GOVERNMENT OF TELANGANA
ROADS & BUILDINGS DEPARTMENT

Office of Engineer-in-Chief (R&B), State Roads& CRN
Errummanzil, Hyderabad-500022.

Proc.No. ENC (R&B)/DCE(R)/EE(R)/DEE1/AEE1/2019,Dt.06.07.2019

Sub:-I & CAD Dept, Finalization of issues related to GST and Works Contract -**Implementation of Goods and Services Tax (GST) for ongoing and future Works Contracts**w.e.f 01-07-2017- Guidelines on implementation of Goods and Services Tax (GST) for regulating work bills for all Engineering Departments - GO Ms No 67 I&CAD (Reforms) dept dated 04.07.2018 Quantification of Embedded Tax rates for the previous SoRs prior to 2017-18 Directed by the Government - Board of Chief Engineers meeting held on 23.03.2019- Minutes of BOCEs meeting held on 23.03.2019 -**Embedded tax rates of previous SoRs**i.e,**2008-09, 2014-15 to 2016-17on implementation of GST for ongoing works** as on 01.07.2017- Approval - Communicated -Regarding.

Ref:-1. G.O.M.SNo. 67 I & CAD (Reforms) Dept dated 04.07.2018
2. Chairman, BOCES proceeding dated 27.08.2018 on communication of Embedded taxes for SoRs 2009-10 to 2016-17
3. Chairman, BOCEs letter N0 ENC/IW/P&M/EE/DEE.2/AEE.5/ BOCE/61108 /2018, dated 01.04.2019 communicating BOCES minutes

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As per the directions of Government under G.O 1st cited and subsequent recommendations of Board of Chief Engineers meeting held on 20.08.2018, the embedded tax rates of previous SoRs (pertaining to Irrigation) from 2009-10 to 2016-17 was approved by the Chairman, BOCEs vide proceeding 2nd cited and the same are published in I&CAD Dept web site for its implementation accordingly.

Further, as per the plea of BAI, Telangana before the Board of Chief Engineers meeting on 23.03.2019, the embedded tax rates of common materials like Bricks, Fine & Coarse aggregate was also examined and discussed by the BOCEs.

After detailed deliberations in the matter, the BOCEs have recommended as below.

"The Board of Chief Engineers has deliberated the issue in detail and after comprehensive discussions in the matter, the BOCEs has recommended to keep the same hire charges of machinery as adopted in pre-GST regime in the post-GST regime also for all the ongoing works as on 01.07.2017. In this regard, BOCEs observed that by keeping the same machinery hire charges in post-GST regime, the machinery lead/conveyance charges will not be affected and hence recommended to keep the same machinery lead/conveyance charges in post-GST regime for all the ongoing works as on 01.07.2017.

Further, BOCEs also examined the embedded tax rates of common materials like Fine & Coarse aggregate and Bricks etc., in pre-GST regime and after detailed deliberations of BOCEs. It was recommended for exemption of bricks (except factory made aerated bricks like Aerocon etc.,) and Coarse aggregate (crusher by product) from the purview of embedded taxes and to retain the same rates in post-GST regime as that of pre-GST regime for all the ongoing works as on 01.07.2017. This is because most of the dealers/suppliers come under exempted category."

In view of the above BOCEs recommendations, the embedded tax rates of previous SoRs (pertaining to Irrigation) from 2009-10 to 2016-17 is revised and approved accordingly duly superseding all the earlier approvals of BOCEs on Quantification of Embedded Tax rates vide proceeding 3rd cited. The revised embedded tax rates of previous SoRs (pertaining to Irrigation) from 2009-10 to 2016-17 are uploaded in I&CAD Dept web site for its implementation by all Engineering Departments accordingly.

In this regard, the following revised guidelines on implementation of GST for the ongoing works as on 01.07.20l7 in working out the embedded tax component of the same is here with communicated to the HODs of all Engineering Depts& members of Board of Chief Engineers for information and directed to take necessary action accordingly.

1. ***Same hire charges of machinery are to be kept as adopted in pre-GST regime in the post-GST regime for all the ongoing works as on 01.07.2017.***

2. ***Same machinery lead/conveyance charges are to be kept as adopted in pre-GST regime in post-GST regime for all the ongoing works as on 01.07.2017 and***

3. ***In respect of common materials like Bricks (except factory made aerated bricks like Aerocon etc.,) and Coarse aggregate (crusher by product) same rates are to be retained as adopted in pre-GST regime in post-GST regime for all the ongoing works as on 01.07.2017***

Keeping in view of the above BoCE recommendations the embedded tax rates of material pertaining to part –II of SSR's of R&B for the year 2008-09, 2014-15, 2015-16 & 2016-17 are approved by all the E-In-C's/CE's of R&B and the same are uploaded in the official web site of Roads and Bridges Department.

Further the model calculation for embedded tax in respect of variation items are approved by all the E-In-C's/CE's of R&B and the same are uploaded in the official web site of Roads and Bridges Department.

It is also informed that the model calculation are for the guidance of SE's/EE's only while arriving at the embedded taxes and any discrepancies found in the above finalized embedded tax rates may be brought to the notice of the undersigned for issuing necessary corrigendum/addendum.

Encl: 1) Soft copies of revised embedded tax rates
of previous SoRs i.e.,2008-09, 2014-15,2015-16 & 2016-17
2) Copy of Minutes of BOCE dated 23.03.2019

For Engineer-in-Chief (R&B)
State Roads & CRN

1. Copy communicated to the Commissioner (State Taxes), commercial Tax Dept., Nampally, Hyd for information.
2. Copy communicated to the Engineer-In-chief (PR) Panchayat Raj Department.
3. Copy communicated to all the SE's /EE's dealing with State Roads & CRN.

