Crew Charge in Rs.	Total in Rs
1	2	3	4	5	6	7
28	Dewatering pump 10 hp (diesel)	Hour	15.20	158.70	111.10	285.00
29	Dewatering pump 10 hp (electric)	Hour	6.70	56.00	83.30	146.00
30	Dewatering pump 20 hp (diesel)	Hour	48.30	317.40	111.10	476.80
31	Dewatering pump 20 hp (electric)	Hour	12.30	112.10	83.30	207.70
32	Drifter	Hour	322.70	0.00	354.90	677.60
33	Drilling jumbo	Hour	368.40	42.80	175.80	587.00
34	Dumper 4.5 cum	Hour	580.70	399.90	227.10	1207.70
35	Geophysical Electric resistivity	Hour	99.00	0.00	0.00	99.00
36	Grouting pump	Hour	24.90	28.00	263.60	316.50
37	Guniting / sand blast equipment	Hour	110.10	0.00	219.70	329.80
38	Ice plant & accessories 30 t / day	Hour	170.20	798.60	131.80	1100.60
39	Jack hammer	Hour	19.80	0.00	329.60	349.40
40	Needle vibrator 40 mm (petrol)	Hour	7.60	18.80	158.20	184.60
41	Needle vibrator 40 mm (electric)	Hour	8.00	5.60	158.20	171.80
42	Needle vibrator 60 mm (petrol)	Hour	8.20	28.20	158.20	194.60
43	Needle vibrator 60 mm (electric)	Hour	9.70	8.40	158.20	176.30
44	Planing machine 4 m stroke	Hour	117.80	84.10	210.90	412.80
45	Plate shearing machine up to 12	Hour	41.90	112.10	142.00	296.00
46	Pneumatic placer 0.5 cum	Hour	171.10	0.00	86.80	257.90
47	Pneumatic tamper	Hour	20.70	0.00	263.60	284.30
48	Pug cutting machine	Hour	6.40	2.80	0.00	9.20
49	Pusher leg	Hour	12.70	0.00	0.00	12.70
50	Road roller diesel 10 t	Hour	197.20	714.00	210.90	1122.10
51	Shovel 0.50 cum 75 hp	Hour	1003.10	476.00	236.60	1715.70
52	Shovel 0.85 cum 110 hp	Hour	1706.60	872.70	236.60	2815.90
53	Stationery derrick crane	Hour	86.10	0.00	0.00	86.10
54	Tipper 5 cum	Hour	446.70	299.90	177.50	924.10
55	Tipping tub 1.5 cum	Hour	64.20	0.00	0.00	64.20
56	Tower crane 5 tonne	Hour	867.10	145.70	189.30	1202.10
57	Transformer 250 KVA	Hour	5041.00	0.00	0.00	5041.00
58	Truck 10 t	Hour	414.10	299.90	177.50	891.50
59	Truck mounted derrick crane 5 t	Hour	519.70	299.90	177.50	997.10
60	Upright drilling machine/grinder	Hour	22.50	28.00	198.90	249.40

Machinery Hire Charges – Common SoR 2016-17

Sl. N o	Description of machinery	Unit	Hire charge in Rs	Fuel charge in Rs	Crew Charge in Rs.	Total in Rs
1	2	3	4	5	6	7
61	Ventilation fan 20 hp	Hour	11.50	112.10	28.70	152.30
62	Vibratory pad foot roller 8 t	Hour	1342.20	1031.40	263.60	2637.20
63	Wagon drill	Hour	188.50	0.00	283.90	472.40
64	Water tanker 8000 ltr	Hour	402.50	299.90	177.50	879.90
65	Welding set	Hour	16.00	67.20	0.00	83.20
66	Winch 35 hp (electric)	Hour	129.40	137.30	263.60	530.30
67	Tractor with 2T roller	Hour				345.00
68	Hydraulic Truck Crane 30T	Hour	3096.80	118.80	526.70	3742.30
69	Hydraulic Truck Crane 16T	Hour	2278.10	75.00	526.70	2879.80
70	Heavy Duty Airless Spray Painting	Hour	121.40			121.40
71	Concrete Placer Pump (25 cum/hr) (Electric)	Hour	1004.30	336.20	164.80	1505.30



Government of Andhra Pradesh

**COMMON SCHEDULE OF RATES
FOR THE YEAR 2016-17**
(Effective from 1st June, 2016)

R&B Department, AP

ROAD & BRIDGE WORKS

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PART-II
ROAD & BRIDGE WORKS

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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)
- 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, Garividhi in Vijayanagaram District, Renigunta in Chittoor District, Yerraguntla & Mangampet in Kadapa District, Hindupur,

Tadipatri, Anantapur, Guntakal, Rayalcheruvu, Yadiki of Anantapur District, Adoni, Dhoni, 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 KM 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 KM 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 $\frac{1}{2}$ Kilometer lead or part thereof of over the initial lead of $\frac{1}{2}$ 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 75% extra
than 1.5 times the width
- III) For pipe lines where the depth is 120% extra
1.5 times or more than the width
- IV) Silt removal in restricted areas such ... 120% extra
U. T's., Culverts and Syphons.
- 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. **1.65** 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.

LABOUR RATES

Si. No	S.S. Item No.	Description	Unit (Per)	S o Rate for 2016-17 in Rs.	Remarks
1	2	3	4	5	6
		(A) SKILLED WORKMEN			
		First Class			
1	a	Mason and stone cutter	Day	445	As per WR Dept. (S.No.39)
2	b	Brick Layer	Day	445	As per WR Dept. (S.No.11)
3	c	Carpenter	Day	475	As per WR Dept. (S.No.4)
4	d	Painter	Day	510	As per WR Dept. (S.No.35)
5	e	Plumber	Day	510	As per WR Dept. (S.No.36)
6	f	Welder	Day	445	As per WR Dept. (S.No.41)
7	g	Fitter	Day	475	As per WR Dept. (S.No.6)
8	h	Electrician	Day	515	As per WR Dept. (S.No.5)
9	1	Cook	Day	420	As per WR Dept. (S.No.2) Other Category
10	2	Mechanic	Day	475	As per WR Dept. (S.No.12)
11	3	Rigger	Day	450	
12	4	Rigger Syrang	Day	450	
13	5	Well Sinker	Day	450	
14	6	Blaster	Day	510	As per WR Dept. (S.No.3)
15	3	Bar bender	Day	555	As per WR Dept. (S.No.1)
16	7	Tipper and Heavy Vehicle Driver above 12 T	Day	510	As per WR Dept. (S.No.15)
17		Tanker and medium Vehicle driver (7.5 T to 12 T)	Day	450	
18		Tanker and Light Vehicle driver up to 7.5 T	Day	340	
19		Wagon Drill Operator upto 7.5 T	Day	445	
20	8	Lorry and Heavy Vehicle Driver above 12 T	Day	480	
21		Road Roller Driver (7.5 T to 12 T)	Day	445	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	350	
		<u>Operator</u>			
26	10	Pan Mixer	Day	445	
27		Concrete Mixer	Day	445	As per WR Dept. (S.No.16)

Si. No	S.S. Item No.	Description	Unit (Per)	S o Rate for 2016-17 in Rs.	Remarks
1	2	3	4	5	6
28		Vibrator	Day	445	As per WR Dept. (S.No.32)
29		Composer	Day	460	
30		Jack Hammer	Day	445	As per WR Dept. (S.No.23)
31		Driller	Day	510	As per WR Dept. (S.No.34)
32		Boring Maistry	Day	445	
33	11	Pump operator	Day	445	As per WR Dept. (S.No.24)
34	12	Turner Grade-I	Day	445	
35	13	Wireless Operator	Day	510	As per WR Dept. (S.No.12) Other Category
36	14	Assistant Wireless Operator	Day	410	
37	15	Jeep Driver	Day	505	As per WR Dept. (S.No.15) Other Category
38	16	Work Inspector with I.T.I qualification	Day	520	As per WR Dept. (S.No.9) Other Category
39	17	Work Inspector with LCE, LME,L.E.E qualification	Day	645	As per WR Dept. (S.No.4) Other Category
40	18	Work Inspector with B.E (Civil, Mechanical and Electrical) qualification	Day	860	As per WR Dept. (S.No.7) Other Category
41	19	Work Inspector with Non-technical qualification SSLC/SSC/HSC	Day	450	As per WR Dept. (S.No.10)
42	20	Mason Spl. Grade for Mossaic and Polished shahabad stone floor	Day	445	
43	21 a(i)	Typist / Job Typist	Day	510	As per WR Dept. (S.No.13) Other Category
	a (ii)	Computer operator	Day	560	As per WR Dept. (S.No.11) Other Category
	b	CAD Operator with Diploma in Engineering /General degree with CAD certificate	Day	690	As per WR Dept. (S.No.14) Other Category
		(B) SEMI –SKILLED WORKMEN			
		SECOND CLASS			
44	a	Mason	Day	400	As per WR Dept. (S.No.35) Semi-Skilled
45	b	Brick Layer and Stone Cutter	Day	400	As per WR Dept. (S.No.35) Semi-Skilled
46	c	Carpenter	Day	400	As per WR Dept. (S.No.4) Semi-Skilled
47	d	Painter	Day	400	As per WR Dept. (S.No.37) Semi-Skilled

Sl.no	S.S. Item No.	Description	Unit (Per)	S o Rate for 2016-17 in Rs.	Remarks
1	2	3	4	5	6
48	e	deleted			
49	f	Blacksmith	Day	445	(Skilled)
50	g	Welder	Day	400	
51	h	Fitter	Day	400	
52	i	Electrician	Day	400	
53	2	Caulker	Day	400	
54	4	Tinker	Day	400	
55	5	Sawyer	Day	400	
56	6	Brick-Moulder	Day	400	
57	7	Pot-tile turner	Day	400	
58	8	Pan-tile turner	Day	400	
59	9	Brick and Lime Kiln man/Glazzer	Day	400	
60	10	Telephone Operator	Day	510	As per WR Dept. (S.No.12) Other Category
61	11	Hand Driller	Day	400	
62	12	Quarry Man	Day	400	
63	13	Hammer Man	Day	400	As per WR Dept. (S.No.40) Semi-skilled
64	14	Thatcher	Day	400	
65	15	Fireman	Day	400	
66	16	Cleaner/Helper	Day	400	
67	17	Stone Packer	Day	400	
68	18	Jawali	Day	400	
69	19	Ex-Service man/Goorkha watchman	Day	400	
70	20	Ratton Worker	Day	400	
71	21	Mate	Day	400	
72	1	Head Mazdoor (Mukaddar)	Day	400	As per WR Dept. (S.No.10) Semi-Skilled

(C) UNSKILLED WORKMEN

73	2	Man Mazdoor	Day	350	As per WR Dept. (S.No.3) Un-Skilled
74	3	Watch Man	Day	350	As per WR Dept. (S.No.5) Un-Skilled
75	5	Woman Mazdoor	Day	350	As per WR Dept. (S.No.4) Un-Skilled
76	6 (b)	Helper/Cleaners/Sweepers/Scavangers/Chouki dars/Security Guards/Office Boys	Day	350	
77	<i>Note : Whenever unskilled workmen are engaged for cleaning of Sewers & Septic Tanks, they may be paid double the above wages.</i>				

	(D) OTHER CONVEYANCE ITEMS			S o Rate for 2016-17 in Rs.	Remarks
1	2	3	4	5	6
78	1	Single bullock with driver and cart	Day	435	As per WR Dept. (S.No.6) Semi-Skilled
79	2	Bullock pair with driver	Day	450	
80	3	Bullock pair with driver and cart	Day	460	As per WR Dept. (S.No.5) Semi Skilled
81	4	Bullock pair with driver and cart with pneumatic tyres	Day	500	
82	5	Bullock pair driver and kapila	Day	Deleted	
83	6	Nava with crew	Day	415	As per WR Dept. (S.No.3) Semi Skilled
84	7	Punt thundal	Day	330	
85	8	Punt lascar	Day	330	
	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

RATES OF MATERIALS & WORK ITEMS SSI No.	S.S. Item No.	Description	Unit (per)	S o Rate for 2016-17 in Rs.	Remarks
1	2	3	4	5	6
		(A) STONE AND ROAD MATERIALS			
		ROUGH STONE QUARRIED INCLUDING WEDGING, BREAKING, BURNING, SPLITTING.			
1	22.a	For R.R Masonry Work (other than Granite, Dolomite and Trap)	1 cum	180	
2	b.i	For SS Revetment work 225 mm	1 cum	145	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	164	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	156	
5	c	Jeddy Stone above 450 mm to 600 mm	1 cum	206	
6	d i	Laterite for revetment 225 mm	1 cum	136	
7	d ii	Laterite for revetment 300 mm	1 cum	159	
8	d iii	Granite for SS revetment 225 mm	1 cum	177	
9	d iv	Granite for SS revetment 300 mm	1 cum	172	
		Note:- Only when other granite is not available			
10	e	Laterite for masonry	1 cum	156	
11	f	Cyclopean stones above 0.2 cum	1 cum	292	
12	g	For R.R.Masonry works (granite, dolomite and trap variety)	1 cum	252	As per WR Dept. (M 148 of Material) Material other than covered under irrigation items
13		NOTE:- For items 22(a) to 22(g) add extra Rs /cum, wherever quarrying is done by blasting	1 cum	70	
		COURSED RUBBLE STONE QUARRYING WEDGING, BREAKING, BURNING AND SPLITTING FOR SS FIRST SORT WORKS			
14	23.a	Granite, Dolomite and trap	1 cum	288	

RATES OF MATERIALS & WORK ITEMS SSI No.	S.S. Item No.	Description	Unit (per)	S o Rate for 2016-17 in Rs.	Remarks
1	2	3	4	5	6
15	23.b	For other varieties	1 cum	207	
16	27	Granite stone slabs for culverts, lintels and copings (3 faces dressed coarsened rubble masonry)	1 cum	1901	
17		NOTE: - For items 23(a), 23(b) and 27 add extra Rs. Per Cum, wherever quarrying is done by blasting	1 cum	82	
18	28.a	Bond stones (600 x 200 x 200 mm)	Each	50	
19	b	Chainage stones and Centre line stones (750x150x150 mm)	Each	50	
20	31	Demarcation Stones (900 x 150 x 150 mm)	Each	90	
21	32.a	Guard Stones (1200 x 200 x 200 mm)	Each	152	
22	B	Guide Stones (800 x 150 x 150 mm)	Each	102	
23	C	Carving letters and figures in stone up to 100 mm size	Each	10	
24	D	Carving letters and figures in stone above 100 mm size	Each	11	
		HARD BROKEN STONE OF GRANITE, TRAP AND DOLERITE FREE FROM DUST OBTAINED BY QUARRYING, WEDGING, BREAKING, BURNING AND SPLITTING			
25	33.a	- do - 6mm size (SS 5)	1 cum	532	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	692	As per WR Dept. (M 051 of Material) (excluding blasting charges of Rs.70/- and Machine crushing charges of 25%)

RATES OF MATERIALS & WORK ITEMS SSI No.	S.S. Item No.	Description	Unit (per)	S o Rate for 2016-17 in Rs.	Remarks
1	2	3	4	5	6
27	c	- do - 12mm size (SS 5)	1 cum	822	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	1036	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	994	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	620	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	456	
32	h	- do - 60mm size (SS 5)	1 cum	419	
33	i	- do - 65mm size (SS 5)	1 cum	379	
34	j	- do - 75mm size (SS 5)	1 cum	304	
35	k	- do - 75 to 100mm size (SS 5)	1 cum	248	
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	
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 2016-17 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	9.9	
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	
			1 cum	9.9	
		SOFT BROKEN STONE SCREENED AND FREE FROM DUST			
40	33.1	- do - 40 mm size (SS 5)	1 Cum	123	
41	33.m	- do - 50 mm size (SS 5)	1 Cum	111	
42	33.n	- do - 60 mm size (SS 5)	1 Cum	87	
43	33.o	- do - 65 mm size (SS 5)	1 Cum	78	
44	33.p	- do - 75 mm size (SS 5)	1 Cum	73	
		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)			
45	33a	-do- 2.36 to 5 mm size (IRC&MORTH)	1 cum	308	
46	b	-do- 5 to 7mm size (IRC&MORTH)	1 cum	504	
47	c	-do- 9.5 to 11.2mm size (IRC&MORTH)	1 cum	656	
48	d	-do- 12mm to 14 mm size (IRC and MORTH)	1 cum	780	
49	e	-do- 19 mm to 22 mm size (IRC and MORTH)	1 cum	984	
50	f	-do- 25 mm to 27 mm size (IRC and MORTH)	1 cum	944	
51	g	-do- 40 mm to 45 mm size (IRC and MORTH)	1 cum	588	
52	h	-do- 50 mm to 55 mm size (IRC and MORTH)	1 cum	456	
53	i	-do- 60 mm to 63 mm size (IRC and MORTH)	1 cum	419	
54	j	-do- 65 mm size (IRC and MORTH)	1 cum	379	
55	k	-do- 75 mm size (IRC and MORTH)	1 cum	304	
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	As proposed by WR Dept.