SSR - 2008-09

Statement showing the Schedule of Rates with Revised embedded tax rates for the material rates items of SoR 2008-09

Sl. No	S.S. Item No.	Description	Unit	SS Rate for 2008-09	Total embedded Tax Rate (%)
1	2	3	4	5	6
		(A) STONE AND ROAD MATERIALS			
		ROUGH STONE QUARRIED INCLUDING WEDGING, BREAKING,BURNING, SPLITING AND STACKING			
1	22.a	For R.R Masonary Work (other than Granite, Dolomite and Trap	1 cum	**133**	4
2	b.I	For SS Revetment work 225 mm	1 cum	**71**	4
3	b.ii	For SS Revetment work 300 mm	1 cum	**95**	4
4	b.iii	For SS Revetment work450 mm	1 cum	**114**	4
5	c	Jeddy Stone above 450 mm to 600 mm	1 cum	**156**	4
6	d I.	Laterite for revetment 225 mm	1 cum	**98**	4
7	d II.	Laterite for revetment 300 mm	1 cum	**114**	4
8	d.iii	Granite for SS revetment 225 mm	1 cum	**117**	4
9	d.iv	Granite for SS revetment 300 mm	1 cum	**136**	4
		Note:- Only when other than granite is not available			
10	e	Laterite for masonry	1 cum	**114**	4
11	f	Cyclopean stones above 0.2 cum	1 cum	**210**	4
12	g	For R.R.Masonry works (granite, dolamite and trap variety	1 cum	**155**	4
		NOTE:- For items 22(a) to 22© ,22d.iii,22d.iv 22(f) and 22(g) add extra Rs /cum, wherever quarrying is done by blasting	1 cum	**67**	
		COURSED RUBBLE STONE QUARRYING WEDGING, BREAKING, BURNING AND SPLITTING INCLUDING STACKING FOR SS FIRST SORT WORKS			
13	23.a	Granite, dolamite and trap	1 cum	**218**	4
14	b	For other varieties	1 cum	**152**	4
15	27	Granite stone slabs for culverts, lintels and copings (3 faces dressed coarsed rubble masonry)	1 cum	**1409**	4
		NOTE: - For items 23(a), 23(b) and 27 add extra Rs. Per Cum, wherever quarrying is done by blasting	1 cum	**69**	4
16	28	Bond stones (600 x 200 x 200 mm)	each	**25**	4
17	b	Chainage stones and Centre line stones (750x150x150xmm)	each	**30**	4
18	31	Demarcation Stones (900 x 150 x 150 mm)	each	**57.5**	4
19	32.a	Guard Stones (1200 x 200 x 200 mm)	each	**86**	4
20	b	Guide Stones (800 x 150 x150 mm)	each	**57.5**	4
21	c	Carving letters and figures in stone up to 100 mm size	each	**5.3**	4
22	d	Carving letters and figures in stone above 100 mm size	each	**7**	4
		HARD BROKEN STONE OF GRANITE, TRAP AND DOLERITE FREE FROM DUST OBTAINED BY QUARRYING, WEDGING, BREAKING, BURNING AND SPLITTING INCLUDING STACKING.			
23	33.a	- do - 6mm size (IS383,1970)	1 cum	**430**	0
24	b	- do - 10mm size (IS383,1970)	1 cum	**560**	0
25	c	- do - 12mm size (IS383,1970)	1 cum	**690**	0
26	d	- do - 20mm size (IS383,1970)	1 cum	**845**	0
27	e	- do - 25mm size (IS383,1970)	1 cum	**830**	0
28	f	- do - 40mm size (IS383,1970)	1 cum	**500**	0
29	g	- do - 50mm size (IS383,19705)	1 cum	**390**	4
30	h	- do - 60mm size (IS383,1970)	1 cum	**360**	4
31	I	- do - 65mm size (IS383,1970)	1 cum	**325**	4
32	j	- do - 75mm size (IS383,1970)	1 cum	**260**	4
33	k	- do - 75 to 100mm size (IS383,1970)	1 cum	**210**	4
		NOTE:- (1) Add extra Rs. /- per cum for items 33 (a) to 33 (k) if the metal is obtained by blasting		**70**	
		(2) Add **25%** extra per cum if the metal is obtained by machine crushing excluding cost of blasting.		**25%**	
		(3) Deduct Rs. /- per cum if the metal or rubble is obtained from surface stone and boulders.		**9**	
		(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.		**15.00** **9.00**	
		SOFT BROKEN STONE SCREENED AND FREE FROM DUST INCLUDING STACKING			
34	33.l	- do - 40 mm size (IS383,1970)	1 Cum	**105**	4
35	33.m	- do - 50 mm size (IS383,1970)	1 Cum	**95**	4
36	33.n	- do - 60 mm size (IS383,1970)	1 Cum	**75**	4
37	33.o	- do - 65 mm size (IS383,1970)	1 Cum	**67**	4
38	33.p	- do - 75 mm size (IS383,1970)	1 Cum	**63**	4

Sl. No	S.S. Item No.	Description	Unit	SS Rate for 2008-09	Total embedded Tax Rate (%)
1	2	3	4	5	6
		HARD BROKEN STONE OF GRANITE TRAP DOLERITE AND DOLAMITE FREE FROM DUST OBTAINED BY QUARRYING WEDGING, BREAKING, BURNING AND SPLITTING INCLUDING STACKING (QUARTZITE AND BASALT WITH AGGREGATE IMPACT OF LESS THAN 20)			
39	33a	-do- 2.36 mm to 5 mm size (IRC, MORTH &MORD)	1 cum	**234**	4
40	b	-do- 5 mm to 7 mm size (IRC, MORTH & MORD)	1 cum	**430**	4
41	c	-do- 9.5 mm to 11.2 mm size (IRC, MORTH & MORD)	1 cum	**560**	0
42	d	-do- 12mm to 14 mm size (IRC, MORTH & MORD)	1 cum	**690**	0
43	e	-do- 19 mm to 22 mm size (IRC,MORTH & MORD)	1 cum	**845**	0
44	f	-do- 25 mm to 27 mm size (IRC,MORTH &MORD)	1 cum	**830**	0
45	g	-do- 40 mm to 45 mm size (IRC , MORTH &MORD)	1 cum	**500**	0
46	h	-do- 50 mm to 55 mm size (IRC,MORTH & MORD)	1 cum	**390**	4
47	i	-do- 60 mm to 63 mm size (IRC, MORTH &MORD)	1 cum	**360**	4
48	j	-do- 65 mm size (IRC ,MORTH &MORD)	1 cum	**325**	4
49	k	-do- 75 mm size (IRC,MORTH &MORD)	1 cum	**260**	4
	1	**NOTE**:- Add extra Rs. /- per cum for items 33 (a) to 33 (j) if the metal is obtained by blasting	1 cum	**70**	
	2	Add **25%** extra per cum if the metal is obtained by machine crushing excluding cost of blasting.	1 cum	**25%**	
	3	Deduct Rs. /- per cum if the metal or rubble is obtained from surface stones and boulders	1 cum	**9**	
	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	**15.00 9.00**	
		HARD BROKEN STONE OTHER THAN GRANITE SUCH AS QUARTZ, QUARTZ-NAPA AND BASALT SCREENED AND FREE FROM DUST INCLUDING STACKING			
50	33.q	- do - 10 mm size (IS383,1970)	1 Cum	**331**	0
51		-do- 9.5 mm to 11.2 mm size (IRC,MORTH & MORD)	1 Cum	**331**	0
52	r	- do - 12 mm size (IS383,1970)	1 Cum	**310**	0
53		-do- 12mm to 14 mm size (IRC , MORTH & MORD)	1 Cum	**310**	0
54	s	- do - 20 mm size (IS383,1970)	1 Cum	**251**	0
55		-do- 19 mm to 22 mm size (IRC,MORTH & MORD)	1 Cum	**251**	0
56	t	- do - 25 mm size (IS383,1970)	1 Cum	**247**	0
57	u	- do - 40 mm size (IS383,1970)	1 Cum	**146**	0
58		-do- 40 mm to 45 mm size (IRC , MORTH & MORD)	1 Cum	**146**	0
59	v	- do - 50 mm size (IS383,1970)	1 Cum	**129**	4
60		-do- 50 mm to 55 mm size (IRC,MORTH &MORD)	1 Cum	**129**	4
61	33.w	- do - 65 mm size (IS383,1970)	1 Cum	**122**	4
62		-do- 60 mm to 65 mm size (IRC, MORTH &MORD)	1 Cum	**122**	4
63	x	- do - 75 mm size (IS383,1970)	1 Cum	**101**	4
64		- do - 75 mm size (IRC ,MORTH & MORD)	1 Cum	**101**	4
65	y	- do - 75 to 100 mm size (IS383,1970)	1 Cum	**80**	4
66		- do - 75 to 100 mm (IRC, MORTH & MORD)	1 Cum	**80**	4
		OTHER ITEMS INCLUDING STACKING			
67	33.z1	Laterite 40 to 75 mm (ring)	1 Cum	**87.5**	4
68	z2	kankar, hard broken kankar 40 to 75 mm (ring)	1 Cum	**65.5**	4
69	z3	Soling stone of 150 mm size of granite, trap and Dolamite varieties.	1 Cum	**82**	4
		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**	
70	z4	Soling stone of 150 mm size other than granite variety	1 Cum	**57.5**	4
71	z5	Soling Stone laterite, Kankar 150mm, surface stone	1 Cum	**35**	4
72	z6	Field picked metal unbroken 20 mm size	1 Cum	**47.5**	4
73	z7	- do - 25 mm size	1 Cum	**37.5**	0
74	z8	- do - 40 mm size	1 Cum	**42**	0
75	z9	- do - 50 mm size	1 Cum	**37.5**	4
76	z10	- do - 60 mm size	1 Cum	**31**	4
77	z11	- do - 80 mm size	1 Cum	**22.5**	4
	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.			**15.00 9.00**	
78	34	Gravel including stacking	1 Cum	**56**	-
79	35 a	Quarry rubbish	1 Cum	**25**	4
	b	HBG Stone Chips 2.36mm and below	1 Cum	**225**	4
80	36.a	Sand for mortar, ceiling coat including washing screening etc.,	1 Cum	**175**	4
81		Sand for concrete			

Sl. No	S.S. Item No.	Description	Unit	SS Rate for 2008-09	Total embedded Tax Rate (%)
1	2	3	4	5	6
82	b	Sand for filling and blindage	1 Cum	**60**	4
83	37	Clay for puddle and masonry Items 38 (a) to 39 (h) As per local prevaili	1 Cum	**28**	
		(C) LIME AND CEMENT			
	40 to 41(c)			**As per local prevailing**	
84	42	Cement excluding cost of empty cement bags	Metric Tonne	The price of cement will be reviewed and fixed on monthly basis as per G.O.Ms.No.94 T,R&B Dept Dt16-4-2008 and rates will be communicated separately.	
	NOTE: (1) The rate is material at site (No conveyance charges to be allowed)		2)As per		
85	42.a	Labour for mixing cement mortar	1 Cum	**28**	0
86	b	Mixing of cement mortar by machine	1 Cum	**45**	0
87	c	Grinding lime mortar or Surkhi mortar	1 Cum	**78**	4
88	d	Shell lime slaked and screened	1 Cum	**780**	4
		(D) MORTARS			
89	43 to 45	Items 43 to 45		**Rates have to be worked**	
		(E) METAL AND IRON WORKS			
		(A) CLEARING SITE			
90	1.a	Clearing heavy Jungle	1 Sqm	**2.2**	0
91	b	Clearing light Jungle	1 Sqm	**2**	0
92	c	Clearing Scrub Jungle	1 Sqm	**2**	0
93	d	Clearing Juliflora (Prosafis) jungle including up-rooting and removing of Juliflora stumps.	1 Sqm	**3.3**	0
94	2.a.I	Cutting and removing Palmyrah trees including stacking of girth 30 to 100 cm.	Each	**27**	0
95	ii	- do - 100 to 200 cm.	Each	**42.5**	0
96	2.b.I	Uprooting and removing Palmyrah stumps including stacking of girth 30 to 100 cm.	Each	**30**	0
97	ii	- do - 100 to 200 cm.	Each	**46**	0
98	2.c.I	Cutting and removing date trees including stacking of girth 30 to 100 cm	Each	**18**	0
99	ii	- do - 100 to 200 cm	Each	**28**	0
100	d.I	Uprooting and removing stumps of date trees including stacking of girth 30 to 100 cm.	Each	**18**	0
101	ii	- do - 100 to 200 cm	Each	**24**	0
102	e I	Cutting and removing other kind of trees including stacking of girth 30 to 100 cm	Each	**24**	0
103	ii	- do - 100 to 200 cm	Each	**38**	0
104	iii	- do - above 200 cm	Each	**62**	0
105	f.I	Uprooting and removing stumps of other kind of trees including stacking of girth 30 to 100 cm.	Each	**18**	0
106	ii	- do - 100 to 200 cm	Each	**26**	0
107	iii	- do - above 200 cm	Each	**35.5**	0
108	3.a	Uprooting and clearing prickly pear jungle	1 Sq.m	**1.9**	0
109	b	- do - under 2.5 meters height including burning and burying as directed.	1 Sq.m	**2.4**	0
110	c	- do - over 2.5 meters height including burning and burying with an initial lead of conveyance	1 Sq.m	**2.9**	0
111	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 Sq.m	**1.5**	0
112	b.I	Clearing alchi, tilla	1 Sq.m	**2.9**	0
113	b.ii	Removal of Jammu	1 Sq.m	**2.5**	0
114	c.I	Removal of imponea, cornea	1 Sq.m	**2.9**	0
115	c.ii	Removal of water hyacinth up to 30 cm thick.	1 Sq.m	**3**	0
116	c.iii	- do - more than 30 cm thick	1 Sq.m	**4.1**	0
117	d	Removal of natchu, goobi, thooti etc., for every extra lead or lift over the initial lead or lift.	1 Sq.m	**1**	0
		(B) DISMANTLING			
	5	**DISMANTLING, CLEARING AWAY AND CAREFULLY STACKING MATERIALS USEFUL FOR REUSE.**			-
118	n.(i)	Dry rough stone revetment for aprons and stacking within 40 metres	1 cum	**50**	