RATES OF MATERIALS & WORK ITEMS SSI No.	S.S. Item No.	Description	Unit (per)	S o Rate for 2016-17 in Rs.	Remarks
1	2	3	4	5	6
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	9.9	
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 9.9	
		HARD BROKEN STONE OTHER THAN GRANITE SUCH AS QUARTZ, QUARTZ-NAPA AND BASALT SCREENED AND FREE FROM DUST			
60	33.q	- do - 10 mm size (SS 5)	1 Cum	386	
61		-do- 9.5 mm to 11.2 mm size (IRC and MORTH)	1 Cum	386	
62	r	- do - 12 mm size (SS 5)	1 Cum	362	
63		-do- 12mm to 14 mm size (IRC and MORTH)	1 Cum	362	
64	S	- do - 20 mm size (SS 5)	1 Cum	293	
65		-do- 19 mm to 22 mm size (IRC and MORTH)	1 Cum	293	
66	T	- do - 25 mm size (SS 5)	1 Cum	287	
67	U	- do - 40 mm size (SS 5)	1 Cum	170	
68		-do- 40 mm to 45 mm size (IRC and MORTH)	1 Cum	170	
69	V	- do - 50 mm size (SS 5)	1 Cum	150	
70		-do- 50 mm to 55 mm size (IRC and MORTH)	1 Cum	150	
71	33.w	- do - 65 mm size (SS 5)	1 Cum	142	
72		-do- 60 mm to 65 mm size (IRC and MORTH)	1 Cum	142	
73	X	- do - 75 mm size (SS 5)	1 Cum	117	
74		- do - 75 mm size (IRC & MORTH)	1 Cum	117	
75	Y	- do - 75 to 100 mm size (SS 5)	1 Cum	92	
76		- do - 75 to 100 mm (IRC & MORTH)	1 Cum	92	
		OTHER ITEMS			
77	33.z1	Laterite 40 to 75 mm (ring)	1 Cum	101	
78	z2	kankar, hard broken kankar 40 to 75 mm (ring)	1 Cum	75	
79	z3	Soling stone of 150 mm size of granite, trap and Dolomite varieties.	1 Cum	95	

RATES OF MATERIALS & WORK ITEMS SSI No.	S.S. Item No.	Description	Unit (per)	S o Rate for 2016-17 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	As proposed by WR Dept.
81	z4	Soling stone of 150 mm size other than granite variety	1 Cum	76	
82	z5	Soling Stone laterite, Kankar 150mm, surface stone	1 Cum	47	
83	z6	Field picked metal unbroken 20 mm size	1 Cum	61	
84	z7	- do - 25 mm size	1 Cum	46	
85	z8	- do - 40 mm size	1 Cum	53	
86	z9	- do - 50 mm size	1 Cum	46	
87	z10	- do - 60 mm size	1 Cum	40	
88	z11	- do - 80 mm size	1 Cum	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	
90	34	Gravel	1 Cum	103	As per WR Dept. (M 008 of Material)
91	35 a	Quarry rubbish	1 Cum	89	
92	B	HBG Stone Chips 2.36mm and below	1 Cum	350	As per WR Dept. (Sl.No.67 of Material)
93	36.a	Fine aggregate / Sand (un-screened) for Concrete & Filtering items) (excluding Seigniorage charges)	1 Cum	95	As per WR Dept. (Si. No. 27 of Material)
94	b.	Fine aggregate / Sand (unscreened) for filling (excluding Seigniorage charges)	1 cum	95	
95	c	Fine aggregate / Sand (screened) for Mortar, Plastering items and Sand blasting items (excluding Seigniorage charges) (Rs. 70/- is added towards screening charges)	1 Cum	165	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	
		(C) LIME AND CEMENT			
97	40 to 41(c)			As per local prevailing rates based on competitive rates	

RATES OF MATERIALS & WORK ITEMS SSI No.	S.S. Item No.	Description	Unit (per)	S o Rate for 2016-17 in Rs.	Remarks
1	2	3	4	5	6
98	42	Cement excluding cost of empty cement bags	1 MT	Monthly rates will be communicated by Govt	
NOTE: (1) The rates are inclusive of sales tax. 2)As per the rates applicable to the District. 3) Least of the (1) and (2) above may be allowed 4) 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	100	
100	D	Shell lime slaked and screened	1 Cum	987	
101	E	White cement	1 Kg.	36	
102		(D) MORTARS			
103	43 to 45	Items 43 to 45			
		(E) METAL AND IRON WORKS			
104		Mild steel rods 6mm dia.	1 MT	Monthly rates communicated by 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 inclusive of sales tax. 2)As per the rates applicable to the District. 3) Least of the (1) and (2) above may be allowed 4) The prices of steel will be reviewed and fixed on monthly basis and rates will be communicated separately.			
		III RATES OF WORKS			
		(A) CLEARING SITE			
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	
114	a.2	- do - 100 to 200 cm.	Each	48	
115	2.b.1	Uprooting and removing Palmyrah stumps including stacking of girth 30 to 100 cm.	Each	51	
116	b.2	- do - 100 to 200 cm.	Each	53	
117	2.c.1	Cutting and removing date trees including stacking of girth 30 to 100 cm	Each	26	
118	c.2	- do - 100 to 200 cm	Each	39	

RATES OF MATERIALS & WORK ITEMS SSI No.	S.S. Item No.	Description	Unit (per)	S o Rate for 2016-17 in Rs.	Remarks
1	2	3	4	5	6
119	2.d.1	Uprooting and removing stumps of date trees including stacking of girth 30 to 100 cm.	Each	26	
120	d.2	- do - 100 to 200 cm	Each	33	
121	2.e 1	Cutting and removing other kind of trees including stacking of girth 30 to 100 cm	Each	33	
122	e.2	- do - 100 to 200 cm	Each	51	
123	e.3	- do - above 200 cm	Each	83	
124	2.f.1	Uprooting and removing stumps of other kind of trees including stacking of girth 30 to 100 cm.	Each	26	
125	f.2	- do - 100 to 200 cm	Each	36	
126	f.3	- do - above 200 cm	Each	45	
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) DISMANTLING			
	5	DISMANTLING, CLEARING AWAY MATERIALS USEFUL FOR REUSE.			
137	a.i	Dry rough stone revetment for aprons and stacking within 40 metres	1 cum	65.60	
	7	Drilling holes in hard granite or sheet rock			
	a)	Manually (Hand)			
138	i)	20 mm dia meter	1 RM	136	
139	ii)	25 mm dia meter	1 RM	144	
140	iii)	36 mm dia meter	1 RM	166	
141	b)	Pneumatic Compressor			
142	i)	20 mm dia meter	1 RM	154	
143	ii)	25 mm dia meter	1 RM	167	
144	iii)	36 mm dia meter	1 RM	182	

RATES OF MATERIALS & WORK ITEMS SSI No.	S.S. Item No.	Description	Unit (per)	S o Rate for 2016-17 in Rs.	Remarks
1	2	3	4	5	6
	8	Grouting the holes with neat cement slurry excluding cost of steel			
145	i)	20 mm dia meter	1 RM	97	
146	ii)	25 mm dia meter	1 RM	122	
147	iii)	36 mm dia meter	1 RM	152	
		White Washing and Painting works			
148	A	White washing and colour banding for guard and guide stones including cost of materials	Each	10	
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	
		(S) ROAD WORK ITEMS			
		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 OF GRAVEL 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			
		(For a compact thickness)			
	1 (i)	HARD METAL			
152	A	40 mm thickness	10 sqm	70	
153	B	50 mm thickness	10 sqm	74	
154	C	75 mm thickness	10 sqm	80.30	
155	D	100 mm thickness	10 sqm	87	
156	1 (ii)	(For compact thickness of soft metal)			
157	A	50 mm thickness	10 sqm	53.80	

RATES OF MATERIALS & WORK ITEMS SSI No.	S.S. Item No.	Description	Unit (per)	S o Rate for 2016-17 in Rs.	Remarks
1	2	3	4	5	6
158	B	75 mm thickness	10 sqm	63.90	
159	C	100 mm thickness	10 sqm	70.10	
	5	Picking old metalled 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)			
		HARD METAL			
160	5 (a)	40 mm thick ness	10 sqm	185	
161	(b)	50 mm thick ness	10 sqm	210	
162	(c)	75 mm thick ness	10 sqm	231	
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	73	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	11	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		deleted
169		Road marking paint confirming to IS 164(For MORTH data, for works of State & National high ways only)	Per Kg	196	
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		deleted
173		Binding Wire	1 Kg	60	As per WR Dept. (M 072 of Material) other

RATES OF MATERIALS & WORK ITEMS SSI No.	S.S. Item No.	Description	Unit (per)	S o Rate for 2016-17 in Rs.	Remarks
1	2	3	4	5	6
					than covered under irrigation items
174		Jute rope	Mtr	8.75	
175		De bonding strips	Mtr	11.00	
176		Selent	Ltr	69.50	
177		Poly sheet 125 microns	1 sqm	18.00	
178		Rural water rate	1 kl	77.00	

HIRE CHARGES OF PLANT AND MACHINERY

**HIRE CHARGES OF PLANT & MACHNIERY FOR
ROAD & BRIDGE WORKS FOR THE YEAR 2016-17**

Sl. No.	Description		Unit	S o Rate for 2016-17 in Rs.	Remarks
	Machine	Activity			
1	2	3	4	5	6
1	Dozer(D 80)	Spreading	Per Hour	2562.60	As per WR Dept. (S.No.8)
		Cutting			
		Cleaning			
2	Dozer (D50)	Spreading Cutting Cleaning	Per hour	1649	
3	Mortor Grader	Clearing	Per Hour	3220	
		Spreading			
		GSB			
		WMM			
4	Hydraulic Excavator	Soil Ordinary	Per Hour	2815.90	As per WR Dept. (S.No.52)
		Soil Marshy			
		Soil unsuitable			
5	Front end loader	Soil loading	Per Hour	1650	
		Aggregate loading	Per Hour		
6	Tipper- 5.5 Cum	Transportation of soil, GSB,WMM, Hot mix etc	Per Hour	924.10	As per WR Dept. (S.No.54)
7	Vibratory roller 8 tonne	Earth/Soil, GSB,	Per Hour	2637.20	As per WR Dept. (S.No.62)
		WMM			
8	Smooth wheeled roller 8 tonne	Soil compaction ,BM compaction	Per Hour	1122.10	As per WR dept. (S.No.50)
9	Water tanker 8 Kilolitre	Water transport	Per Hour	879.90	As per WR Dept. (S.No.64)
10	Water tanker 6 Kilolitre	Water transport	Per Hour	630	
11	Tractor	Pulling	Per Hour	415	
12	Tractor with rotavator	GSB mixing @ site	Per Hour	425	
13	Tractor with ripper attachment	Scarifying	Per Hour	425	
14	Air Compressor 5 cmm(electric)	General purpose	Per Hour	462.20	As per WR Dept. (S.No.2)
15	Wet mix plant 60 TPH	Wet mix	Per Hour	1650	
16	Mechanical broom Hydraulic	Surface cleaning	Per Hour	375	
17	Bitumen Pressure Distributor	Applying bitumen tack coat	Per Hour	1500	
18	Emulsion Pressure Distributor	Applying emulsion tack coat	Per Hour	860	
19	Hot mix Plant – 120 TPH capacity	DBM/BM/SDC	Per Hour	28200	
		/Premix			

Sl. No.	Description		Unit	S o Rate for 2016-17 in Rs.	Remarks
	Machine	Activity		5	
1	2	3	4	6	
20	Hot mix Plant – 100 TPH capacity	DBM/BM/SDC /Premix	Per Hour	24200	
21	Hot mix Plant – 60 TPH capacity	DBM/BM/SDC /Premix		21700	
22	Hot mix Plant – 40 to 60 TPH capacity	DBM/BM/SDC /Premix	Per Hour	19200	
23	Paver Finisher Hydrostatic with sensor control 100 TPH	DBM/BM/SDC /Premix		3060	
24	Paver finisher Mechanical 100	Paving of WMM, paving of DLC	Per Hour	2250	
25	Hydraulic Chip Spreader	Surface dressing	Per Hour	2695	
26	Tandem Road roller	Rolling of Asphaltic surface	Per Hour	1650	
27	Pneumatic Road roller	Rolling of Asphaltic surface	Per Hour	1347	
28	Pot-Hole repair machine	Repair of pot-holes	Per Hour	887	
29	Bitumen boiler oil fired	Bitumen Spraying	Per Hour	219	
30	GSB Plant 50 Cum	Producing GSB	Per Hour	1257	
31	Mastic Cooker	Mastic wearing coat	Per Hour	78	
32	Batching and Mixing Plant (a) 30 Cum capacity	Concrete mixing	Per Hour	1231.90	
	(b) 15 - 20 Cum capacity	Concrete mixing	Per Hour	998.20	As per WR Dept. (S.No.10)
33	Transit mixer	Transportation of concrete mix	Per Hour	1915.00	As per WR Dept. (S.No.1)
34	Concrete pump of 45 and 30 cum	Pumping of Concrete	Per Hour	1505.30	As per WR Dept. (S.No.71)
35	Cranes				
	(a) 80 tonnes	Lifting purpose	Per Hour	1288	
	(b) 35 tonnes			870	
	(c) 3 tonnes			422	
	(d)Crane with grab bucket 0.75 cum	Well foundation	Per Hour	2268	
	(e)Crane with grab bucket 1 cum	Well foundation	Per Hour	3709	
36	Concrete bucket 1.50 cum	For pouring concrete	Per Hour	15.80	As per WR Dept. (S.No.14)
37	Kerb casting machine	Kerb making	Per Hour	660	
38	Concrete mixer (a)0.28 cum	Concrete mixing	Per Hour	471.10	As per WR Dept. (S.No.18)
	(b) 1.0 cum			620	

Sl. No.	Description		Unit	S o Rate for 2016-17 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	6023	
40	Concrete paver finisher with 40 HP motor	Paving of concrete surface	Per Hour	3190	
41	Integrated stone crusher	Crushing of spalls 100 TPH	Per Hour	9583	
		Crushing of spalls 200 TPH	Per Hour	20206	
42	Pre stressing jack with pump and access	Stressing of steel wires/ stands	Per Hour	155	
43	Generator				
	250 KVA	Generation of electric energy	per hour	1850	
	125 KVA		per hour	1320	
	100 KVA		per hour	1126	
	30 KVA		per hour	832.30	As per WR Dept. (S.No.23)
44	Pneumatic sinking of Plants	Pneumatic sinking of wells	Per K.m.	5600	
45	Truck 5.5 cum per 10 tonnes	Material transport	Per her	891.50	As per WR Dept. (S.No.58)
46	Road marking Machine	Road marking	Per Hour	133	
47	Mobile slurry seal equipment	Mixing and laying slurry seal	Per Hour	1239	
48	Plate compacter	For compacting in medians	Per Hour	58	
49	Drilling equipment	For drilling	Per Hour	840.90	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

PUBLIC HEALTH ITEMS			
Sl. No.	Description	Unit	SoR for 2016-17
1	2	3	4
1	RATES OF LABOUR (SKILLED WORKMEN)		
	1. Caulkar	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	RATES FOR EARTH WORK :		
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 relvent 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.	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 more 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, nuckles 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, nuckles 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, nuckles and chisels including stacking.		
f.	For contolled blasting at restricted places		

Sl. No.	Description	Unit	SoR for 2016-17
1	2	3	4
	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 upto 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 upto 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 hammala charges if prevailing.		
8. a.	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 Metre	
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)		

Sl. No.	Description	Unit	SoR for 2016-17
1	2	3	4
	DIAMETER OF PIPE/Fittings in mm :		To follow as per AP.Standard data
	80mm to 750mm dia		
	800	Per Meter	567
	900	Per Meter	737
	1000	Per Meter	958
	1100	Per Meter	1180
	1200	Per Meter	1403
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	16304
	1000	Each Joint	18215
	1100	Each Joint	20123
	1200	Each Joint	22033
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 :		To follow as per AP.Standard data
	80mm to 750mm dia	Each Joint	
	800	Each Joint	6836
	900	Each Joint	8040
	1000	Each Joint	9259
	1100	Each Joint	10508
	1200	Each Joint	11802
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 upto 500 Meters excluding cost of rubber rings as per BIS No.783/85.		
	per every 25 mm dia.	Per Meter	21.40
11b	Lowering the RCC S/S pipes carefully into the ready made trenches laying them true to alignment and gradient, jointing with rubber rings and testing including filling with water with a water lead upto 500 meters including cost of rubber rings as per BIS No. 783/1985		

Sl. No.	Description	Unit	SoR for 2016-17
1	2	3	4
	per every 25 mm dia.	Per Meter	To follow as per AP.Standard data
	80mm to 600mm		
	700		343
	800		412
	900		494
	1000		592
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		
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 refiling.		
	DIA in mm		
	50	Per Meter	33
	40	Per Meter	33
	32	Per Meter	33
	25	Per Meter	30
	20	Per Meter	28
	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.		
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.		To follow as per AP.Standard data
	Outer Dia of pipes in MM		
	63 to 355 mm dia		
	400		255
	450		282
17	Labour charges for fixing Air valves including boring the mains and threading the bore fixing nipple etc., complete.		
	Dia of Air valve in mm.		
	25	Each	To follow as per AP.Standard data
	40	Each	
	50	Each	177
	65	Each	188
	80	Each	204
	100	Each	242
	125	Each	376
	150	Each	412

Sl. No.	Description	Unit	SoR for 2016-17
1	2	3	4
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.		
	Dia of Air valve in mm.		
	25	Each	167
	40	Each	189
	50(Double Air valves)	Each	201
	65	Each	215
	80	Each	235
	100	Each	274
	125	Each	428
	150	Each	469
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	520
	700	Each cut	534
	750	Each cut	575
	800	Each cut	612
	900	Each cut	687
	1000	Each cut	764
	1100	Each cut	842
	1200	Each cut	918
23	Cutting A.C. Pipes without water in mains.Dia of pipes in mm.	Each cut	
	Dia of Pipes in mm		
	80	Each cut	34
	100	Each cut	34
	125	Each cut	34
	150	Each cut	34
	200	Each cut	35
	250	Each cut	58
	300	Each cut	58
	350	Each cut	72
	400	Each cut	79
	450	Each cut	98
	500	Each cut	109
	600	Each cut	120
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 upto 75 mm thick) including water bound macadam	10 Sqm	656
	b) Cutting open C.C. road surface	1 Cum	1822