Sl. No	S.S. Item No.	Description	Unit	SS Rate for 2008-09	Total embedded Tax Rate (%)
1	2	3	4	5	6
		(C) QUARRYING AND BLASTING			
119	6	Blasting and removing hard granite measured in solid	1 cum	**covered under earth**	
	7	**Drilling holes in hard granite or sheet rock**			
	a)	**Manually (Hand)**			
120	I)	20 mm dia meter	1 RM	**88**	0
121	ii)	25 mm dia meter	1 RM	**95.5**	0
122	iii)	36 mm dia meter	1 RM	**109**	0
	b)	**Pneumatic Compressor**			
123	I)	20 mm dia meter	1 RM	**100**	0
124	ii)	25 mm dia meter	1 RM	**110**	0
125	iii)	36 mm dia meter	1 RM	**121**	0
	8	**Grouting the holes with neat cement slurry excluding cost of steel**			
126	I)	20 mm dia meter	1 RM	**64.5**	0
127	ii)	25 mm dia meter	1 RM	**81**	0
128	iii)	36 mm dia meter	1 RM	**99.5**	0
		EARTH WORK EXCAVATION AND DEPOSITING ON BANK WITH AN INITIAL LEAD OF 10 METRES AND AN INITIAL LIFT OF 2 METRES IN CASE OF HEAD LEAD ONLY.			
129	8.a	Sand or loose soils wet sand not under water, silt in canals, channels and drains SS 20-A.	1 cum	**27**	0
130	b	- do - 20-B	1 cum	**25**	0
131	9.a	Loamy and Clayey soils like black cotton soils, red earth and ordinary gravel SS 20-A.	1 cum	**41**	0
132	b	- do - 20-B	1 cum	**37.5**	0
133	10.b	Slushy soil and silt clearance up to 0.60 metres depth SS 20-B	1 cum	**41**	0
134	11.b	Clayey Soil in wet and slushy condition SS 20-B	1 cum	**43**	0
135	12.a	Hard Gravelly Soils SS 20-A	1 cum	**43**	0
136	b	- do - SS 20-B	1 cum	**40.5**	0
137	13.a	Mixture of gravel and soft disintegrated rock like shales ordinary gravel, stoney earth and earth mixed with fair sized boulders SS 20-A	1 cum	**45.5**	0
138	b	- do - 20-B	1 cum	**41.5**	0
139	14	Soft disintegrated rock (removable by pick axes and crow bars)	1 cum	**49**	0
140	15	Stone matrix	1 cum	**50.5**	0
141	16	Hard disintegrated rock or soft rock or conglomerate rock etc., removable by pick axes and crow bars	1 cum	**66**	0
142	17	Hard disintegrated rock or soft rock or conglomerate rock and Hard lime kankar requiring partial blasting.	1 cum	**87**	0
143	18.a.I	Fissured and fractured rock and boulders up to 3 cum in size requiring blasting including stacking	1 cum	**147**	0
144	a.ii	- do - Stacking is not done	1 cum	**141.5**	0
145	18.b.I	Excavation of Nandyal Slabs more than 3 cum in size requiring blasting including stacking	1 cum	**180**	0
146	b.ii	- do - Stacking is not done	1 cum	**175**	0
147	19.a.I	Hard rock and boulders more than 3 cum in size requiring blasting including stacking	1 cum	**320**	0
148	a.ii	- do - Stacking is not done	1 cum	**310**	0
149	a.iii	Hard rock and boulders more than 3 cum in size wherever quarrying is done by controlled blasting.	1 cum	**400**	0
150	a.iv	- do - Stacking is not done	1 cum	**390**	0
151	19.b	Benching, chiseling, wedging and boring in rock in foundation grade levelling.	1 cum	**440**	0
		FOR ALL SOILS, SOFT DISINTEGRATED ROCK AND STONE MATRIX (ITEM N0s 8-b to 15 ABOVE)			
152	20.a.I	Extra for every additional 10 metres lead or part there of over the initial lead for the first 3 extra leads	1 cum	**1.7**	0

Sl. No	S.S. Item No.	Description	Unit	SS Rate for 2008-09	Total embedded Tax Rate (%)
1	2	3	4	5	6
153	ii	-do- from 4 th extra lead to 6 th extra lead	1 cum	**2.7**	0
154	iii	-do- from 7 th extra lead to 9 th extra lead	1 cum	**4**	0
		FOR HARD DISINTEGRATED ROCK (ITEM 16 TO 17 ABOVE)			
155	20bi	(Extra for every additional 10 metres lead or part there of) over the initial lead for the first 3 extra leads	1 cum	**2.9**	0
156	ii	Extra for every additional 10 mtrs. Lead or part there of from 4 th extra lead to 6 th extra lead	1 cum	**4.5**	0
157	iii	-do- from 7 th extra lead to 9 th extra lead	1 cum	**6**	0
		FOR FISSURED AND FRACTURED HARD ROCK AND BOULDERS ETC., (ITEM 18 & 19 a ABOVE)			
158	20.c.I	(Extra for every additional 10 metres lead or part there of) over the initial lead for the first 3 extra leads	1 cum	**4.5**	0
159	ii	Extra for every additional 10 mtrs. Lead or part there of from 4 th extra lead to 6 th extra lead	1 cum	**7**	0
160	iii	-do- from 7 th extra lead to 9 th extra lead	1 cum	**8.5**	0
		FOR ALL SOILS, SOFT DISINTEGRATED ROCK AND STONE MATRIX (ITEM N0s 8-b to 15 ABOVE)			
161	21.a.I	Extra for every additional 1 metre lift or part there of over the initial lift for the first 3 extra lifts	1 cum	**1.7**	0
162	ii	Extra for every additional 1 mtrs. lift or part there of from 4 th extra lift to 6 th extra lift	1 cum	**2.7**	0
163	iii	-do- from 7 th extra lift and above	1 cum	**4**	0
		FOR HARD DISINTEGRATED ROCK (ITEM 16 & 17 ABOVE)			
164	21.b. I	Extra for every additional 1 metres Lift or part there of over the initial lift for first 3 extra lifts	1 cum	**2.9**	0
165	ii	Extra for every additional 1 mtrs. lift or part there of from 4 th extra lift to 6 th extra lift	1 cum	**4.5**	0
166	21.b.iii	-do- from 7 th extra lift and above	1 cum	**6**	0
		FOR FISSURED AND FRACTURED, HARD ROCK AND BOULDERS ETC.,(ITEM 18 TO 19 a ABOVE).			
167	21.c.I	Extra for every additional lift of 1 metre or part there of over the initial lift for the first 3 extra lifts	1 cum	**4.5**	0
168	ii	Extra for every additional lift of 1metre or part there of over from 4th extra lift to 6 th extra lift	1 cum	**7**	0
169	iii	-do- from 7 th extra lift and above	1 cum	**8.5**	0
		Note: The lift charges mentioned in SS item Nos 21a,21 b, and 21c under (D) Earth work are applicable to delifts also.			
	22.a	Add to relevant SS 20-A rates for new tank bunds, closing breaches, road formation and embankments for extra watering and consolidation by stone roller up to 1 tonne.	1 cum	**3**	0
170	b	- do - with stone roller 2 tonnes or cattle treading	1 cum	**4.8**	0
	b(I)	Add to relevant SS 20-A rates for new tank bunds, closing breaches, road formation and embankments for extra watering and consolidation by pneumatic tampers at 90% proctor's density.	1 cum	**5**	0
171	c	Add to relevant SS 20-A rates for new tank bunds, closing breaches, road formation and embankments for extra watering and consolidation of proctor's density with 8 to 10 tonne power roller including watering and conveyance of water for initial lead of 1/2 Kilometer.	1 cum	**28**	0
		Note: The element of Hire charges is Rs **51.76** per 10 cum corresponding to the hire charges of 8 to 10 Tonne power roller fixed at Rs. 2200 /- per day of 8 hours. The rate shall be increased when the element of hire charges increases for item No. 22 c above, if the roller is lent to the contractor at a rate of Rs 275/- per hour (i.e.,) Rs 2200 /- per day of 8 hours may be effected.)			
172	22.d	Extra for every additional 1/2 km lead for water over the initial lead of 1/2 Km for consolidation of banks .	1 cum	**3**	0
173	23.a	Benching old embankment slopes 0.45 x 0.45 metres.	1 RM	**2**	0
174	23.b	Puddle wall work	1 cum	**43**	0

Sl. No	S.S. Item No.	Description	Unit	SS Rate for 2008-09	Total embedded Tax Rate (%)
1	2	3	4	5	6
175	24	Turfing slopes including watering for 3 months with initial lead for conveyance of water and grass for 1 hectometer.	1 Sq.m	**19**	0
176	25	Refilling with the excavated sand complying with the standard specifications for filling foundations	1 cum	**14**	0
177	26.a	Refilling with the excavated soils (other than sand) complying with the standard specifications for filling foundations.	1 cum	**14**	0
178	b	Trimming of slopes of embankments and depositing the soils on the top of the bank.	1 cum	**50% of earth work excavation of similar classification**	
179	c	Ploughing	1 Sq.m	**0.8**	0
		(E) CONCRETE AND (G) STONE MASONRY			
180		SSI NOS 31a to 39 and SSI Nos. 60 to 87		**Rates have to be worked based on standard data**	
		Note:			
		1. Add for vibrating concrete	1 cum	**43**	0
		2. Add for machine mixing of concrete.	1 cum	**45**	0
		3.Add where the power is available for operating the mixer, the rate is,	1 cum	**27.5**	0
181	a I	White washing and colour banding for guard and guide stones including cost of materials	each	**5.8**	0
182	b I	Screening sand and gravel	1 cum	**5.7**	0
183	b 2	Screening chips and metal	1 cum	**11.8**	0
184	c 1	Removing and refixing Hectometer or Demarcation stones	each	**8.6**	0
		CENTERING CHARGES			
185	L 1	Centering charges for culvert slabs and other structures of 3 mts. span and above	1 cum	**950**	0
186	L 2	Centering charges for bed blocks and culvert slabs and other structures of less than 3 mts. span.	1 cum	**760**	0
		CENTERING CHARGES FOR MINOR AND MAJOR BRIDGE WORKS			
187	L3	For mass concrete piers, abutments and steining well curbs, well caps etc.,	1 cum	**700**	0
188	L 4	For RCC piers, abutments, wing wall, steining, well curbs, well caps etc.,	1 cum	**850**	0
189		NOTE:- The rates under L3 and L 4 are applicable to Roads and Buildings and Irrigation structures up to 2 metres width			
190	L 5	For RCC deck slabs	1 cum	**1550**	0
191	L 6	For RCC beams	1 cum	**2000**	0
192	L 7	For RCC hand rails	1 cum	**2200**	0
193	L 8	For CC pavements, wearing coats, approach, slabs, guide stone, J. M. stone etc.,	1 cum	**160**	0
	n	**Laying and fixing RCC Hume pipes in position including lifting, aligning etc., complete with (fixing) collars for the following diametres of pipes but excluding cost of materials (NP2 Class)**			
194	n 1	250 mm diameter	1 Rm	**17**	0
195	n 2	300 mm diameter	1 Rm	**23.5**	0
196	n 3	450 mm diameter	1 Rm	**30**	0
197	n 4	600 mm diameter	1 Rm	**49**	0
198	n 5	750 mm diameter	1 Rm	**60**	0
199	n 6	800 mm diameter	1 Rm	**73**	0
200	n 7	1000 mm diameter	1 Rm	**82**	0
201	n 8	1220 mm diameter	1 Rm	**100**	0
		Note:- For NP3 class 50% extra over the rates of NP2. Class may be allowed.			
		(S) ROAD WORK ITEMS			