Sl. No.	Description	Unit	SoR for 2016-17
1	2	3	4
	c) Cutting open water bound macadam road including soiling	1 Cum	224
26	Bailing out water.(For PH item)		
	a) Bailing out water from the pipe line trenches with oil engine driven pumpsets, including hire charges, fuel charges and wages for Driver and Helper.	HP/Hour	53
	b) Bailing out water from the pipe line trenches with Electric Driven pumpset including hire charges, current charges and wages for Driver and Helper.	HP/Hour	39
	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.		
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	11671
	b) 1 to 2 m deep under water.	10 Cum	16717
	c) 2 to 5 m deep under water.	10 Cum	25092
	d) Beyond 5 m deep under water for every additional 1 m depth over item 'c'	10 Cum	4794
	NOTE:- The above rates do not include rock requiring blasting or chiseling		
30	Laying and jointing perforated RCC pipes 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	36
	per every 25 mm dia.		
31	Centring 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)		3488
	2) Slabs for thickness above (300 mm)		6974
	3) Side walls curved surfaces.		2635
	4) Side wall straight surfaces.		2345
	5) Dome.		2857
	6) Roof Slab.		1758
	7) Column braces and beams		1176
	8) Circular braces, ring beams & circular column.		1290
	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%		

Sl. No.	Description	Unit	SoR for 2016-17
1	2	3	4
b)	For Ground level works :-		
	1) Slabs	1 Sqm	To follow as per AP.Standard data
	2) Beams & Lintels	1 Cum	
	3) Sun shades	1 Sqm	
	4) RCC vertical walls of plane surface	1 Sqm of centering area	876
	5) RCC vertical walls of circular faces	1 Sqm of centering area	1115
	NOTE: Scaffolding for every extra height of 1 m or part thereof but not less than 0.5 m. The above centering charges are applicable for water retaining structures only.		
32	Lift or delift of materials :		
	a) Lifting of cement concrete for RCC elevated reservoir. For every 1m height or part thereof over the initial lift of 3 m	1 Cum	143
	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 thereof beyond the initial depth of 3 meters from ground level.	1 Cum	44
39	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 execavation etc., complete.		100% extra over the cost of work
40	Removal of wet silt and sludge from sullage drains with aid of baskets and vessels.	10 Cum	2071
43	Rates for OHSRs/ELSRs including fixtures with a staging of 15 m, without Seismic analysis.		
a	500 Kilo litres	Per litre	15.9
b	1000 Kilo litres	Per litre	13.2
c	1500 Kilo litres	Per litre	11.9
d	2000 Kilo litres	Per litre	11.1
e	2500 Kilo litres	Per litre	10.4
	1) The above rates are arrived with base rate of Cement Rs.5000/- per MT & Steel for Rs36000/- per MT for the month of April 2016		
	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 SBC of 15 T/Sqm.		
	a) For every decrease of 2.50 T/Sqm of SBC, the rate shall be increased by 2.50% on basic rate .		

Sl. No.	Description	Unit	SoR for 2016-17
1	2	3	4
	b) For every increase of 2.5 T/Sqm of SBC, the rate shall be decreased by 1.0% on basic rate.		
	c) For SBC below 10T/sqm , solid raft shall be provided and for solid raft the rate shall be increased by 10% on basic rate.		
	5) For staging less than 15 m, the rate shall be decreased by Rs.0.05 paise on basic rate per litre per every Meter decrease in staging.		
	6) For staging above 15 m, the rate shall be increased by Rs.0.10 paise on basic rate per litre 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-5000) x (0.07/5000)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-36000) x (0.02/36000) Rs = Rate of Steel (Rs per MT) at the time of preparation of estimate.		
	9) Rate inclusive of three coats of epoxy paint Food Grade of best quality to inner surface of the Reservoir including roof.		
	10) The above rates are adopted for preparation of estimate for construction of ELSRs/OHSRs for finished work including 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.		
	11) The above rates adopted for a wind pressure upto "350 kg/sq m". For every 100 kg/sqm decrease in wind pressure, the rate shall be decreased by 5%		
	12) For tribal/Agency / Rural area, the above rates as arrived upto shall be increased by 10%.		
	13.The Basic rate is adopted by considering the design for Seismic forces for Zone-I & II only of seismic zones.		
	(a) The basic rates shall be increased by 33 1/3 % for Zone-III of seismic zones.		
	14. The ELSR/OHSR shall be designed with minimum of two rows of columns for capacities above 500 KL & upto 1000KL.		
	15. The ELSR/OHSR shall be designed with minimum of three rows of columns for capacities above 1000KL.		
	16) The basic rate is inclusive of following Fixtures		
	i) Pipe connections & Specials with D.I materials		
	(a) All pipe conections 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 conforming to the specification of SoR item No.28 (c) All specials such as Bends,Tees, Reducers, Duckfoot Bends,Bell mouths etc., shall be of DI material.		
	II) The sizes of the verticals for ELSR/OHSR shall be:		

Sl. No.	Description	Unit	SoR for 2016-17
1	2	3	4
	a) For 500 KL to 750 KL ELSRs Inlet Pipe - 300mm dia. Out let Pipe - 350mm dia Over Flow pipe - 350m dia Scour Pipe - 200mm dia		
	b) For 800 KL to 1500 KL ELSRs Inlet Pipe - 400mm dia. Out let Pipe - 450mm dia Over Flow pipe - 450m dia Scour Pipe - 200mm dia		
	c) For above 1500 KL to 2500 KL ELSRs Inlet Pipe - 400mm dia. Out let Pipe - 500mm dia 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 side and collapsible MS gate on front side up to 1st 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.		

Sl. No.	Description	Unit	SoR for 2016-17
1	2	3	4
	xiii) Compound wall: 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 shall be 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 Gound level, over a bed of CC(1:4:8)- 100mm thick. 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 angulars of 25mm X 25mm X 4mm in "Y" shape to hieght of 0.60m, with embedded length of 150mm in concrete. The barbed wire fencing with 3 ply of 18 gauge shall be streched 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		
	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.: <ul style="list-style-type: none"> i) 500 KL : 0.086% ii) 1000 KL : 0.047% iii) 1500 KL : 0.034% iv) 2000 KL : 0.026% v) 2500 KL : 0.022 % For intermediate capacities, interpolated percentages shall be adopted.		
	xiv) Staff Quarter shall be constructed for a minimum plinth area of 40 sqm with the following specification: RCC framed structure withconcrete grade not less than M20 design mix at the locations specified by the department at the time of execution with verandah, hall, bed room, kitchen and bath &W/C with floor area of 40.00sqmts excluding balconies and staircases.		

Sl. No.	Description	Unit	SoR for 2016-17
1	2	3	4
	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 openable 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.		
44	Rates for OHSRs/ELSRs including fixtures with a staging of 10 m without Seismic analysis.		
a	Upto 10,000 Litres capacity	Per litre	51.1
B	15,000 Litres capacity	Per litre	35.1
C	20,000 Litres capacity	Per litre	34.5
D	40,000 Litres capacity	Per litre	30.6
E	60,000 Litres capacity	Per litre	23.2
F	1,00,000 Litres capacity	Per litre	21.4
g	2,00,000 Litres capacity	Per litre	18.7
H	3,00,000 Litres capacity	Per litre	17.6
i	4,00,000 Litres capacity	Per litre	15.5
j	4,50,000 Litres capacity	Per litre	13.4
	NOTE: -1) For intermediate ranges proportional rates may be adopted. All VRCC shall be in M30 grade design mix.		
	2)The above rates are applicable for Elevated Level Services Reservoirs / OHSRs with RAFT FOUNDATION and a rate of Rs.5,000/- per tonne for cement and Rs.36,000/- per tonne for steel.		
	3) For every Meter of staging less than 10 m, the rate shall be reduced by Rs.0.05 paise per litre 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 paise per litre 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-5000) x (0.07/5000) 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-36000) x (0.02/36000) Rs = Rate of Steel (Rs per MT) at the time of preparation of estimate.		
	7) Rate inclusive of three coats of epoxy paint to inner surface of the reservoir including roof dome.		

Sl. No.	Description	Unit	SoR for 2016-17
1	2	3	4
	8) The above rates shall be adopted for estimate purposes for construction of ELSR for a finished work including 2 coats of wheather 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 upto 350 kg / sq m .For decrease in wind presure the rate has to be decreased by 5% per every 100kg/sqm. If the ELSR / OHSR is to be designed for seismic forces also, cost shall be arrived by working out detailed quantities based on the designs.		
	10) For Tribal/Agency/ Rural area, the above rates shall be increased by 10%		
	11) If the ELSR is to be designed for seismic forces also, cost shall be arrived by working out detailed quanitites 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 upto Zone-II earth quake. b) for Zone-III earth quake the above rates are to be increased by 33 1/3% .		
	13) The rate is proposed duly adopting the 2015-16 rate of SSR with the Steel & Cement rates of April -2016		
	13) Fixtures include :		
	a) RCC or Aluminium ladder inside 0.60 m wide.		
	b) spiral staircase on the outside shall be provided upto 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 upto 1.0 height.		
	c) Lightening arrestor, including conductor and earthing 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 upto 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 conenction and valves. All valves near inlet, out let and for scour of ELSRs shall be D.I valves of heavy duty confirming to the specification of SoR item No.28		

Sl. No.	Description	Unit	SoR for 2016-17
1	2	3	4
45	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 & consumables etc.,complete.		
	1) 2.0 Mld	Per litre	3.8
	2) 5.0 Mld	Per litre	3.1
	3) 10.0 Mld	Per litre	2.8
	4) 20.0 Mld	Per litre	2.4
	5) 30.00 mld and above	Per litre	2.1
	NOTE :-		
	a) For Intermediate Capacities proportional rates may be adopted		
	b)The above rates are arrived with base rate of Cement Rs.5000/- per MT & Steel for Rs36000/- per MT for the month of April 2016		
	c) The above rates shall be increased / decreased due to increase/decrease in the cost of cement by Basic rate x (Rc-5000) x (0.07/5000) 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-36000) x (0.02/36000)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 Stian 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 proposed duly adopting the 2015-16 rate of SSR with the Steel & Cement rates of April -2016		
	The above rates of Filtration Plants shall include all the following components.		
	A) Civil Works (All works of VRCC Shall be in M30 design mix)		
	1). Stilling Chamber and Aeration cascade		
	2). Raw water channel with Stainless Steel Weir of SS 304 L Grade material and also with digital flow meters		
	3) Flash Mixer chamber with Flash mixing arrangements including SS shaft & SS Blades with gear wheel arrangements etc.,using 304 L Grade Steel.		

Sl. No.	Description	Unit	SoR for 2016-17
1	2	3	4
	4) Clarifluculator / Flocculation tanks with the components of central driven circular clarifier with scrapper & bridge arrangements made with Stainless Steel Grade 304 L tubes /angulars for durability & chemical resistant with wheel arrangements etc.,		
	5) 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.		
	6) 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		
	7) Chlorine contact tank		
	8) 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 minmum size of 2.40 X 2.40 mts. a) Main Doors of all individual Buidings shall be made of Best Teak wood b) Other Internal Doors of the buildings shall be of Compreesed wood/ Aluminium/ UPVC materials. c) Ventilators shall be provided for each building/structure of suitable size as per NBC statndards.		
	9) 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 Clarifloculator/ 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		
	10) The Pipe gallery way for Clear water/ Back wash water/ pipe connections shall be suffuiently spaced for easy operation & maintenance and inspection, as per standard norms.		
	11) 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		
	12) 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.		
	13) Inspection / Path ways in filter beds : Middle pathway: Minimum of 1.50m, Side pathway: Minimum of 1.20m.		

Sl. No.	Description	Unit	SoR for 2016-17
1	2	3	4
	14) 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.		
	15) The basement of the Filtration plant building shall be minimum of 1.20m above the existing nearby Road top level.		
	16) Minimum head room of 2.00m shall be provided , at the alum mixing chambers in alum store for inspection & maintenance		
	17) 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) 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.		
	19) UPVC pipes shall be provided for under drain system.Filter pipe manifolds shall be assembled with HDPE pipes.		
	20) Alum storage capacity shall be designed for minimum period of 90 days. Consumables shall be provided for 2115 Running Hours of WTP.		
	21) Chlorinator : Vaccum type chlorinator shall be provided with following specifications:a) Vaccum operated solution feeding type Vaccum Regulator, Rotometer, Rate setting Valve, built-in NRV, Gas Overflow out let by manifolding to mount the system with the unit.b) The unit shall consists of Ejector with necessary accessories such as Check Valve, Drain Valve and Vacum 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 diaphram 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 accssories, civil and mechanical works,manifold header installations, injector fixing, connection with UPVC pipes, solution pipings, fixing of motors as per standard speicfications and commissioning of Cholirnation Plant to the required demand, with a deffect liability period of 1 year. The cholrinator of may be of any reupted 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.		

Sl. No.	Description	Unit	SoR for 2016-17
1	2	3	4
	iii) 20 MLD to 50 MLD Plants - 5 Kg/hr Chlorinator - For Post Chlorination.		
	B) Mechanical Equipment		
	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 euqipment 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 pumpsets 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.		
	C) Electrical Equipment		
	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 / Aluminum chequed plate.		
	6) Min LUX levels inside the treatment plant shall be maintained.		
	7) Yard lighting shall be provided as per norms.		
	D) Equipment for Flow measurements		
	1) Equipment for measuring Conductivity, Turbidity, Ph value, Residual Chlorine with recording & data storage facility (Computer based) & Alarm by SMS or other methods.		

Sl. No.	Description	Unit	SoR for 2016-17
1	2	3	4
	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.		
	Hardware:		
	i) Wall mounted Sensor House for measuring Raw water & Clear water flow from Filter bed out lets with accessories consists of		
	ii) Electrode Type: General type, Scraper type or replaceable type Electorde made with material of SS external Ultra Touch Sensors as per requirement.		
	iii) Customised 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 equalent make.		
	iv) Customised 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 equalent make.		
	v) Customised Application Requirement: Centralized System with two serial interfaces, 3 Nos 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, sendind data to the Web Server, Communication with GPRS , operated with Battery Power of any reputed make or any equalent make.		
	Software:		
	The software shall be designed with Web Domain with Data Base Server and Web Name as per the directions of the Departmental Authorities		

Sl. No.	Description	Unit	SoR for 2016-17
1	2	3	4
	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	2		
1	Manufacture, Supply and Delivery of R.C.C. Plain ended pipes conforming to B.I.S 458/2003 , Ex-factory, Excluding transportation, taxes & duties			
	Size	Unit	SoR For 2016-17	
			NP - 2 Class	NP - 3 Class
	80 mm dia	Meter	134	
	100 mm dia	Meter	156	
	150 mm dia	Meter	185	
	200 mm dia	Meter	221	
	225 mm dia	Meter	240	
	250 mm dia	Meter	255	
	300 mm dia	Meter	366	859
	350 mm dia	Meter	457	1030
	400 mm dia	Meter	527	1136
	450 mm dia	Meter	645	1305
	500 mm dia	Meter	706	1411
	600 mm dia	Meter	1047	2136
	700 mm dia	Meter	1336	2650
	800 mm dia	Meter	1642	3502
	900 mm dia	Meter	2072	4397
	1000 mm dia	Meter	2531	5473
	1100 mm dia	Meter	2982	6455
	1200 mm dia	Meter	3555	7604
	1400 mm dia	Meter	4864	9800
	1600 mm dia	Meter	5604	12717
	1800 mm dia	Meter	7374	16868
				22602

Note : All the prices are ex-works. Excise duty, CST/VAT extra as applicable at the time of supply.

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

Cost Cement. Rs.5, 000/- per MT (including all taxes and freight).

Steel (M.S. Rods) - Rs.36, 000/- per MT. (including 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 = $(S2-S1)/1000 \times Ws$.

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

S1 = Rs. 36,000/- , S2 = Cost of M S Rods (Rs. Per MT including all taxes and freight) at the time of preparation of estimate.

C1 = Rs 5,000/- C2 = Cost of Cement (Rs. Per MT including 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				
	2				
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 taxes & duties				
	Size	Unit	SoR For 2016-17		
			NP - 2 Class	NP - 3 Class	NP - 4 Class
	80 mm dia	Each	42		
	100 mm dia	Each	43		
	150 mm dia	Each	44		
	200 mm dia	Each	61		
	225 mm dia	Each	64		
	250 mm dia	Each	70		
	300 mm dia	Each	93	132	132
	350 mm dia	Each	115	166	166
	400 mm dia	Each	127	189	189
	450 mm dia	Each	200	252	252
	500 mm dia	Each	226	300	300
	600 mm dia	Each	308	393	393
	700 mm dia	Each	401	526	526
	800 mm dia	Each	564	673	673
	900 mm dia	Each	676	784	784
	1000 mm dia	Each	789	979	979
	1100 mm dia	Each	964	1241	1241
	1200 mm dia	Each	1170	1554	1554
	1400 mm dia	Each	1509	1967	1967
	1600 mm dia	Each	1929	2518	2518
	1800 mm dia	Each	1963	3241	3241

Note: Excise duty, CST/VAT extra as applicable at the time of supply.

The above rates of RCC Collars suitable to plain ended pipes are based on the following raw materials cost.

Cement. Rs.5000/- per MT (including all taxes and freight).