Sl. No	S.S. Item No.	Description	Unit	SS Rate for 2008-09	Total embedded Tax Rate (%)
1	2	3	4	5	6
		PICKING OLD METALLED SURFACE TO DEPTH OF 40 TO 100 mm SPREADING OLD METAL AND NEW METAL SECTIONING INCLUDING EDGEBUNDS AND SUBGRADE ROLLING, SPREADING METAL INCLUDING BLINDAGE OFGRAVEL WATERING WITH AN INITIAL LEAD OF 2 HECTOMETERS AND HAND ROLLER (1.5 TO 2 TONNES) ROLLING ETC., INCLUDING BARRICADING,DIVERSION OF TRAFFIC AND WETTING THE NEW CONSOLIDATION FOR A FORTNIGHT COMPLETE.			
		(For a compact thickness)			
	1 (I)	**HARD METAL**			
202	a	40 mm thickness	10 sqm	**52**	0
203	b	50 mm thickness	10 sqm	**55**	0
204	c	75 mm thickness	10 sqm	**60**	0
205	d	100 mm thickness	10 sqm	**65**	0
	1 (ii)	**For compact thickness of soft metal**			
206	a	50 mm thickness	10 sqm	**40**	0
207	b	75 mm thickness	10 sqm	**48**	0
208	c	100 mm thickness	10 sqm	**52**	0
209	2	Picking 5 to 100 mm old metalled surface and sectioning	10 sqm	**20**	0
210	3	Picking gravelled surface 25 mm deep and levelling and sectioning	10 sqm	**6**	0
211	4	Picking the existing B.T. surface and removal of chips	10 sqm	**22**	0
	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 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			
212	5 (a)	40 mm thickness	10 sqm	**137**	0
213	(b)	50 mm thickness	10 sqm	**155**	0
214	(c)	75 mm thickness	10 sqm	**170**	0
215	(d)	100 mm thickness	10 sqm	**185**	0
216	(e)	150 mm thick excluding hire charges	10 sqm	**330**	0
		Spreading gravel watering with an initial lead of 2 hectometers and power roller (8 to 10 T) rolling excluding hire charges of power roller and barricading etc., (for a compact thickness of)			
217	6a	50 mm thickness	10 sqm	**25**	0
218	b	75 mm thickness	10 sqm	**34**	0
219	c	100 mm thickness	10 sqm	**53**	0
220	d	150 mm thickness	10 sqm	**60**	0
221	7a	**Blinding the road surface 6 mm thick with gravel or sand available at site after remaining loose stones including**	10 sqm	**1.8**	0
222	b	-do- without watering	10 sqm	**1.5**	0
223	8a	**Blinding the road surface 6 mm thick with gravel or sand dug from road site including watering.**	10 sqm	**2.9**	0
224	b	-do- without watering	10 sqm	**2.1**	0
225		**Spreading gravel sand including watering and roller rolling (for compacted thickness of)**			

Sl. No	S.S. Item No.	Description	Unit	SS Rate for 2008-09	Total embedded Tax Rate (%)
1	2	3	4	5	6
226	9a	-do- 6mm to 20 mm thick	1 cum	**38**	0
227	b	-do- from 20 to 25 mm thick	1 cum	**34**	0
228	c	-do- from 25 to 40 mm thick	1 cum	**32**	0
229	d	-do- from 40 to 50 mm thick	1 cum	**30**	0
230	10	Picking 50 to 100 mm Old metalled surface, spreading metal and blindage watering tamping for patch repairs (labour only)	10 sqm	**28**	0
231	11	Picking old metalled surface 50 to 100 mm deep spreading gravel watering and tamping (labour only)	10 sqm	**15**	0
232	12	Levelling ruts and tamping gravelled roads	10 sqm	**3**	0
233	13	Levelling ruts and tamping metalled roads	10 sqm	**6**	0
234	14	Spreading gravel or sand including watering and rolling with hand roller irrespective of thickness in layer	10 cum	**230**	0
235	15(I)	Carrying for water for WBM consolidation metal and blindage of 40 to 150 mm thickness for every one hectometer beyond initial lead of 2	10 sqm	**3**	0
236	(ii)	Rate towards the cost of water to be consumed for Cement Concrete Roads(including curing) under Greater Hyderabad Municipal	1 sqm	**10**	0
237	16	Structural steel/ Reinforcement steel (HYSD/TMT) Note:- As per monthly rate fixed by the sub committee	1 tonne		20.64
238	17	Cement 43Gr/ 53 Gr Note:- As per monthly rate fixed by the sub committee	1 tonne		30.5
239	18	Bitumen	1 tonne		Excise duty and vat as provided in the sanctioned estimate

Sd/-

Engineer-In-Chief (R&B) SR & CRN

Sd/-

Engineer-In-Chief(R&B) NH, CRF &Buildings

Sd/-

Chief Engineer(R&B) Rural Roads

Sd/-

Chief Engineer(R&B) Admn, COT & QC

Sd/-

Chief Engineer(R&B)D&P,LWE&RSW

Sd/-

Chief Engineer(R&B) PPP & EAP

Sd/-

Chief Engineer(R&B) CTE

For Engineer-in-Chief (R&B)
State Roads & CRN

SSR - 2014-15

Statement showing the Schedule of Rates with Revised embedded tax rates for the material rates items of SoR 2014-15