Steel (M.S. Rods) - Rs.36,000/- per MT. (including all taxes and freight).

The revised cost of RCC collars 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 each) due to change in the cost of M.S. Rods = $(S_2 - S_1)/1000 \times W_s$. R2= Variation (increase /decrease) in cost (Rs. per each)due to change in the cost of Cement = $(C_2 - C_1)/1000 \times W_c$.

S1 = Rs. 36,000/- , S2 = Cost of M S Rods (Rs. Per MT including all taxes and freight) at the time of preparation of estimate.

C1 = Rs.5,000/-, C2 = Cost of Cement (Rs. Per MT including all taxes and freight) at the time of preparation of estimate

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

W_c= 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	2			
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, taxes & duties.			
	Size	Unit	SoR For 2016-17	
			NP - 2 Class	NP - 3 Class
	80 mm dia	Meter	169	
	100 mm dia	Meter	192	
	150 mm dia	Meter	223	
	200 mm dia	Meter	274	
	225 mm dia	Meter	298	
	250 mm dia	Meter	317	
	300 mm dia	Meter	446	1104
	350 mm dia	Meter	574	1376
	400 mm dia	Meter	632	1525
	450 mm dia	Meter	787	1682
	500 mm dia	Meter	908	1923
	600 mm dia	Meter	1275	2698
	700 mm dia	Meter	1651	3447
	800 mm dia	Meter	2123	4565
	900 mm dia	Meter	2689	5737
	1000 mm dia	Meter	3279	6452
	1100 mm dia	Meter	3820	7615
	1200 mm dia	Meter	4315	8990
	1400 mm dia	Meter	6186	11902
	1600 mm dia	Meter	7654	15456
	1800 mm dia	Meter	8528	20503
				21185

Note: All the prices are ex-works, Excise duty, CST/VAT extra as applicable at the time of supply. The above rates of RCC S/S Non-Pressure pipes are based on the following raw materials cost.

Cement. Rs.5000/- per MT (including all taxes and freight).

Steel (M.S. Rods) – Rs.36,000/- per MT. (including 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. 36,000/- , S2 = Cost of M S Rods (Rs. Per MT including all taxes and freight) at the time of preparation of estimate.

C1 = Rs. 5,000/- , C2 = Cost of Cement (Rs. Per MT including 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				
	2				
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, taxes & duties.				
	Size	Unit	SoR For 2016-17		
			P1 - Class	P2 - Class	P3 - Class
	80 mm dia	Meter	225	253	288
	100 mm dia	Meter	253	303	350
	150 mm dia	Meter	349	451	556
	200 mm dia	Meter	406	582	768
	225 mm dia	Meter	456	661	854
	250 mm dia	Meter	499	704	892
	300 mm dia	Meter	671	1012	1257
	350 mm dia	Meter	836	1412	1819
	400 mm dia	Meter	993	1873	2409
	450 mm dia	Meter	1053	2220	2956
	500 mm dia	Meter	1412	2400	3352
	600 mm dia	Meter	1933	3582	4638
	700 mm dia	Meter	2580	4706	5875
	800 mm dia	Meter	3227	5567	7084
	900 mm dia	Meter	3888	6529	
	1000 mm dia	Meter	4927	7472	
	1100 mm dia	Meter	5920		
	1200 mm dia	Meter	6922		

Note: All the prices are ex-works, Excise duty, CST/VAT extra as applicable at the time of supply.

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

Cement. Rs.5000/- per MT (including all taxes and freight).

Steel (M.S. Rods) - Rs.36,000/- per MT. (including 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. 36,000/-

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

C1 = Rs. 5,000/-, C2 = Cost of Cement (Rs. Per MT including 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	2				
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 taxes & duties. the Rubber Rings shall be tested at the factory premises confirming to B.I.S. 5382/1985.				
	Size	Unit	SoR For 2016-17		
			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 taxes & duties. the Rubber Rings shall be tested at the factory premises confirming to B.I.S. 5382/1985.				
	Size				
	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

Size					
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			

Note: The duties and taxes as applicable shall be added as per rules at the time of preparation of estimate.

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

Sl.No.	Description	Rate upto 5 Kms Lead including Loading, unloading and 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	2	3	4	5	6
1	Conveyance of R.C.C plain ended pipes on all weathered roads including loading, unloading and stacking (per Meter) SoR for 2016-17				
		NP - 2 Class		NP - 3 Class & NP - 4 Class	
	80 mm dia	3.15	0.14		
	100 mm dia	4.20	0.14		
	150 mm dia	6.30	0.27		
	200 mm dia	8.40	0.27		
	225 mm dia	9.45	0.42		
	250 mm dia	10.50	0.42		
	300 mm dia	14.70	0.56	40.95	1.12
	350 mm dia	21.00	1.26	44.10	1.26
	400 mm dia	23.10	1.40	52.50	1.68
	450 mm dia	30.45	1.68	56.70	1.95
	500 mm dia	32.55	1.95	61.95	1.95
	600 mm dia	47.25	3.08	93.45	4.34
	700 mm dia	59.85	4.34	103.95	5.04
	800 mm dia	70.35	4.34	124.95	5.04
	900 mm dia	80.85	4.34	163.80	9.50
	1000 mm dia	119.70	8.94	197.40	9.50
	1100 mm dia	131.25	8.94	214.20	10.34
	1200 mm dia	149.10	9.50	239.40	10.34
	1400 mm dia	179.55	9.50	325.50	10.76
	1600 mm dia	207.90	9.50	390.60	10.76
	1800 mm dia	239.40	9.50	520.80	15.10

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	2	3	4	5	6
1	Conveyance of R.C.C. Socket and Spigot pipes on all weather roads including loading, unloading and stacking (per Meter of effective length)				
	SoR for 2016-17				
	Size	NP - 2 & P1 Class		NP – 3 & NP - 4 Class	
	80 mm dia	4.20	0.13		
	100 mm dia	4.20	0.25		
	150 mm dia	7.35	0.25		
	200 mm dia	9.45	0.50		
	225 mm dia	10.50	0.50		
	250 mm dia	11.55	1.14		
	300 mm dia	18.90	1.27	49.68	1.52
	350 mm dia	22.05	1.40	54.00	1.77
	400 mm dia	22.05	1.65	66.96	3.31
	450 mm dia	31.50	1.77	73.44	3.31
	500 mm dia	34.65	1.91	81.00	3.56
	600 mm dia	45.15	3.31	109.08	5.08
	700 mm dia	55.65	3.56	146.88	10.04
	800 mm dia	76.65	5.46	173.88	10.04
	900 mm dia	114.45	9.79	200.88	10.04
	1000 mm dia	130.20	9.79	211.68	10.04
	1100 mm dia	147.00	10.04	226.80	10.04
	1200 mm dia	163.80	10.04	253.80	10.29
	1400 mm dia	203.70	10.04	340.20	10.29
	1600 mm dia	241.50	10.29	401.76	11.06
	1800 mm dia	299.25	10.29	535.68	15.12
		P2 – Class		P3 – Class	
	80 mm dia	4.20	0.13	4.20	0.13

	100 mm dia	4.20	0.25	4.20	0.25
	150 mm dia	7.35	0.25	7.35	0.25
	200 mm dia	9.45	0.50	12.60	1.14
	225 mm dia	12.60	1.14	14.70	1.27
	250 mm dia	13.65	1.27	17.85	1.40
	300 mm dia	26.25	1.52	30.45	1.65
	350 mm dia	32.55	1.77	42.00	1.91
	400 mm dia	38.85	1.91	55.65	3.31
	450 mm dia	49.35	3.18	69.30	3.31
	500 mm dia	55.65	3.31	84.00	4.96
	600 mm dia	73.50	3.31	121.80	6.35
	700 mm dia	110.25	6.73	177.45	10.04
	800 mm dia	145.95	9.53	226.80	10.04
	900 mm dia	177.45	10.04		
	1000 mm dia	218.40	10.29		

8. S o R FOR A.C. PIPES

Sl.No	Description				
1	Manufacture, Supply of A.C. Pressure pipes (mazza process) as per BIS No: 1592/2003 as amended from time to time duly marked with BIS mark, including cost of material, incidental handling, loading and packing charges but are exclusive of transportation, unloading, stacking at departmental stores, and excluding excise duty, VAT octroi and other govt. Levies. The pipes shall be tested at factory premises confirming to is code 1592/2003.				
	Size	Unit	SoR For 2016-17		
			Class - 15	Class - 20	Class - 25
	80 mm dia	Rate/Meter	199	217	271
	100 mm dia	Rate/Meter	261	332	408
	125 mm dia	Rate/Meter	341	425	533
	150 mm dia	Rate/Meter	480	597	750
	200 mm dia	Rate/Meter	795	1016	1289
	250 mm dia	Rate/Meter	1008	1306	1635
	300 mm dia	Rate/Meter	1410	1836	2345
	350 mm dia	Rate/Meter	1719	2234	2817
	400 mm dia	Rate/Meter	2235	2922	3627
	450 mm dia	Rate/Meter	2651	3518	4405
	500 mm dia	Rate/Meter	3274	4303	5403
	600 mm dia	Rate/Meter	4656	6078	7745
	700 mm dia	Rate/Meter	6158	8352	10800
	750 mm dia	Rate/Meter	7017	9641	12358
	800 mm dia	Rate/Meter	8029	10923	14019
	850 mm dia	Rate/Meter	9006	12289	15787
	900 mm dia	Rate/Meter	10040	13729	17659
	1000 mm dia	Rate/Meter	12394	16855	21715
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 BIS No. 6530/1972				
	80 mm dia	Rate/Meter	42	42	42
	100 mm dia	Rate/Meter	61	61	61
	125 mm dia	Rate/Meter	67	67	67
	150 mm dia	Rate/Meter	80	80	80
	200 mm dia	Rate/Meter	105	105	105
	250 mm dia	Rate/Meter	126	126	126
	300 mm dia	Rate/Meter	155	155	155
	350 mm dia	Rate/Meter	263	263	263
	400 mm dia	Rate/Meter	396	396	396
	450 mm dia	Rate/Meter	482	482	482
	500 mm dia	Rate/Meter	612	612	612
	600 mm dia	Rate/Meter	658	658	658
	700 mm dia	Rate/Meter	734	734	734
	750 mm dia	Rate/Meter	816	816	816
	800 mm dia	Rate/Meter	859	859	859
	850 mm dia	Rate/Meter	917	917	917

	900 mm dia	Rate/Meter		1000	1000	1000
	1000 mm dia	Rate/Meter		1030	1030	1030
	1. The above rates of AC Pipes are based on the Cement cost of RS 5,000/- per MT (Including all taxes and freight). 2. The above rates of AC pipes are based on the Fiber cost of Rs 78,400/- per M.T (Excluding all taxes & Freight) For any Increase/ Decrease in the rate of cement, the price of AC pipe per Rmt shall be increased/decreased as under. $W \times 0.85 \times IC$ Where W = Weight of pipe in Kg's/Rmt IC = Increase/Decrease in cost of cement/Kg For any increase/decrease in the rate of fiber, the price of AC pipe per Rmt shall be increased/Decreased as under : $W \times 0.15 \times IF$ Where : W=: Weight of pipe in Kg's/Rmt IF = Increase /Decrease in cost of fiber/Kg					
Note:	1) The Fiber rates are to be obtained from A.C. Pipe manufacturer of "Mazza" process. 2) The cement rate shall be communicated by the sub-committee of Board of Chief engineers. 3)The duties and taxes as applicable shall be added as per rules at the time of preparation of estimate					
2	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).			5% on the basic cost of corresponding AC Pressure pipes.		

9. S o R FOR A.C. COUPLINGS

Sl. No.	Description				
1	2				
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 excise duty, VAT and other govt. Levies and testing of joints as per IS Code.				
SoR For 2016-17					
0	Size	Unit	Class - 15	Class - 20	Class – 25
	80 mm dia	Rate/Each	95	103	118
	100 mm dia	Rate/Each	123	133	160
	125 mm dia	Rate/Each	155	171	205
	150 mm dia	Rate/Each	181	226	279
	200 mm dia	Rate/Each	333	363	462
	250 mm dia	Rate/Each	388	489	623
	300 mm dia	Rate/Each	506	656	844
	350 mm dia	Rate/Each	657	848	1083
	400 mm dia	Rate/Each	1012	1320	1691
	450 mm dia	Rate/Each	1211	1597	2051
	500 mm dia	Rate/Each	1445	1932	2467
	600 mm dia	Rate/Each	1770	2221	2840
	700 mm dia	Rate/Each	2339	3149	4096
	750 mm dia	Rate/Each	2639	3608	4657
	800 mm dia	Rate/Each	2994	4060	5253
	850 mm dia	Rate/Each	3336	4541	5888
	900 mm dia	Rate/Each	3691	5048	6554
	1000 mm dia	Rate/Each	4504	6138	7999

1. The above rates of AC Coupling are based on the Cement cost of RS 5,000/- per MT (Including all taxes and freight).
2. The above rates of AC Coupling are based on the Fiber cost of Rs 78,400/- 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 x 0.85 x 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 x 0.15 X 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.

The cement rate shall be communicated by the sub-committee of Board of Chief Engineers.

Note: The duties and taxes as applicable shall be added as per rules at the time of preparation of estimate.

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

Sl. No.	Description				
1	2				
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 VAT. The Rubber Rings shall be tested at the factory premises confirming to B.I.S 5382/1988				
SoR for 2016-17					
	Size	Unit	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

Note: The duties and taxes as applicable shall be added as per rules at the time of preparation of estimate.

11. S o R FOR PRE-STRESSED (NON-CYLINDER) CONCRETE PIPES FOR THE YEAR 2016-17

Sl. No.	Description							
1	2							
1	Manufacture, Supply, Delivery of Pre-stressed (Non-cylinder) concrete pipes conforming to IS 784/2001 ex-factory excluding transportation, taxes & duties., for the following Field/Site Test Pressures. (The manufacture shall design the pipes as per the IS Code 784-2001)							
	Size	Unit	SoR for 2016-17.					
			Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
			6 Kg/cm²	8 Kg/cm²	10 Kg/cm²	12 Kg/cm²	14 Kg/cm²	16 Kg/cm²
	350 MM DIA	Meter	2525	2533	2545	2554	2605	2695
	400 MM DIA	Meter	2713	2733	2762	2795	2844	2885
	450 MM DIA	Meter	2877	2888	2918	2972	3047	3111
	500 MM DIA	Meter	3112	3123	3145	3208	3272	3368
	600 MM DIA	Meter	3572	3596	3627	3735	3852	3966
	700 MM DIA	Meter	4060	4120	4240	4370	4500	4700
	800 MM DIA	Meter	4920	5050	5170	5350	5520	5858
	900 MM DIA	Meter	5660	5830	5990	6260	6490	7000
	1000 MM DIA	Meter	6680	6890	7110	7330	7600	8190
	1100 MM DIA	Meter	7520	7750	8020	8290	8560	9310
	1200 MM DIA	Meter	8460	8790	9090	9290	9850	10770
	1300 MM DIA	Meter	9640	10000	10360	10710	11770	12200
	1400 MM DIA	Meter	11180	11610	12030	12740	13620	14260
	1500 MM DIA	Meter	12660	13160	13630	14890	15460	17340
	1600 MM DIA	Meter	14260	14800	15340	16840	17520	19310
	1700 MM DIA	Meter	15370	15990	16610	18180	20190	21200
	1800 MM DIA	Meter	17024	18095	19036	20891	21820	24210
	1900 MM DIA	Meter	18191	19176	20805	21987	23882	26370
	2000 MM DIA	Meter	19982	21215	22274	24439	27500	28680
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	228	228	228	228	228	228
	400 MM DIA	Meter	246	246	246	246	246	246

	450 MM DIA	Meter	285	285	285	285	285	285
	500 MM DIA	Meter	303	303	303	303	303	303
	600 MM DIA	Meter	372	372	372	372	372	372
	700 MM DIA	Meter	437	437	437	437	437	437
	800 MM DIA	Meter	494	494	494	494	494	494
	900 MM DIA	Meter	541	541	541	541	541	541
	1000 MM IA	Meter	625	625	625	625	625	625
	1100 MM IA	Meter	702	702	702	702	702	702
	1200 MMDIA	Meter	778	778	778	778	778	778
	1300 MM DIA	Meter	882	882	882	882	882	882
	1400 MM DIA	Meter	997	997	997	997	997	997
	1500 MM DIA	Meter	1082	1082	1082	1082	1082	1082
	1600 MM DIA	Meter	1212	1212	1212	1212	1212	1212
	1700 MM DIA	Meter	1319	1319	1319	1319	1319	1319
	1800 MM DIA	Meter	1396	1396	1396	1396	1396	1396
	1900 MM DIA	Meter	1474	1474	1474	1474	1474	1474
	2000 MM DIA	Meter	1552	1552	1552	1552	1552	1552
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	1.30	1.30	1.30	1.30	1.30	1.30
	400 MM DIA	Per K.M/M	1.30	1.30	1.30	1.30	1.30	1.30
	450 MM DIA	Per K.M/M	1.60	1.60	1.60	1.60	1.60	1.60
	500 MM DIA	Per K.M/M	1.70	1.70	1.70	1.70	1.70	1.70
	600 MM DIA	Per K.M/M	1.90	1.90	1.90	1.90	1.90	1.90
	700 MM DIA	Per K.M/M	3.10	3.10	3.10	3.10	3.10	3.10
	800 MM DIA	Per K.M/M	3.10	3.10	3.10	3.10	3.10	3.10
	900 MM DIA	Per K.M/M	3.10	3.10	3.10	3.10	3.10	3.10
	1000 MM DIA	Per K.M/M	5.00	5.00	5.00	5.00	5.00	5.00
	1100 MM DIA	Per K.M/M	5.00	5.00	5.00	5.00	5.00	5.00