Sl. No	S.S. Item No.	Description	Unit	TS SSR 2014-15	Total embedded Tax Rate(%)
1	2	3	4		
		(A) STONE AND ROAD MATERIALS			
		ROUGH STONE QUARRIED INCLUDING WEDGING, BREAKING,BURNING, SPLITING AND STACKING			
1	22.a	For R.R Masonary Work (other than Granite, Dolomite and Trap	1 cum	160	5
2	b.I	For SS Revetment work 225 mm	1 cum	144	5
3	b.ii	For SS Revetment work 300 mm	1 cum	164	5
4	b.iii	For SS Revetment work450 mm	1 cum	136	5
5	c	Jeddy Stone above 450 mm to 600 mm	1 cum	188	5
6	d I.	Laterite for revetment 225 mm	1 cum	118	5
7	d II.	Laterite for revetment 300 mm	1 cum	138	5
8	d.iii	Granite for SS revetment 225 mm	1 cum	154	5
9	d.iv	Granite for SS revetment 300 mm	1 cum	156	5
10		**Note:-** Only when other than granite is not available			
11	e	Laterite for masonry	1 cum	136	5
12	f	Cyclopean stones above 0.2 cum	1 cum	254	5
13	g	For R.R.Masonry works (granite, dolamite and trap variety	1 cum	252	
14		NOTE:- For items 22(a) to 22© ,22d.iii,22d.iv 22(f) and 22(g) add extra Rs /cum, wherever quarrying is done by blasting	1 cum	70	
		COURSED RUBBLE STONE QUARRYING WEDGING, BREAKING, BURNING AND SPLITTING INCLUDING STACKING FOR SS FIRST SORT WORKS			
15	23.a	Granite, dolamite and trap	1 cum	262	5
16	b	For other varieties	1 cum	188	5
17	27	Granite stone slabs for culverts, lintels and copings (3 faces dressed coarsed rubble masonry)	1 cum	1728	5
18		**NOTE**: - For items 23(a), 23(b) and 27 add extra Rs. Per Cum, wherever quarrying is done by blasting	1 cum	74	
19	28	Bond stones (600 x 200 x 200 mm)	each	30	5
20	b	Chainage stones and Centre line stones (750x150x150xmm)	each	37	5
24	31	Demarcation Stones (900 x 150 x 150 mm)	each	70	5
25	32.a	Guard Stones (1200 x 200 x 200 mm)	each	102	5
26	b	Guide Stones (800 x 150 x150 mm)	each	70	5
27	c	Carving letters and figures in stone up to 100 mm size	each	8	5
28	d	Carving letters and figures in stone above 100 mm size	each	9	5
		HARD BROKEN STONE OF GRANITE, TRAP AND DOLERITE FREE FROM DUST OBTAINED BY QUARRYING, WEDGING, BREAKING, BURNING AND SPLITTING INCLUDING STACKING.			
29	33.a	- do - 6mm size (IS383,1970)	1 cum	532	0
30	b	- do - 10mm size (IS383,1970)	1 cum	692	0
31	c	- do - 12mm size (IS383,1970)	1 cum	822	0
32	d	- do - 20mm size (IS383,1970)	1 cum	1036	0
33	e	- do - 25mm size (IS383,1970)	1 cum	994	0
34	f	- do - 40mm size (IS383,1970)	1 cum	620	0
35	g	- do - 50mm size (IS383,19705)	1 cum	456	5
36	h	- do - 60mm size (IS383,1970)	1 cum	419	5
37	I	- do - 65mm size (IS383,1970)	1 cum	379	5
38	j	- do - 75mm size (IS383,1970)	1 cum	304	5
39	k	- do - 75 to 100mm size (IS383,1970)	1 cum	248	5
40		NOTE:- (1) Add extra Rs. /- per cum for items 33 (a) to 33 (k) if the metal is obtained by blasting		70	
41		(2) Add **25%** extra per cum if the metal is obtained by machine crushing excluding cost of blasting.		25%	
42		(3) Deduct Rs. /- per cum if the metal or rubble is obtained from surface stone and boulders.		9.9	

43		(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.		17	
		SOFT BROKEN STONE SCREENED AND FREE FROM DUST INCLUDING STACKING			
44	33.l	- do - 40 mm size (IS383,1970)	1 Cum	123	0
45	33.m	- do - 50 mm size (IS383,1970)	1 Cum	111	5
46	33.n	- do - 60 mm size (IS383,1970)	1 Cum	87	5
47	33.o	- do - 65 mm size (IS383,1970)	1 Cum	78	5
48	33.p	- do - 75 mm size (IS383,1970)	1 Cum	73	5
		HARD BROKEN STONE OF GRANITE TRAP DOLERITE AND DOLAMITE FREE FROM DUST OBTAINED BY QUARRYING WEDGING, BREAKING, BURNING AND SPLITTING INCLUDING STACKING (QUARTZITE AND BASALT WITH AGGREGATE IMPACT OF LESS THAN 20)			
49	33a	-do- 2.36 mm to 5 mm size (IRC, MORTH &MORD)	1 cum	308	5
50	b	-do- 5 mm to 7 mm size (IRC, MORTH & MORD)	1 cum	504	0
51	c	-do- 9.5 mm to 11.2 mm size (IRC, MORTH & MORD)	1 cum	656	0
52	d	-do- 12mm to 14 mm size (IRC, MORTH & MORD)	1 cum	780	0
53	e	-do- 19 mm to 22 mm size (IRC,MORTH & MORD)	1 cum	984	0
54	f	-do- 25 mm to 27 mm size (IRC,MORTH &MORD)	1 cum	944	0
55	g	-do- 40 mm to 45 mm size (IRC , MORTH &MORD)	1 cum	588	0
56	h	-do- 50 mm to 55 mm size (IRC,MORTH & MORD)	1 cum	456	5
57	i	-do- 60 mm to 63 mm size (IRC, MORTH &MORD)	1 cum	419	5
58	j	-do- 65 mm size (IRC ,MORTH &MORD)	1 cum	379	5
59	k	-do- 75 mm size (IRC,MORTH &MORD)	1 cum	304	5
60	1	**NOTE**:- Add extra Rs. /- per cum for items 33 (a) to 33 (j) if the metal is obtained by blasting	1 cum	70	
61	2	Add **25%** extra per cum if the metal is obtained by machine crushing excluding cost of blasting.	1 cum	25%	
62	3	Deduct Rs. /- per cum if the metal or rubble is obtained from surface stones and boulders	1 cum	9.9	
63	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	
		HARD BROKEN STONE OTHER THAN GRANITE SUCH AS QUARTZ, QUARTZ-NAPA AND BASALT SCREENED AND FREE FROM DUST INCLUDING STACKING			
64	33.q	- do - 10 mm size (IS383,1970)	1 Cum	386	0
65		-do- 9.5 mm to 11.2 mm size (IRC,MORTH & MORD)	1 Cum	386	0
66	r	- do - 12 mm size (IS383,1970)	1 Cum	362	0
67		-do- 12mm to 14 mm size (IRC , MORTH & MORD)	1 Cum	362	0
68	s	- do - 20 mm size (IS383,1970)	1 Cum	293	0
69		-do- 19 mm to 22 mm size (IRC,MORTH & MORD)	1 Cum	293	0
70	t	- do - 25 mm size (IS383,1970)	1 Cum	287	0
71	u	- do - 40 mm size (IS383,1970)	1 Cum	170	0
72		-do- 40 mm to 45 mm size (IRC , MORTH & MORD)	1 Cum	170	0
73	v	- do - 50 mm size (IS383,1970)	1 Cum	150	5
74		-do- 50 mm to 55 mm size (IRC,MORTH &MORD)	1 Cum	150	5
75	33.w	- do - 65 mm size (IS383,1970)	1 Cum	142	5
76		-do- 60 mm to 65 mm size (IRC, MORTH &MORD)	1 Cum	142	5
77	x	- do - 75 mm size (IS383,1970)	1 Cum	117	5
78		- do - 75 mm size (IRC ,MORTH & MORD)	1 Cum	117	5
79	y	- do - 75 to 100 mm size (IS383,1970)	1 Cum	92	5
80		- do - 75 to 100 mm (IRC, MORTH & MORD)	1 Cum	92	5
81		**OTHER ITEMS INCLUDING STACKING**			
82	33.z1	Laterite 40 to 75 mm (ring)	1 Cum	101	5
83	z2	kankar, hard broken kankar 40 to 75 mm (ring)	1 Cum	75	5
84	z3	Soling stone of 150 mm size of granite, trap and Dolamite varieties.	1 Cum	95	5
85		**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	
86	z4	Soling stone of 150 mm size other than granite variety	1 Cum	66	5
87	z5	Soling Stone laterite, Kankar 150mm, surface stone	1 Cum	41	5