	1200 MM DIA	Per K.M/M	9.60	9.60	9.60	9.60	9.60	9.60
	1300 MM DIA	Per K.M/M	9.70	9.70	9.70	9.70	9.70	9.70
	1400 MM DIA	Per K.M/M	9.70	9.70	9.70	9.70	9.70	9.70
	1500 MM DIA	Per K.M/M	9.70	9.70	9.70	9.70	9.70	9.70
	1600 MM DIA	Per K.M/M	10.90	10.90	10.90	10.90	10.90	10.90
	1700 MM DIA	Per K.M/M	10.90	10.90	10.90	10.90	10.90	10.90
	1800 MM DIA	Per K.M/M	11.10	11.10	11.10	11.10	11.10	11.10
	1900 MM DIA	Per K.M/M	11.60	11.60	11.60	11.60	11.60	11.60
	2000 MM DIA	Per K.M/M	11.60	11.60	11.60	11.60	11.60	11.60
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	11000	11000	11000	11000	11000	11000
	400 MM DIA	Per Pair	12600	12600	12600	12600	12600	12600
	450 MM DIA	Per Pair	14200	14200	14200	14200	14200	14200
	500 MM DIA	Per Pair	15870	15870	15870	15870	15870	15870
	600 MM DIA	Per Pair	19000	19000	19000	19000	19000	19000
	700 MM DIA	Per Pair	22283	22283	22283	22283	22283	22283
	800 MM DIA	Per Pair	25500	25500	25500	25500	25500	25500
	900 MM DIA	Per Pair	28760	28760	28760	28760	28760	28760
	1000 MM DIA	Per Pair	31700	31700	31700	31700	31700	31700
	1100 MM DIA	Per Pair	34979	34979	34979	34979	34979	34979
	1200 MM DIA	Per Pair	38200	38200	38200	38200	38200	38200
	1300 MM DIA	Per Pair	41198	41198	41198	41198	41198	41198
	1400 MM DIA	Per Pair	48582	48582	48582	48582	48582	48582
	1500 MM DIA	Per Pair	57000	57000	57000	57000	57000	57000
	1600 MM DIA	Per Pair	63481	63481	63481	63481	63481	63481

	1700 MM DIA	Per Pair	71200	71200	71200	71200	71200	71200
	1800 MM DIA	Per Pair	81400	81400	81400	81400	81400	81400
	1900 MM DIA	Per Pair	94100	94100	94100	94100	94100	94100
	2000 MM DIA	Per Pair	113200	113200	113200	113200	113200	113200
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.							
	Diameter and thickness	Unit	Rate	Diameter and thickness	Unit	Rate		
	80 mm dia x 15 mm thick	Each Flange	740	500mm diax 20 mm thick	Each Flange	7530		
	100 mm dia x 15 mm thick	Each Flange	1016	600 mm diax 20 mm thick	Each Flange	9479		
	125 mm dia x 15 mm thick	Each Flange	1220	700 mm diax 25 mm thick	Each Flange	13407		
	150 mm dia x 15 mm thick	Each Flange	1625	750 mm diax 25 mm thick	Each Flange	14760		
	200 mm dia x 15 mm thick	Each Flange	2030	800 mm diax 25 mm thick	Each Flange	16520		
	250 mm dia x 15 mm thick	Each Flange	2640	900 mm diax 25 mm thick	Each Flange	18959		
	300 mm dia x 15 mm thick	Each Flange	2990	1000 mm diax 25 mm thick	Each Flange	22340		
	350 mm dia x 18 mm thick	Each Flange	4360	1050 mm diax 25 mm thick	Each Flange	23670		
	400 mm dia x 18 mm thick	Each Flange	5440	1100 mm diax 25 mm thick	Each Flange	25590		
	450 mm dia x 18 mm thick	Each Flange	6324	1200 mm diax 32 mm thick	Each Flange	33990		

Note: a) The above rate of PSC pipes are based on the HT wire cost of Rs.52500/-MT (Basic+ CED+ST & freight).

and cement price of Rs5,000/- per MT (including 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 = $(H_2 - H_1)/1000 \times W_h$.

R2= Variation (increase / decrease) in cost (Rs. per meter) due to change in the cost of Cement = $(C_2 - C_1)/1000 \times W_c$.

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

C1 = Rs. 5,000/- C2 = Cost of Cement (Rs. per MT including 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.36, 000/- per MT. Price variation to be released on actual weight of flange.

Note: 1) The duties and taxes as applicable shall be added as per rules at the time of preparation of estimate

2) 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 2016-17

Sl No.	Description										
	2										
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, taxes & duties for the following Field/Site Test Pressures.(The manufacture shall design the pipes as per the IS Code 784-2001)										
	Size	Unit				SoR For	2014-15				
			4 Kg/cm ²	6 Kg/cm ²	8 Kg/cm ²	10 Kg/cm ²	12 Kg/cm ²	14 Kg/cm ²	16 Kg/cm ²	18 Kg/cm ²	
	400 MM DIA	Meter	4840	4840	4840	4860	4910	4940	5000	5040	5080
	450 MM DIA	Meter	5170	5170	5190	5230	5270	5330	5400	5450	5490
	500 MM DIA	Meter	5500	5500	5550	5610	5660	5720	5800	5870	5930
	600 MM DIA	Meter	6320	6400	6470	6540	6610	6680	6800	6900	6970
	700 MM DIA	Meter	7200	7300	7390	7490	7580	7680	7840	7950	8080
	800 MM DIA	Meter	8480	8590	8710	8830	8950	9080	9260	9420	9570
	900 MM DIA	Meter	9660	9810	9970	10120	10280	10440	10870	11080	11330
	1000 MM DIA	Meter	11610	11800	11990	12180	12380	12570	13140	13420	13710
	1100 MM DIA	Meter	12910	13140	13370	13600	13840	14080	14770	15080	15440
	1200 MM DIA	Meter	14370	14640	14920	15200	15480	15760	16590	16980	17370
	1300 MM DIA	Meter	16100	16430	16760	17090	17420	18060	18730	19220	19750
	1400 MM DIA	Meter	18030	18440	18860	19320	20150	20670	21450	21670	22560
	1500 MM DIA	Meter	21300	21740	22180	22620	23470	23960	24610	25600	26150
	1600 MM DIA	Meter	24220	24720	25220	26140	26700	27330	28430	29050	29680
	1700 MM DIA	Meter	26020	26590	27160	28210	28830	30160	30870	31580	32290
	1800 MM DIA	Meter	30740	31370	32480	33180	33890	35380	36170	36970	37770
	1900 MM DIA	Meter	33050	33760	35000	35780	37370	38240	39120	40010	40900
	2000 MM DIA	Meter	34920	36220	37090	37960	39710	40690	41660	42650	43640
2	Cost of laying jointing, testing to hydrostatic field test pressure including cost of site welding and fixing of polypropylene diapher cloth, cost of transportation of water and emptying pipe line after completion of field testing etc.										

	400 MM DIA	Meter	480	480	480	480	480	480	480	480	480
	450 MM DIA	Meter	565	565	565	565	565	565	565	565	565
	500 MM DIA	Meter	615	615	615	615	615	615	615	615	615
	600 MM DIA	Meter	720	720	720	720	720	720	720	720	720
	700 MM DIA	Meter	821	821	821	821	821	821	821	821	821
	800 MM DIA	Meter	942	942	942	942	942	942	942	942	942
	900 MM DIA	Meter	1061	1061	1061	1061	1061	1061	1061	1061	1061
	1000 MM DIA	Meter	1163	1163	1163	1163	1163	1163	1163	1163	1163
	1100 MM DIA	Meter	1318	1318	1318	1318	1318	1318	1318	1318	1318
	1200 MM DIA	Meter	1438	1438	1438	1438	1438	1438	1438	1438	1438
	1300 MM DIA	Meter	1540	1540	1540	1540	1540	1540	1540	1540	1540
	1400 MM DIA	Meter	1695	1695	1695	1695	1695	1695	1695	1695	1695
	1500 MM DIA	Meter	1881	1881	1881	1881	1881	1881	1881	1881	1881
	1600 MM DIA	Meter	2036	2036	2036	2036	2036	2036	2036	2036	2036
	1700 MM DIA	Meter	2293	2293	2293	2293	2293	2293	2293	2293	2293
	1800 MM DIA	Meter	2431	2431	2431	2431	2431	2431	2431	2431	2431
	1900 MM DIA	Meter	2651	2651	2651	2651	2651	2651	2651	2651	2651
	2000 MM DIA	Meter	2823	2823	2823	2823	2823	2823	2823	2823	2823

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	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
	450 MM DIA	Per KM/M	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
	500 MM DIA	Per KM/M	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60
	600 MM DIA	Per KM/M	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80
	700 MM DIA	Per KM/M	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90
	800 MM DIA	Per KM/M	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90
	900 MM DIA	Per KM/M	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90

	1000 MM DIA	Per KM/M	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
	1100 MM DIA	Per KM/M	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
	1200 MM DIA	Per KM/M	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
	1300 MM DIA	Per KM/M	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
	1400 MM DIA	Per KM/M	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
	1500 MM DIA	Per KM/M	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
	1600 MM DIA	Per KM/M	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
	1700 MM DIA	Per KM/M	10.90	10.90	10.90	10.90	10.90	10.90	10.90	10.90	10.90
	1800 MM DIA	Per KM/M	10.90	10.90	10.90	10.90	10.90	10.90	10.90	10.90	10.90
	1900 MM DIA	Per KM/M	10.90	10.90	10.90	10.90	10.90	10.90	10.90	10.90	10.90
	2000 MM DIA	Per KM/M	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50

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/- (including all taxes & freight)

HR Coil (Hot Rolled): - Rs.41, 500/- (including all taxes & freight)

Cement Cost Rs. 5,000/- per MT (including all duties, 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 = $(H_2 - H_1)/1000 \times W_h$.

R2= Variation (increase / decrease) in cost (Rs. per meter) due to change in the cost of HR Coil = $(R_2 - R_1)/1000 \times W_r$.

R3= Variation (increase / decrease) in cost (Rs. per meter) due to change in the cost of Cement = $(C_2 - C_1)/1000 \times W_c$.

H_1 = Rs. 52,500/- H_2 = Cost of HT Wire (Rs. per MT including all taxes and freight) at the time of preparation of estimate.

R_1 = Rs. 41,500/- R_2 = Cost of HR Coil (Rs. per MT including all taxes and freight) at the time of preparation of estimate.

C_1 = Rs. 5,000/- C_2 = Cost of Cement (Rs. per MT including all taxes and freight) at the time of preparation of estimate

W_h =Weight of HT Wire required (Kg.) per Meter of pipe. W_c = Weight of Cement required (Kg.) per Meter of pipe.

W_r = Weight of HR Coil required (kg) per Meter of pipe.

Note: 1) The duties and taxes as applicable shall be added as per rules at the time of preparation of estimate.

2) 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 2016-17

Sl. No	Description											
1	2											
1	Bar Wrapped Steel Cylindrical (BWSC) pipes conforming to IS 15155 - 2002, ex-factory excluding transportation, taxes and duties etc., 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	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
			4 -12 Kg/cm ²	14 Kg/cm ²	16 Kg/cm ²	18 Kg/cm ²	20 Kg/cm ²	22 Kg/cm ²	24 Kg/cm ²	26 Kg/cm ²	28 Kg/cm ²	
	250 MM DIA	Meter	2400	2400	2400	2400	2400	2400	2660	2740	2840	2910
	300 MM DIA	Meter	2680	2680	2680	2680	2680	2790	3190	3300	3420	3540
	350 MM DIA	Meter	3240	3240	3240	3290	3440	3610	3760	3910	4070	4240
	400 MM DIA	Meter	3570	3570	3640	3840	4040	4230	4420	4620	4870	5050
	450 MM DIA	Meter	3990	4020	4280	4520	4780	5020	5310	5570	5810	6100
	500 MM DIA	Meter	4320	4600	4900	5220	5520	5870	6200	6550	6910	7340
	600 MM DIA	Meter	5340	5690	6130	6550	7000	7470	8000	8540	9020	9530
	700 MM DIA	Meter	6500	7080	7660	8240	8940	9620	10240	11150	11730	12320
	800 MM DIA	Meter	7840	8580	9330	10200	11190	12000	13030	13840	14660	15600
	900 MM DIA	Meter	9460	10380	11310	12320	13430	14660	15710	16720	17960	19350
	1000 MM DIA	Meter	11220	12360	13650	14970	16160	17500	18700	20190	21920	23290
	1100 MM DIA	Meter	14720	15020	16400	17930	19410	20970	22880	24350	26210	28110
	1200 MM DIA	Meter	16050	17110	18780	20510	22280	24290	26580	28800	30830	32770
2	Cost of laying jointing, testing to hydrostatic field test pressure including cost of site welding and fixing of polypropylene diaher cloth, cost of transportation of water and emptying pipe line after completion of field testing.											
	250 MM DIA	Meter	327	327	327	327	327	327	327	327	327	327
	300 MM DIA	Meter	385	385	385	385	385	385	385	385	385	385
	350 MM DIA	Meter	456	456	456	456	456	456	456	456	456	456
	400 MM DIA	Meter	509	509	509	509	509	509	509	509	509	509
	450 MM DIA	Meter	509	509	509	509	509	509	509	509	509	509
	500 MM DIA	Meter	638	638	638	638	638	638	638	638	638	638

	600 MM DIA	Meter	784	784	784	784	784	784	784	784	784	784
	700 MM DIA	Meter	914	914	914	914	914	914	914	914	914	914
	800 MM DIA	Meter	1039	1039	1039	1039	1039	1039	1039	1039	1039	1039
	900 MM DIA	Meter	1222	1222	1222	1222	1222	1222	1222	1222	1222	1222
	1000 MM DIA	Meter	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350
	1100 MM DIA	Meter	1587	1587	1587	1587	1587	1587	1587	1587	1587	1587
	1200 MM DIA	Meter	1776	1776	1776	1776	1776	1776	1776	1776	1776	1776
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	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
	300 MM DIA	Per KM/M	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
	350 MM DIA	Per KM/M	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
	400 MM DIA	Per KM/M	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	450 MM DIA	Per KM/M	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30
	500 MM DIA	Per KM/M	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60
	600 MM DIA	Per KM/M	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70
	700 MM DIA	Per KM/M	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90
	800 MM DIA	Per KM/M	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
	900 MM DIA	Per KM/M	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70
	1000 MM DIA	Per KM/M	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
	1100 MM DIA	Per KM/M	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93
	1200 MM DIA	Per KM/M	9.68	9.68	9.68	9.68	9.68	9.68	9.68	9.68	9.68	9.68

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

HR Plates - Rs.41,500/- per MT (Basic +CED+ST & freight) Wire rods - Rs.40,000/- per MT (Basic +CED+ST & freight)

Cement Cost Rs. 5,000/-per MT (including all duties, 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 HR Plate = $(H2-H1)/1000 \times Wh$.

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

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

H1 = Rs. 41,500/- H2 = Cost of HR Plate (Rs. per MT including all taxes and freight) at the time of preparation of estimate.

W1 = Rs. 40,500/- W2 = Cost of Wire rods (Rs. per MT including all taxes and freight) at the time of preparation of estimate.

C1 = Rs. 5,000/- C2 = Cost of Cement (Rs. per MT including all taxes and freight) at the time of preparation of estimate

Wh = Weight of HR Plate required (Kg.) per meter of pipe. Wc= Weight of Cement required (Kg.) per Meter of pipe.

Ww = Weight of wire rods required (kg) per meter of pipe.

Note: 1) The duties and taxes as applicable shall be added as per rules at the time of preparation of estimate.

2) 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 2016-17

Sl.No.	Description	Unit	Thickness in mm	Rate (Rs.)
1	2	3	4	5
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 shotcreting or gunetting duly providing wire mesh of size 50x50x3mm including cost of all materials, labour charges, transportation to anywhere in AP, but excluding taxes & duties, etc.			
	500 mm dia	Meter	8.00	7764
	600 mm dia	Meter	8.00	9265
	700 mm dia	Meter	8.00	10818
	700 mm dia	Meter	10.00	13379
	800 mm dia	Meter	8.00	12429
	800 mm dia	Meter	10.00	14187
	800 mm dia	Meter	12.00	16736
	900 mm dia		8.00	13872
	900 mm dia	Meter	10.00	15849
	900 mm dia	Meter	12.00	17830
	1000 mm dia	Meter	8.00	15594
	1000 mm dia	Meter	10.00	17782
	1000 mm dia	Meter	12.00	19886
	1000 mm dia	Meter	14.00	22905
	1100 mm dia	Meter	8.00	18042
	1100 mm dia	Meter	10.00	20928
	1100 mm dia	Meter	12.00	23339
	1100 mm dia	Meter	14.00	26901
	1100 mm dia	Meter	16.00	30476
	1200 mm dia	Meter	8.00	20208
	1200 mm dia	Meter	10.00	23608
	1200 mm dia	Meter	12.00	26256
	1200 mm dia	Meter	14.00	28899
	1200 mm dia	Meter	16.00	32729
	1200 mm dia	Meter	18.00	36571
	1300 mm dia	Meter	8.00	22412

	1300 mm dia	Meter	10.00	25469
	1300 mm dia	Meter	12.00	28628
	1300 mm dia	Meter	14.00	31481
	1300 MM DIA	Meter	16.00	34348
	1300 MM DIA	Meter	18.00	38367
	1300 MM DIA	Meter	20.00	42398
	1400 MM DIA	Meter	8.00	24072
	1400 MM DIA	Meter	10.00	27355
	1400 MM DIA	Meter	12.00	30502
	1400 MM DIA	Meter	14.00	33576
	1400 MM DIA	Meter	16.00	36654
	1400 MM DIA	Meter	18.00	40936
	1400 MM DIA	Meter	20.00	45229
	1400 MM DIA	Meter	22.00	49533
	1500 MM DIA	Meter	8.00	25745
	1500 MM DIA	Meter	10.00	29256
	1500 MM DIA	Meter	12.00	32654
	1500 MM DIA	Meter	14.00	35941
	1500 MM DIA	Meter	16.00	39238
	1500 MM DIA	Meter	18.00	42537
	1500 MM DIA	Meter	20.00	46983
	1500 MM DIA	Meter	22.00	51441
	1500 MM DIA	Meter	24.00	55911
	1600 MM DIA	Meter	8.00	27454
	1600 MM DIA	Meter	10.00	31035
	1600 MM DIA	Meter	12.00	34528
	1600 MM DIA	Meter	14.00	38031
	1600 MM DIA	Meter	16.00	41542
	1600 MM DIA	Meter	18.00	45061
	1600 MM DIA	Meter	20.00	49763
	1600 MM DIA	Meter	22.00	54479
	1600 MM DIA	Meter	24.00	59205
	1600 MM DIA	Meter	26.00	63941
	1700 MM DIA	Meter	8.00	29044
	1700 MM DIA	Meter	10.00	32969
	1700 MM DIA	Meter	12.00	36677
	1700 MM DIA	Meter	14.00	40397
	1700 MM DIA	Meter	16.00	44121
	1700 MM DIA	Meter	18.00	47857
	1700 MM DIA	Meter	20.00	52848
	1700 MM DIA	Meter	22.00	57855
	1700 MM DIA	Meter	24.00	62867
	1700 MM DIA	Meter	26.00	67897
	1700 MM DIA	Meter	28.00	72933
	1800 MM DIA	Meter	8.00	30781

	1800 MM DIA	Meter	10.00	34903
	1800 MM DIA	Meter	12.00	38828
	1800 MM DIA	Meter	14.00	42765
	1800 MM DIA	Meter	16.00	46702
	1800 MM DIA	Meter	18.00	50656
	1800 MM DIA	Meter	20.00	54615
	1800 MM DIA	Meter	22.00	59774
	1800 MM DIA	Meter	24.00	64944
	1800 MM DIA	Meter	26.00	70122
	1800 MM DIA	Meter	28.00	75315
	1800 MM DIA	Meter	30.00	80516
	1900 MM DIA	Meter	8.00	31399
	1900 MM DIA	Meter	10.00	36563
	1900 MM DIA	Meter	12.00	40699
	1900 MM DIA	Meter	14.00	44850
	1900 MM DIA	Meter	16.00	49008
	1900 MM DIA	Meter	18.00	53177
	1900 MM DIA	Meter	20.00	57348
	1900 MM DIA	Meter	22.00	62759
	1900 MM DIA	Meter	24.00	68182
	1900 MM DIA	Meter	26.00	73617
	1900 MM DIA	Meter	28.00	79061
	1900 MM DIA	Meter	30.00	84518
	1900 MM DIA	Meter	32.00	89982
	2000 MM DIA	Meter	8.00	32833
	2000 MM DIA	Meter	10.00	38223
	2000 MM DIA	Meter	12.00	42578
	2000 MM DIA	Meter	14.00	46943
	2000 MM DIA	Meter	16.00	51315
	2000 MM DIA	Meter	18.00	55700
	2000 MM DIA	Meter	20.00	60086
	2000 MM DIA	Meter	22.00	64445
	2000 MM DIA	Meter	24.00	70000
	2000 MM DIA	Meter	26.00	75564
	2000 MM DIA	Meter	28.00	81143
	2000 MM DIA	Meter	30.00	86729
	2000 MM DIA	Meter	32.00	92327
	2000 MM DIA	Meter	34.00	97935
	2100 MM DIA	Meter	8.00	34495
	2100 MM DIA	Meter	10.00	40156
	2100 MM DIA	Meter	12.00	44727
	2100 MM DIA	Meter	14.00	49295
	2100 MM DIA	Meter	16.00	53895
	2100 MM DIA	Meter	18.00	58493
	2100 MM DIA	Meter	20.00	63098
	2100 MM DIA	Meter	22.00	67716
	2100 MM DIA	Meter	24.00	73551

	2100 MM DIA	Meter	26.00	79396
	2100 MM DIA	Meter	28.00	85254
	2100 MM DIA	Meter	30.00	91119
	2100 MM DIA	Meter	32.00	96998
	2100 MM DIA	Meter	34.00	102886
	2100 MM DIA	Meter	36.00	108784
	2200 MM DIA	Meter	8.00	35926
	2200 MM DIA	Meter	10.00	41816
	2200 MM DIA	Meter	12.00	46605
	2200 MM DIA	Meter	14.00	51397
	2200 MM DIA	Meter	16.00	56204
	2200 MM DIA	Meter	18.00	61013
	2200 MM DIA	Meter	20.00	65836
	2200 MM DIA	Meter	22.00	70670
	2200 MM DIA	Meter	26.00	82851
	2200 MM DIA	Meter	28.00	88956
	2200 MM DIA	Meter	30.00	95072
	2200 MM DIA	Meter	32.00	101198
	2200 MM DIA	Meter	34.00	107338
	2200 MM DIA	Meter	36.00	113487
	2200 MM DIA	Meter	38.00	119647
	2300 MM DIA	Meter	10.00	39411
	2300 MM DIA	Meter	12.00	48753
	2300 MM DIA	Meter	16.00	57608
	2300 MM DIA	Meter	18.00	63809
	2300 MM DIA	Meter	20.00	68848
	2300 MM DIA	Meter	22.00	73892
	2300 MM DIA	Meter	26.00	84105
	2300 MM DIA	Meter	28.00	90750
	2300 MM DIA	Meter	30.00	97451
	2300 MM DIA	Meter	32.00	104060
	2300 MM DIA	Meter	34.00	110761
	2300 MM DIA	Meter	36.00	117462
	2300 MM DIA	Meter	38.00	124219
	2300 MM DIA	Meter	40.00	130930
	2400MM DIA	Meter	10.00	45409
	2400 MM DIA	Meter	12.00	50627
	2400 MM DIA	Meter	14.00	56784
	2400 MM DIA	Meter	16.00	62022
	2400 MM DIA	Meter	18.00	67263
	2400 MM DIA	Meter	20.00	72520
	2400 MM DIA	Meter	22.00	78626
	2400 MM DIA	Meter	26.00	83688
	2400 MM DIA	Meter	28.00	89343
	2400 MM DIA	Meter	30.00	95007
	2400 MM DIA	Meter	32.00	100680
	2400 MM DIA	Meter	34.00	106360

	2400 MM DIA	Meter	36.00	112054
	2400 MM DIA	Meter	38.00	117753
	2400 MM DIA	Meter	40.00	117198
	2400 MM DIA	Meter	42.00	122911
	2500 MM DIA	Meter	10.00	47345
	2500 MM DIA	Meter	14.00	58220
	2500 MM DIA	Meter	16.00	63670
	2500 MM DIA	Meter	18.00	69131
	2500 MM DIA	Meter	20.00	74597
	2500 MM DIA	Meter	22.00	80076
	2500 MM DIA	Meter	28.00	100759
	2500 MM DIA	Meter	30.00	107678
	2500 MM DIA	Meter	34.00	117342
	2500 MM DIA	Meter	36.00	124826
	2500 MM DIA	Meter	38.00	132365
	2500 MM DIA	Meter	40.00	139915
	2500 MM DIA	Meter	42.00	147510
	2500 MM DIA	Meter	44.00	155051
	2500 MM DIA	Meter	46.00	162647
	2600 MM DIA	Meter	12.00	49124
	2600 MM DIA	Meter	14.00	60310
	2600 MM DIA	Meter	16.00	65979
	2600 MM DIA	Meter	18.00	71654
	2600 MM DIA	Meter	20.00	77338
	2600 MM DIA	Meter	22.00	83029
	2600 MM DIA	Meter	32.00	118808
	2600 MM DIA	Meter	34.00	125997
	2600 MM DIA	Meter	36.00	133194
	2600 MM DIA	Meter	38.00	140403
	2600 MM DIA	Meter	40.00	147623
	2600 MM DIA	Meter	42.00	154855
	2600 MM DIA	Meter	44.00	162096
	2600 MM DIA	Meter	46.00	169348
	2600 MM DIA	Meter	48.00	176612
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		564
	500 MM DIA	Meter		702
	600 MM DIA	Meter		863
	700 MM DIA	Meter		1002
	800 MM DIA	Meter		1143
	900 MM DIA	Meter		1344
	1000 MM DIA	Meter		1484
	1100 MM DIA	Meter		1745
	1200 MM DIA	Meter		1955
	1300 MM DIA	Meter		2247

	1400 MM DIA	Meter		2586
	1500 MM DIA	Meter		2925
	1600 MM DIA	Meter		3084
	1700 MM DIA	Meter		3261
	1800 MM DIA	Meter		3688
	1900 MM DIA	Meter		4298
	2000 MM DIA	Meter		5397
	2100 MM DIA	Meter		6175
	2200 MM DIA	Meter		6936
	2300 MM DIA	Meter		8462
	2400 MM DIA	Meter		10348
	2500 MM DIA	Meter		12018
	2600 MM DIA	Meter		13529

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

MS Plates = Rs 36,000/- Per MT.

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_1

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

M_1 = Rs 36000/-

M_2 = Cost of MS Plates at the time of preparation of estimate including all taxes and freight

W_m = Weight of MS Plates in Kgs per meter of pipe

Note: The duties and taxes as applicable shall be added as per rules at the time of preparation of estimate.

15. S.S. RATES FOR H.D.P.E PIPES FOR THE YEAR 2016-17. (PE - 80 Grade)

Sl.No	Description	4.0 kg/ sqcm
1	2	4
Manufacture, Supply, & Delivery of HDPE pipes conforming to IS 4984 - 1995 including transportation to anywhere in A.P, excluding excise duty, sale tax and specials etc., complete. (Supply upto 90 mm dia in coil & above 90 mm dia straight lengths in 6 m.)		
	Rate per Meter	
	OD 40 mm	37
	OD 50 mm	53
	OD 63 mm	73
	OD 75 mm	100
	OD 90 mm	144
	OD 110 mm	216
	OD 125 mm	277
	OD 140 mm	343
	OD 160 mm	450
	OD 180 mm	567
	OD 200 mm	694
	OD 225 mm	880
	OD 250 mm	1089
	OD 280 mm	1356
	OD 315 mm	1725
	OD 355 mm	2249
	OD 400 mm	2915
	OD 450 mm	3705
	OD 500 mm	4551
	OD 560 mm	5632
	OD 630 mm	7124
	OD 710 mm	9052
	OD 800 mm	11457
	OD 900 mm	14517
	OD 1000 mm	17878

Note: Excise duty, CST / VAT extra as applicable at the time of supply.

Reliance Industries Resin cost adopted for the above rates are

For PE - 80 grade Rs.1,01,250/- per MT. (Excluding CED&ST)

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.

price variation formula 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. per Meter excluding CED & ST

P1 = Existing pipe price in Rs. per Meter excluding CED & ST

A2 = Revised price of raw material Rs. per MT excluding CED & ST

A1 = Existing price of raw material Rs. Per MT excluding CED & ST

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

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

16(I). S o R FOR H.D.P.E PIPES FOR THE YEAR 2016-17. (PE - 100 Grade)

Sl. No	Description	6.0 kg/ sqcm	8.0 kg/ sqcm	10.0 kg/ sqcm	12.5 kg/ sqcm	16.0 kg/ sqcm
1	2	3	4	5	6	7
I	Manufacture, Supply, & Delivery of HDPE Pipes conforming to IS 4984 - 1995 including transportation to any where in A.P, excluding excise duty, sale tax and specials etc., complete. (supply upto 90 mm dia in coil & above 90 mm dia straight length in 6 m.)					
	Rate per Meter					
	OD 20 mm					23
	OD 25 mm					39
	OD 32 mm			41	45	63
	OD 40 mm		52	61	70	97
	OD 50 mm	63	78	95	109	150
	OD 63 mm	95	121	146	170	235
	OD 75 mm	135	172	206	246	333
	OD 90 mm	191	245	293	351	482
	OD 110 mm	288	365	435	534	722
	OD 125 mm	367	471	566	708	930
	OD 140 mm	461	589	709	895	1169
	OD 160 mm	603	768	923	1157	1524
	OD 180 mm	759	971	1168	1472	1921
	OD 200 mm	939	1201	1440	1829	2370
	OD 225 mm	1213	1550	1865	2298	2999
	OD 250 mm	1493	1916	2303	2851	3703
	OD 280 mm	1870	2398	2881	3561	4647
	OD 315 mm	2371	3037	3649	4491	5875
	OD 355 mm	2975	3804	4576	5521	7506
	OD 400 mm	3919	5005	6007	7864	9689
	OD 450 mm	4867	6240	7504	9943	12193
	OD 500 mm	6019	7694	9256	12281	14684
	OD 560 mm	6976	8925	10667	13714	
	OD 630 mm	8795	11292	13513	16211	
	OD 710 mm	11188	14309	17164		

	OD 800 mm	14198	18168	21860		
	OD 900 mm	17986	22999			
	OD 1000 mm	22180				

Note:-

Excise duty, CST / VAT extra as applicable at the time of supply.

Reliance Industries Resin cost adopted for the above rates are

For PE - 100 grade Rs.1,02,080/- per MT. (Excluding CED&ST)

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.

price variation formula as follows:

$P_2 = P_1 + (A_2 - A_1) / 1000 \times M \times 0.95$ (for increase in raw material cost)

$P_2 = P_1 - (A_1 - A_2) / 1000 \times M \times 0.95$ (for decrease in raw material cost)

P_2 = Revised pipe price in Rs. Per Meter excluding CED & ST

P_1 = Existing pipe price in Rs. Per Meter excluding CED & ST

A_2 = Revised price of raw material Rs. Per MT excluding CED & ST

A_1 = Existing price of raw material Rs. Per MT excluding CED & ST

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.

16(II) HDPE PIPES –(PE –100 Grade) SEWER LINES FOR THE YEAR 2016-17

Sl. No	Description	6.0 kg/ sqcm	8.0 kg/ sqcm	10.0 kg/ sqcm	12.5 kg/ sqcm	16.0 kg/ sqcm
1	2	3	4	5	6	7
I	Manufacture, Supply, & Delivery of HDPE Pipes conforming to IS 14333 - 2000 for using under ground drainage and sewerage systems including transportation to any where in A.P, excluding excise duty, sale tax and specials etc., complete. (supply upto 90 mm dia in coil & above 90 mm dia straight length in 6 m or 12 m.)					
	Rate per Meter					
	OD 63mm	104	132	157	187	224
	OD 75 mm	147	188	224	267	318
	OD 90 mm	210	268	319	379	459
	OD 110 mm	302	382	456	546	652
	OD 125 mm	386	493	590	699	844
	OD 140 mm	483	614	739	880	1059
	OD 160 mm	629	802	964	1128	1379
	OD 180 mm	792	1017	1219	1449	1744
	OD 200 mm	982	1253	1503	1794	2150
	OD 225 mm	1238	1581	1902	2261	2724
	OD 250 mm	1527	1956	2346	2793	3355
	OD 280 mm	1909	2445	2925	3510	4213
	OD 315 mm	2417	3096	3755	4429	5327
	OD 355 mm	3062	3922	4719	5631	6758
	OD 400 mm	4049	5181	6221	7417	8895
	OD 450 mm	5111	6555	7878	9372	
	OD 500 mm	6317	8081	9716	11583	
	OD 560 mm	7898	10127	12191		
	OD 630 mm	10000	12819	15402		
	OD 710 mm	12969	16613			
	OD 800 mm	16453				
	OD 900 mm	20839				
	OD 1000 mm	25746				

Note:-

Excise duty, CST / VAT extra as applicable at the time of supply.

Reliance Industries Resin cost adopted for the above rates are

For PE - 100 grade Rs.1,02,080/- per MT. (Excluding CED&ST)

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.

price variation formula as follows:

$P_2 = P_1 + (A_2 - A_1) / 1000 \times M \times 0.95$ (for increase in raw material cost)

$P_2 = P_1 - (A_1 - A_2) / 1000 \times M \times 0.95$ (for decrease in raw material cost)

P_2 = Revised pipe price in Rs. Per Meter excluding CED & ST

P_1 = Existing pipe price in Rs. Per Meter excluding CED & ST

A_2 = Revised price of raw material Rs. Per MT excluding CED & ST

A_1 = Existing price of raw material Rs. Per MT excluding CED & ST

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.

17(I). S o R FOR H.D.P.E FITTINGS FOR THE YEAR 2016-17.

	Manufacture, Supply, & Delivery of HDPE fittings conforming to IS 4984 - 1995 including transportation to anywhere in A.P. Excluding excise duty, sale tax and specials etc., complete	
I (a)	PIPE ENDS LONG NECK	Rate per Each
	OD 50 mm	72
	OD 63 mm	91
	OD 75 mm	109
	OD 90 mm	151
	OD 110 mm	210
	OD 125 mm	377
	OD 140 mm	353
	OD 160 mm	493
	OD 180 mm	752
	OD 200 mm	967
	OD 225 mm	1110
	OD 250 mm	1300
	OD 280 mm	1452
	OD 315 mm	1675
	OD 355 mm	3501
	OD 400 mm	4666
	OD 450 mm	7763
	OD 500 mm	8640
(b)	MS FLANGES	Rate per Each
	OD 50 mm	88
	OD 63 mm	111
	OD 75 mm	141
	OD 90 mm	151
	OD 110 mm	160
	OD 125 mm	219
	OD 140 mm	237
	OD 160 mm	312
	OD 180 mm	439
	OD 200 mm	569
	OD 225 mm	713
	OD 250 mm	841
	OD 280 mm	954
	OD 315 mm	1122
	OD 355 mm	1900

	OD 400 mm	2356
	OD 450 mm	3076
	OD 500 mm	3522
(c)	END CAPS	Rate per Each
	OD 50 mm	52
	OD 63 mm	63
	OD 75 mm	78
	OD 90 mm	104
	OD 110 mm	119
	OD 125 mm	165
	OD 140 mm	192
	OD 160 mm	294
	OD 180 mm	477
	OD 200 mm	521
	OD 225 mm	543
	OD 250 mm	773
	OD 280 mm	791
	OD 315 mm	1081
	OD 355 mm	1669
	OD 400 mm	2915
	OD 450 mm	4688
	OD 500 mm	8640
(d)	REDUCERS	Rate per Each
	OD 50 mm x 63 mm	72
	OD 63 mm x 75 mm	104
	OD 75 mm x 90 mm	171
	OD 90 mm x 110 mm	236
	OD 110 mm x 125 mm	360
	OD 125 mm x 140 mm	498
	OD 140 mm x 160 mm	695
	OD 160 mm x 180 mm	962
	OD 180 mm x 200 mm	1243
	OD 200 mm x 225 mm	1526
	OD 225 mm x 250 mm	2080
	OD 250 mm x 280 mm	2955
	OD 280 mm x 315 mm	4178
	OD 315 mm x 355 mm	4792
	OD 355 mm x 400 mm	6761

	OD 400 mm x 450 mm	7014
	OD 450 mm x 500 mm	8993
(e)	TEES	Rate per Each
	OD 50 mm	100
	OD 63 mm	159
	OD 75 mm	192
	OD 90 mm	338
	OD 110 mm	400
	OD 125 mm	602
	OD 140 mm	830
	OD 160 mm	1429
	OD 180 mm	1937
	OD 200 mm	2668
	OD 225 mm	3788
	OD 250 mm	5186
	OD 280 mm	7262
	OD 315 mm	10350
	OD 355 mm	14759
	OD 400 mm	21618
	OD 450 mm	30707
	OD 500 mm	42173
(f)	BENDS	Rate per Each
	OD 50 mm	63
	OD 63 mm	140
	OD 75 mm	182
	OD 90 mm	311
	OD 110 mm	410
	OD 125 mm	605
	OD 140 mm	797
	OD 160 mm	1189
	OD 180 mm	1706
	OD 200 mm	2311
	OD 225 mm	3278
	OD 250 mm	4493
	OD 280 mm	6478
	OD 315 mm	8960
	OD 355 mm	12420
	OD 400 mm	18735

	OD 450 mm	27542
	OD 500 mm	37339
II	Providing and Fixing electro Fusion <u>Ferrule Tapping saddle</u> manufactured from virgin resin of PE-80/PE-100 having blue/black colour 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, labour all taxes (central & state), inspection charges, transportation upto 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 diameter in mm & Tapping size in Inches)	Rs.
	63x1/2"	916
	63 x3/4"	916
	63 x1"	916
	63 x1/2"	916
	75 x1/2"	916
	75 x3/4"	916
	75 x1	916
	90 x1/2"	916
	90 x3/4"	916
	90 x1"	916
	90 x 1 1/4"	1190
	90 x 1 1/2"	1190
	90 x2"	1190
	110x1/2"	916
	110 x3/4"	916
	110 x1"	916
	110 x 1 1/4"	1190
	110x1 1/2"	1190
	110x2"	1190
	160 x1/2"	916
	160 x3/4"	916
	160 x1"	916
	160 x 1 1/4"	1299
	160 x 1 1/2"	1299
	160 x 2"	1299
	200 x 1/2"	1295

	200 x 3/4"	1295
	200 x 1"	1295
	200 x 1 1/4"	1872
	200 x 2"	1872
	250 x 1/2"	1295
	250 x 3/4"	1295
	250 x 1"	1295
	250 x 1 1/4"	1872
	250 x 1 1/2"	1872
	250 x 2"	1872
	315 x 1/2"	1542
	315 x 3/4"	1542
	315 x 1"	1542
	315 x 1 1/4"	1966
	315 x 1 1/2"	1966
	315 x 2"	1966

18. SoR FOR PVC PIPES FOR THE YEAR 2016-17

Sl. No.	Description	TEST PRESSURE		
		4.0 Kgs/cm ²	6 Kgs/cm ²	10 Kgs/cm ²
1	2	4	5	6
1	Manufacture, Supply and Delivery of Unplasticised PVCs Pipes for potable water supplies conforming to IS : 4985/2000 (3 rd 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 Excise duty and Sales Tax etc.			
	DIA IN MM	Rate/Meter	Rs.	Rs.
	20			15
	25			22
	32			33
	40		31	51
	50		47	79
	63	52	75	113
	75	76	103	164
	90	104	149	232
	110	151	215	346
	125	197	274	453
	140	246	354	561
	160	324	459	735
	180	413	592	943
	200	503	719	1147
	225	670	968	1540
	250	777	1187	1872
	280	1020	1500	2371
	315	1291	1884	2993
	355	1697	2463	
	400	2140	3134	

Note: The duties and taxes as applicable shall be added as per rules at the time of preparation of estimate.

The resin cost adopted for the above rates is Rs.68,825/- per MT(Basic rate, excluding CED)

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:

$$P_2 = P_1 + (A_2 - A_1) / 1000 \times M \times 0.95 \text{ (for increase in raw material cost)}$$

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

P2 = Revised pipe price in Rs. Per Meter, P1 = Existing pipe price in Rs. Per Meter

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.

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

19. SoR FOR NON- PRESSURE P.V.C.U PIPES FOR THE YEAR 2016-17

Code No	Description	
1	2	4
	Manufacture, Supply, & Delivery of unplasticized 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 any where in A.P, excluding Central Excise Duty, Cess, & VAT etc.,	Rates 2016-17
	Rate per Meter	Rs.
	Pipe Series (S25)	
	OD 160 mm	270
	OD 200 mm	411
	OD 250mm	637
	OD 315 mm	1005
	Pipe Series (S20)	
	OD 125 mm	209
	OD 160 mm	335
	OD 200 mm	508
	OD 250mm	791
	OD 315 mm	1242
	Pipe Series (S16.5)	
	OD 110 mm	184
	OD 125 mm	248
	OD 160 mm	388
	OD 200 mm	603
	OD 250mm	935
	OD 315 mm	1477

Note: The duties and taxes as applicable shall be added as per rules at the time of preparation of estimate.

The resin cost adopted for the above rates is Rs.68,825/- per MT (Basic rate, excluding CED)

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 x M x 0.95 (for increase in raw material cost)

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

P2 = Revised pipe price in Rs. Per Meter

P1 = Existing pipe price in Rs. Per Meter

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.

20. SoR FOR NON- PRESSURE P.V.C.U PIPES FOR THE YEAR 2016-17

Code No	Description	
1	2	4
	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 any where in A.P, excluding Central Excise Duty, Cess, & VAT etc.,	Rates 2016-17
	Rate per Meter	Rs.
	Pipe Series (S25)	
	OD 160 mm	289
	OD 200 mm	438
	OD 250mm	681
	OD 315 mm	1071
	Pipe Series (S20)	
	OD 125 mm	225
	OD 160 mm	355
	OD 200 mm	540
	OD 250mm	841
	OD 315 mm	1321
	Pipe Series (S16.5)	
	OD 110 mm	196
	OD 125 mm	264
	OD 160 mm	415
	OD 200 mm	638
	OD 250mm	993
	OD 315 mm	1567

Note: The duties and taxes as applicable shall be added as per rules at the time of preparation of estimate.

The resin cost adopted for the above rates is Rs.68,825/- per MT (Basic rate, excluding CED) 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:

$$P_2 = P_1 + (A_2 - A_1) / 1000 \times M \times 0.95 \text{ (for increase in raw material cost)}$$

$$P_2 = P_1 - (A_1 - A_2) / 1000 \times M \times 0.95 \text{ (for decrease in raw material cost)}$$

P2 = Revised pipe price in Rs. Per Meter

P1 = Existing pipe price in Rs. Per Meter

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 CENTRIFUGALLY CAST (SPUN)IRON PRESSURE PIPES

Sl. No.	Description	Unit	S.S. Rates for 2016-17		
1	2	3	4	5	6
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, taxes & duties.		LA Class (Rs)	A Class (Rs)	B Class (Rs)
	Nominal dia (in MM)				
	80	Rmt	736	800	858
	100	Rmt	912	1004	1071
	125	Rmt	1176	1284	1382
	150	Rmt	1416	1552	1672
	200	Rmt	2072	2248	2432
	250	Rmt	2792	3040	3289
	300	Rmt	3601	3936	4265
	350	Rmt	4536	4921	5336
	400	Rmt	5520	6032	6512
	450	Rmt	6656	7312	7888
	500	Rmt	7792	8489	9185
	600	Rmt	10384	11336	12280
	700	Rmt	13401	14641	15816
	750	Rmt	15008	16409	17801
	800	Rmt	16801	18304	19800
	900	Rmt	20464	22328	24193
	1000	Rmt	24585	26856	29025
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)		Class		
	SIZE IN MM	UNIT	LA	A	B
	80	Per KM/RMT	0.24	0.24	0.24
	100	Per KM/RMT	0.24	0.24	0.24
	125	Per KM/RMT	0.36	0.36	0.36
	150	Per KM/RMT	0.36	0.36	0.36
	200	Per KM/RMT	0.61	0.61	0.61

250	Per KM/RMT		0.73	0.73	0.73
300	Per KM/RMT		0.97	0.97	0.97
350	Per KM/RMT		1.33	1.33	1.33
400	Per KM/RMT		1.57	1.57	1.57
450	Per KM/RMT		1.82	1.82	1.82
500	Per KM/RMT		2.18	2.18	2.18
600	Per KM/RMT		2.18	2.18	2.18
700	Per KM/RMT		2.18	2.18	2.18
750	Per KM/RMT		3.63	3.63	3.63
800	Per KM/RMT		6.17	6.17	6.17
900	Per KM/RMT		6.17	6.17	6.17
1000	Per KM/RMT		6.17	6.17	6.17

Note:The duties and taxes as applicable shall be added as per rules at the time of preparation of estimate.

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 per Meter.

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 CED&ST)) at the time of preparation of estimate.

R1 = Price of Pig Iron(Rs per MT excluding CED&ST) at the time of preparation of SSR =Rs. 22,000/-

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

22.S o R FOR DUCTILE IRON PRESSURE PIPES FOR THE YEAR 2016-17

Sl. No.	Description	Unit	S.S. Rate for 2016-17		
			3	4	5
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, taxes & duties.				
	Nominal Dia in mm	Rmt	K7	K9	
	100	Rmt	791	941	
	150	Rmt	1119	1388	
	200	Rmt	1525	1852	
	250	Rmt	2049	2430	
	300	Rmt	2661	3110	
	350	Rmt	3353	3878	
	400	Rmt	4073	4678	
	450	Rmt	4905	5598	
	500	Rmt	5850	6513	
	600	Rmt	7788	8590	
	700	Rmt	10087	11116	
	750	Rmt	11306	12475	
	800	Rmt	12487	13763	
	900	Rmt	15239	16792	
	1000	Rmt	18056	19897	
	1100	Rmt		21114	
	1200	Rmt		24700	
2	Centrifugally cast (Spun) Ductile Iron pressure pipes for water, gas and sewage <u>with 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, taxes & duties.				
	Nominal Dia in mm		K7	K9	
	100	Rmt	669	861	
	150	Rmt	989	1262	
	200	Rmt	1375	1716	
	250	Rmt	1789	2280	
	300	Rmt	2387	2915	
	350	Rmt	2998	3622	
	400	Rmt	3631	4368	
	450	Rmt	4355	5160	

	500	Rmt	5188	6173
	600	Rmt	6873	7953
	700	Rmt	9128	10091
	750	Rmt	10214	11306
	800	Rmt	11289	12483
	900	Rmt	13651	15094
	1000	Rmt	16229	17945
	1100	Rmt		18939
	1200	Rmt		22054
3	Centrifugally cast (Spun) Ductile Iron pressure pipes with <u>flanged (welded) ends</u> 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, taxes & duties.			
	Nominal Dia in mm		1.0 Mt. Length	2.0 Mt. Length
	100	Each	3603	4726
	150	Each	5085	6718
	200	Each	6721	8946
	250	Each	8770	11741
	300	Each	10954	14709
	350	Each	17268	21923
	400	Each	21423	27045
	450	Each	25882	32515
	500	Each	31375	39160
	600	Each	44450	54698
	700	Each	52947	65954
	800	Each	65231	81342
	900	Each	77741	97211
	1000	Each	99872	123035
	1100	Each	120935	147180
			3.0 Mt. Length	4.0 Mt. Length
	100	Each	5824	6339
	150	Each	8301	9163
	200	Each	11078	12396
	250	Each	14578	16372
	300	Each	18268	20638
	350	Each	26360	28726
	400	Each	32493	34914
	450	Each	38942	41708
	500	Each	46689	49851
	600	Each	64609	68313

	700	Each	78569	83635
	800	Each	96946	103294
	900	Each	116061	123950
	1000	Each	145475	153757
	1100	Each	173124	204955
			5.0 Mt. Length	
	100	Each	7387	
	150	Each	10708	
	200	Each	14513	
	250	Each	19192	
	300	Each	24209	
	350	Each	33156	
	400	Each	40262	
	450	Each	48017	
	500	Each	56179	
	600	Each	78043	
	700	Each	95988	
	800	Each	118573	
	900	Each	146828	
	1000	Each	175720	
	1100	Each	220220	
4	Conveyance of Ductile Iron Pressure Pipes and accessories including loading at Factory, unloading at site and stacking for the following sizes		Class	WELDED DOUBLE FLANGED PIPES
	SIZE IN MM	UNIT	K7	K9
	100	Per KM/RMT	0.22	0.22
	150	Per KM/RMT	0.33	0.33
	200	Per KM/RMT	0.33	0.44
	250	Per KM/RMT	0.44	0.66
	300	Per KM/RMT	0.66	0.88
	350	Per KM/RMT	0.77	1.10
	400	Per KM/RMT	0.88	1.32
	450	Per KM/RMT	1.10	1.54
	500	Per KM/RMT	1.32	1.87
	600	Per KM/RMT	1.87	2.20
	700	Per KM/RMT	2.75	2.86
	750	Per KM/RMT	3.30	4.18
	800	Per KM/RMT	5.61	5.06
	900	Per KM/RMT	5.61	8.36
	1000	Per KM/RMT	5.61	8.36
	1100	Per KM/RMT	5.61	-
	1200	Per KM/RMT	6.00	6.00
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	41	
	150 MM DIA	RMT	50	
	200 MM DIA	RMT	64	
	250 MM DIA	RMT	74	
	300 MM DIA	RMT	81	
	350 MM DIA	RMT	91	
	400 MM DIA	RMT	127	
	450 MM DIA	RMT	127	
	500 MM DIA	RMT	154	
	600 MM DIA	RMT	154	
	700 MM DIA	RMT	200	
	750 MM DIA	RMT	200	
	800 MM DIA	RMT	200	
	900 MM DIA	RMT	227	
	1000 MM DIA	RMT	227	
	1100 MM DIA	RMT	227	
6	Additional price for HAC(high alumina cement motar lining)			
	DIA IN MM			
	100 MM DIA	RMT	61	
	150 MM DIA	RMT	80	
	200 MM DIA	RMT	98	
	250 MM DIA	RMT	117	
	300 MM DIA	RMT	125	
	350 MM DIA	RMT	143	
	400 MM DIA	RMT	196	
	450 MM DIA	RMT	196	
	500 MM DIA	RMT	242	
	600 MM DIA	RMT	242	
	700 MM DIA	RMT	310	
	750 MM DIA	RMT	310	
	800 MM DIA	RMT	310	
	900 MM DIA	RMT	354	
	1000 MM DIA	RMT	354	
	1100 MM DIA	RMT	354	
	1200 MM DIA	RMT	354	

Note: The duties and taxes as applicable shall be added as per rules at the time of preparation of estimate.

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

$$P_2 = P_1 + (R_2 - R_1)/1000 * M * 0.96, \text{ Where}$$

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 excluding CED&ST)) at the time of preparation of estimate.

R1 = Price of Pig Iron(Rs per MT excluding CED&ST) at the time of preparation
of SoR =Rs.22,000/-

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

23. S o R FOR DUCTILE IRON FITTINGS FOR THE YEAR 2016-17

Sl. No.	Description	Unit	
1	2	3	
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, Taxes and Duties etc.			
I	DI double socket branch flange Tee		
	Upto 500 x 500 mm dia	Kg	107
	Above 500 x 500 mm dia	Kg	120
II	DI All Socket Tees		
	Upto 300 x 300 mm dia	Kg	107
	Above 300 x 300 mm dia	Kg	120
III	DI Double socket Tapers (Reducer)		
	Upto 500 x 450 mm dia	Kg	107
	Above 500 x 450 mm dia	Kg	120
IV	DI Flanged Socket		
	Upto 500 mm dia	Kg	107
	Above 500 mm dia	Kg	120
V	DI Flanged Spigot		
	Upto 500 mm dia	Kg	107
	Above 500 mm dia	Kg	120
VI	DI Double Socket Duck Foot Bend		
	Upto 300mm dia	Kg	107
	Above 300mm dia	Kg	120
VII	DI Double Flange Duck/Foot bend		
	Upto 300 mm dia	Kg	107
	Above 300 mm dia	Kg	120
VIII	DI All socket Cross.		
	Upto 300 x 300 mm dia	Kg	107
	Above 300 x 300 mm dia	Kg	120
IX	DI All Flange Tee		

	Upto 500 x 500 mm dia	Kg	107
	Above 500 x 500 mm dia	Kg	120
X	DI All Flange Cross		
	Upto 300 x 300 mm dia	Kg	107
	Above 300 x 300 mm dia	Kg	120
XI	DI Double Flange Reducer		
	Upto 500 x 450 mm dia	Kg	107
	Above 500 x 450 mm dia	Kg	120
XII	Blank Flange		
	Upto 500 mm dia	Kg	107
	Above 500 mm dia	Kg	120
XIII	Mechanical Joints		107
	Upto 300 mm dia	Kg	120
	Above 300 mm dia	Kg	
XIV	DI Double Socket Bends		107
	Upto 500mm dia	Kg	120
	Above 500 mm dia	Kg	
			107
XV	DI Double Flanged Bends		120
	Upto 500mm dia	Kg	107
	Above 500 mm dia	Kg	120

Note: The duties and taxes as applicable shall be added as per rules at the time of preparation of estimate.

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

24. S o R FOR RUBBER GASKETS SUITABLE FOR C.I/ D.I. S/S PIPES

Sl. No.	Description	Unit	S.S Rates For 2016-17
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 central excise duty, sales tax, octroi and other Govt. Levies etc., complete.		
	80mm dia	Each	52
	100mm dia	Each	81
	125mm dia	Each	97
	150mm dia	Each	118
	200mm dia	Each	143
	250mm dia	Each	160
	300mm dia	Each	244
	350mm dia	Each	308
	400mm dia	Each	337
	450mm dia	Each	362
	500mm dia	Each	503
	600mm dia	Each	596
	700mm dia	Each	791
	750mm dia	Each	879
	800mm dia	Each	1054
	900mm dia	Each	1271
	1000mm dia	Each	1391

Note: The duties and taxes as applicable shall be added as per rules at the time of preparation of estimate.

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

25. S o R FOR CI PIPES AND SPECIALS FOR THE YEAR 2016-17

Sl. No.	Description	Quality or sort	Rate/ Kg including packing, forwarding, Transit risk and delivery any where in A.P. for the year 2015-16. Rs.
1	2	3	4
	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	64

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

Pig Iron: Rs.22,000/- per M.T.(excluding CED, Tax & Fright)

Coke : Rs.36,570/- per M.T. .(Excluding CED, Tax & Fright)

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 thereof 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 , Excise duty, CST/VAT extra as applicable at the time of supply.

Note: The duties and taxes as applicable shall be added as per rules at the time of preparation of estimate.

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

26. S o R FOR WATER HAMMER CONTROL DEVICES FOR THE YEAR 2016-17
(Rate Each in Rs.)

Sl. No.	Description	TEST PRESSURE				Additional charges for Flanged ended valves
		10 Kgs/cm ²	15 Kgs/cm ²	20 Kgs/cm ²	25 Kgs/cm ²	
1	2	3	4	5	6	7
1	Manufacture, Supply and delivery of Air Cushion valves / Quick Released damped Air Valves (QRDA) as per AWWA, Ex-factory excluding trasportation, Central Excise duty and sale tax etc., complete.					
	DIA IN MM Rate/Each	Rs.	Rs.	Rs.	Rs.	
	100	64263	73904	81293	89419	
	150	97659	112308	123538	135892	
	200	104237	119871	131860	145045	
2	Conveyance of valves and accessories including loading at factory and unloading, stacking at site of work.	5% on basic cost of valves				

Note: The duties and taxes as applicable shall be added as per rules at the time of preparation of estimate.

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

27. S o R FOR VALVES CONFORMING TO IS for normal usage 2016-17.

Sl.No.	Description	TEST PRESSURES	
		3	4
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.	PN 1.0 (MPa)	PN 1.6 (MPa)
Rate/Each			
DIA IN MM		Rs.	Rs.
50		10800	13500
100		12800	16000
150		18800	23500
200		24800	31000
250		37800	47250
300		57800	72250
350		71800	89750
400		122800	153500
450		152800	191000
500		191800	239750
550		199800	249750
600		245800	307250
650		272800	341000
700		472800	591000
750		512800	641000
800		612800	766000
850		698800	873500
900		795800	994750

	1000	1295800	1619750
	1100	1495800	1869750
	1200	1695800	2119750
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 Nitrile or EPDM rubber; excluding transportation and all taxes, complete.	PN 2.5 (MPa)	
	Rate/Each Rs.		
	50	12800	
	100	14800	
	150	21800	
	200	39800	
	250	44800	
	300	51800	
	350	62800	
	400	91800	
	450	120800	
	500	172800	
	550	191800	
	600	212800	
	650	245800	
	700	298800	
	750	312800	
	800	335800	
	850	352800	
	900	398800	
	1000	512800	
	1100	612800	
	1200	812800	

	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)
		Rate/Each	
	50	9800	12250
	100	13800	17250
	150	19800	24750
	200	26800	33500
	250	36800	46000
	300	56800	71000
	350	67800	84750
	400	81800	102250
	450	105800	132250
	500	174800	218500
	550	192800	241000
	600	232800	291000
4	Supply and Delivery of Flanged Resilient Seated C.I Air Relief Valves (Single/Double) of following dia. conforming to IS- 14845 (with amendments up to date, if any) having Body, Cover, Valve disc, Stuffing box, Valve guide, Cowl, Gland, Cap, Joint support ring, with C.I; Stem, Bolts, Nuts with Stainless Steel (IS 6603); Stem nut, Body seal ring, Float guide with Leaded tin bronze (IS 318); Gasket with rubber; Gland packing with Jute / Hemp; Float		

	with timber core and Vulcanite Coating; excluding transportation and all taxes complete.		
	DIA IN MM Rate/Each	PN 1.0 (MPa)	PN 1.6 (MPa)
	40	5800	7250
	50	8800	11000
	80	14800	18500
	100	21800	27250
	150	41800	52250
	200	61800	77250
5	Conveyance of valves and accessories including loading at factory and unloading, stacking at site of work.	5% on basic cost of valves	

Note : The duties and taxes as applicable shall be added as per rules at the time of preparation of estimate.

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

**28. S o R FOR VALVES FOR HEAVY USUAGEx in WTPs, STPs, Pump houses,
Pumping Mains & ELSRs 2016-17.**

Sl. No.	Description	TEST PRESSURE			
		PN 10	PN 16		
1	2	3	4	5	6
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	PN 1.0 (MPa)	PN 1.6 (MPa)	PN 2.5 (MPa)	
DIA IN MM					
A) Without By-Pass					
	50	6,972	6,972	15,405	
	80	10,500	10,500	18,993	
	100	10,800	11,779	21,534	
	150	16,800	18,546	35,919	
	200	21,800	27,250	60,582	
	250	27,800	34,750	89,985	
	300	51,800	64,514	1,45,959	
	350	71,800	89,750	4,27,121	
	400	91,800	1,14,750	4,34,440	
B) With By-Pass					

	450	1,50,800	1,88,500		
	500	1,92,800	2,41,000		
	550	2,12,800	2,66,000		
	600	2,72,800	3,41,000	11,84,278	
	650	3,12,800	3,91,000		
	700	3,92,800	4,91,000		
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.	PN 1.0 (MPa)	PN 1.6 (MPa)	PN 2.5 (MPa)	
	DIA IN MM				
	25	3,800	4,750		
	40	6,800	8,500	48,991	
	50	9,800	12,250	48,991	
	80	16,800	21,000	50,794	
	100	21,800	27,250	68,198	
	150	41,800	52,250	82,508	
	200	60,489	60,489	91,962	
	300	98,800	1,23,500		

3	Supply delivery of Double Flanged Slant seat Swing Check Valve (NRV) with body and Disc of Ductile Iron GGG-40/SG-400/15 or GGG-50/SG-500/7 or Equivalent as per IS1865, IS:3896-2 with fully encapsulated in Vulcanized EPDM rubber & Fusion bonded Electro Static epoxy powder coating inside and outside color Blue RAL 5005 with Min. Coating thickness of 250 microns. The EPDM rubber & Epoxy rubber & Epoxy powder should conform to W 270 standards (Drinking water application) and face to face dimensions as per EN 558-1 / DIN 3202-F6 / IS 5312 & Flange connections as per IS:1538 excluding all duties, taxes and transportation.	PN 1.0 (MPa)	PN 1.6 (MPa)	PN 2.5 (MPa)	
DIA IN MM					
a) Without By-Pass					
	80		12,285	13,514	
	100		16,800	21,000	
	150		24,800	31,000	
	200		29,800	37,250	1,52,344
	250		39,800	49,750	1,85,024
	300		49,800	62,250	2,25,246
b) With By-Pass					
	350		71,800	89,750	
	400		87,800	1,09,750	
	450		97,800	1,22,250	
	500		1,35,800	1,69,750	
	550		1,65,800	2,07,250	
	600		1,98,800	2,48,500	

4	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	PN 1.0 (MPa)	PN 1.6 (MPa)	PN 2.5 (MPa)	
DIA IN MM					
a) Without By-Pass					
	80	10,800	13,500	21,600	
	100	14,800	18,500	29,600	
	150	19,800	24,750	39,600	
	200	24,800	31,000	49,600	
	250	35,800	44,750	71,600	
	300	51,800	64,750	1,03,600	
b) With By-Pass					
	350	61,800	77,250	1,23,600	
	400	94,800	1,18,500	1,89,600	
	450	1,22,800	1,53,500	2,45,600	
	500	1,35,800	1,69,750	2,71,600	
	550	1,52,800	1,91,000	3,05,600	
	600	1,87,800	2,34,750	3,75,600	
	650				

		2,25,800	2,82,250	4,51,600	
	700	2,75,800	3,43,200	5,51,600	
	750	2,98,800	3,73,500	5,97,600	
	800	3,35,800	4,19,750	6,71,600	
	850	3,52,800	4,41,000	7,05,600	
	900	3,98,800	4,98,500	7,97,600	
	1000	4,98,800	6,23,500	9,97,600	
	1100	7,73,500	8,50,850		
	1200	10,00,000	11,00,000		
5	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.	PN 1.0 (MPa)	PN 1.6 (MPa)	PN 2.5 (MPa)	PN 4.0 (MPa)
	DIA IN MM				
	150	17,800	22,250	35,600	1,33,162
	200	24,800	31,000	49,600	1,61,916
	250	34,800	43,500	69,600	2,26,892
	300				

		42,800	53,500	85,600	2,38,244
	350	59,800	74,750	1,19,600	2,59,305
	400	79,800	99,750	1,59,600	3,96,438
	450	89,800	1,12,250	1,79,600	
	500	1,15,800	1,44,750	2,31,600	4,89,889
	550	1,35,800	1,69,750	2,71,600	
	600	1,52,800	1,91,000	3,05,600	5,36,789
	650	1,72,800	2,16,000	3,45,600	
	700	1,98,800	2,48,500	3,97,600	
	750	2,25,800	2,82,250	4,51,600	
	800	2,53,800	3,17,250	5,07,600	
	850	2,72,800	3,41,000	5,45,600	
	900	2,98,800	3,73,500	5,97,600	
	1000	4,12,800	5,16,000	8,25,600	
	1100	6,12,800	7,66,000	12,25,600	
	1200	7,12,800	8,91,000	14,25,600	
	1300	9,12,800	11,41,000	18,25,600	
	1400	9,98,800	12,48,500	19,97,600	
	1500	12,53,800	15,67,250	25,07,600	
	1600	12,42,800	15,53,500	24,85,600	
	1700	17,52,800	21,91,000	35,05,600	
	1800	19,23,800	24,04,750	38,47,600	
	1900	21,81,800	27,27,250	43,63,600	

	2000	23,15,800	28,94,750	46,31,600	
	2100	24,20,800	30,26,000	48,41,600	
	2200	25,80,800	32,26,000	51,61,600	

NOTE:-All the prices are ex-go down /ex-factory. Excise duty and CST /Local Tax Extra as applicable at the time of supply. Packaging and Transportation extra at 5% on basic cost. The duties and taxes as applicable may be added as per rules at the time of preparation of estimate. 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.

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

29. S o R FOR SFRC MAN-HOLE FRAME WITH COVERS FOR THE YEAR 2016-17.

Sl.No.	Description	Unit	S o R for 2016-17
1	2	3	4
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, unloading & stacking at site but excluding central excise duty, sales tax, octroi and other Govt levies etc., as applicable. L.S.I Mark		Rs.
a)	M.D. -10 with 500mm diaclear opening	Each	1543
b)	H.D.-20 with 500mm diaclear opening	Each	1989
C)	H.D.-10with 560mmdia clear opening(New item)	Each	1560
d)	H.D.-20 with 560mm diaclear opening	Each	2133
e)	H.D.-35 with 560mm diaclear opening.	Each	2286
f)	24x24 MD 10	Each	1682
g)	24x18 MD 10	Each	1548
h)	24x24 HD 20	Each	1890
i)	24x18 HD 20	Each	1927
j)	Deviders 0.9 mtr.	Each	3957
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 taxes such as sales tax, C.E.D and others etc., as applicable.	Each	166

Note: The duties and taxes as applicable shall be added as per rules at the time of preparation of estimate.

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

30. S o R FOR CI and M.S. DISMANTLING JOINTS FOR THE YEAR 2016-17

Sl.No.	Description	Unit	2016-17
1	2	3	4
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 Excise duty, Taxes and transportation charges etc., complete.		Rs.
	Nominal Dia. In MM		
	50	Each	4826
	80	Each	5282
	100	Each	6900
	125	Each	8800
	150	Each	9777
	200	Each	13864
	250	Each	16504
	300	Each	26409
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 Excise duty, Taxes and transportation charges etc., complete		
	Nominal Dia. In MM		
	350	Each	59,785
	400	Each	68,507
	450	Each	74,325
	500	Each	88,959
	600	Each	1,03,515
	700	Each	1,15,161
	750	Each	1,18,075
	800	Each	1,41,365
	900	Each	1,47,482
	1000	Each	1,76,660
	1100	Each	1,91,245
	1200	Each	2,20,420
	1300	Each	2,49,592
	1400	Each	2,79,334
	1600	Each	3,08,566
	1800	Each	3,65,405
	2000	Each	4,54,730
3	Conveyance of joints and accessories including loading at factory and unloading, stacking at site of work.		5% on basic cost
Note:	The duties and taxes as applicable shall be added as per rules at the time of preparation of estimate.		

31. OTHER ITEMS FOR THE YEAR 2016-17

Sl. No.	Description	Unit	S.S. Rates for 2016-17
1	2	3	4
1	SUPPLY AND DELIVERY OF PIG LEAD 99.99 % PURE INCLUDING TAXES AND CONVEYANCE ETC., COMPLETE.	Per Kg	319
2	SUPPLY AND DELIVERY OF LEAD WOOL BEST QUALITY INCLUDING TAXES AND CONVEYANCE ETC., COMPLETE.	Per Kg	168
3	SUPPLY AND DELIVERY OF SPUN YARN OF BEST QUALITY INCLUDING TAXES AND CONVEYANCE ETC., COMPLETE.	Per Kg	128
4	SUPPLY AND DELIVERY OF RUBBER PACKING INCLUDING TAXES AND CONVEYANCE ETC., COMPLETE.		
	a) 3 mm thick	Per Kg	103
	b) 6 mm thick	Per Kg	103
5	SUPPLY AND DELIVERY OF BOLTS AND NUTS WITH DOUBLE WASHERS INCLUDING TAXES AND CONVEYANCE ETC., COMPLETE. (1/2" TO 1")	Per Kg	123

**32. S o R FOR RUBBER RINGS SUITABLE FOR
SWG PIPES FOR THE YEAR 2016-17**

Sl. No.	Description	Unit	S.S Rates For 2015-16
1	2	3	4
1	Manufacture Supply of Rubber Rings made with EPDM Rubber Rings (seals according to EN681 AND ASTM 425) suitable for SWG pipes confirming to IS No.651/1992 anywhere in A.P , For including cost of materials, loading, unloading , handling with company standard packing , transportation, unloading and stacking but excluding central excise duty and other taxes etc complete. The Rubber Rings shall be tested at the factory premises confirming to I.S No.651/1992		
	100 mm dia	Each	48
	150 mm dia	Each	72
	200 mm dia	Each	108
	230 mm dia	Each	131
	250 mm dia	Each	167
	300 mm dia	Each	192
	350 mm dia	Each	228

Note: The duties and taxes as applicable shall be added as per rules at the time of preparation of estimate.

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

33. S o R FOR TRENCH LESS TECHNOLOGY WITH PIPE JACKING METHOD FOR THE YEAR 2015-16

Sl. No.	Description	Unit	S.S Rates For 2015-16
1	2	3	4
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	26000
	900 mm dia	Rmt	27300
	1000 mm dia	Rmt	28600
	1100 mm dia	Rmt	29900
	1200 mm dia	Rmt	31200
	1300 mm dia	Rmt	32500
	1400mm dia	Rmt	35100
	1500 mm dia	Rmt	39000

Note: The duties and taxes as applicable shall be added as per rules at the time of preparation of estimate.

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

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.

O R D E R:

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	Morrum /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)
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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