88	z6	Field picked metal unbroken 20 mm size	1 Cum	55	5
89	z7	- do - 25 mm size	1 Cum	42	0
90	z8	- do - 40 mm size	1 Cum	48	0
91	z9	- do - 50 mm size	1 Cum	42	5
92	z10	- do - 60 mm size	1 Cum	36	5
93	z11	- do - 80 mm size	1 Cum	32	5
94	**NOTE**:- Add Rs. /- Per Cum for selection of stone and boulders from			17	
95	34	Gravel including stacking	1 Cum	103	0
96	35 a	Quarry rubbish	1 Cum	81	5
97	b	HBG Stone Chips 2.36mm and below	1 Cum	340	5
98	36.a	Sand for mortar, ceiling coat including washing screening etc.,	1 Cum	606	5
99		Sand for concrete		462	5
100	b	Sand for filling and blindage	1 Cum	342	5
101	37	Clay for puddle and masonry Items 38 (a) to 39 (h) As per local prev	1 Cum	35	5
102		**(C) LIME AND CEMENT**			
103	40 to 41(c)				
104	42	Cement excluding cost of empty cement bags	Metric Tonne		
	NOTE: (1) The rate is material at site (No conveyance charges to be allowed) 2)As				
105	42.a	Labour for mixing cement mortar	1 Cum		
106	b	Mixing of cement mortar by machine	1 Cum		
107	c	Grinding lime mortar or Surkhi mortar	1 Cum	94	5
108	d	Shell lime slaked and screened	1 Cum	940	5
		(D) MORTARS			
110	43 to 45	Items 43 to 45			
		(E) METAL AND IRON WORKS			
		(A) CLEARING SITE			
111	1.a	Clearing heavy Jungle	1 Sqm	2.9	0
112	b	Clearing light Jungle	1 Sqm	2.6	0
113	c	Clearing Scrub Jungle	1 Sqm	2.6	0
114	d	Clearing Juliflora (Prosafis) jungle including up-rooting and removing of Juliflora stumps.	1 Sqm	3.7	0
115	2.a.I	Cutting and removing Palmyrah trees including stacking of girth 30 to 100 cm.	Each	19	0
116	ii	- do - 100 to 200 cm.	Each	44	0
117	2.b.I	Uprooting and removing Palmyrah stumps including stacking of girth 30 to 100 cm.	Each	46	0
118	ii	- do - 100 to 200 cm.	Each	48	0
119	2.c.I	Cutting and removing date trees including stacking of girth 30 to 100 cm	Each	24	0
120	ii	- do - 100 to 200 cm	Each	35	0
121	d.I	Uprooting and removing stumps of date trees including stacking of girth 30 to 100 cm.	Each	24	0
122	ii	- do - 100 to 200 cm	Each	30	0
123	e I	Cutting and removing other kind of trees including stacking of girth 30 to 100 cm	Each	30	0
124	ii	- do - 100 to 200 cm	Each	46	0
125	iii	- do - above 200 cm	Each	75	0
126	f.I	Uprooting and removing stumps of other kind of trees including stacking of girth 30 to 100 cm.	Each	24	0
127	ii	- do - 100 to 200 cm	Each	33	0
128	iii	- do - above 200 cm	Each	41	0
129	3.a	Uprooting and clearing prickly pear jungle	1 Sq.m	2.3	0
130	b	- do - under 2.5 meters height including burning and burying as directed.	1 Sq.m	3	0
131	c	- do - over 2.5 meters height including burning and burying with an initial lead of conveyance	1 Sq.m	3.5	0
132	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 Sq.m	1.9	0
133	b.I	Clearing alchi, tilla	1 Sq.m	3.8	0
134	b.ii	Removal of Jammu	1 Sq.m	3.3	0
135	c.I	Removal of imponea, cornea	1 Sq.m	3.6	0

136	c.ii	Removal of water hyacinth up to 30 cm thick.	1 Sq.m	3.7	0
137	c.iii	- do - more than 30 cm thick	1 Sq.m	5	0
138	d	Removal of natchu, goobi, thooti etc., for every extra lead or lift over the initial lead or lift.	1 Sq.m	1.4	0
		(B) DISMANTLING			
	5	**DISMANTLING, CLEARING AWAY AND CAREFULLY STACKING MATERIALS USEFUL FOR REUSE.**			
139	n.(i)	Dry rough stone revetment for aprons and stacking within 40 metres	1 cum	62.5	0
		(C) QUARRYING AND BLASTING			
140	6	Blasting and removing hard granite measured in solid	1 cum	-	-
	7	**Drilling holes in hard granite or sheet rock**			
	a)	**Manually (Hand)**			
141	I)	20 mm dia meter	1 RM	124	0
142	ii)	25 mm dia meter	1 RM	131	0
143	iii)	36 mm dia meter	1 RM	151	0
	b)	**Pneumatic Compressor**			
144	I)	20 mm dia meter	1 RM	140	0
145	ii)	25 mm dia meter	1 RM	152	0
146	iii)	36 mm dia meter	1 RM	165	0
	8	**Grouting the holes with neat cement slurry excluding cost of steel**			
147	I)	20 mm dia meter	1 RM	88	0
148	ii)	25 mm dia meter	1 RM	111	0
149	iii)	36 mm dia meter	1 RM	138	0
150	a I	White washing and colour banding for guard and guide stones including cost of materials	each	8.6	0
151	b I	Screening sand and gravel	1 cum	9.3	0
152	b 2	Screening chips and metal	1 cum	16	0
153	c 1	Removing and refixing Hectometer or Demarcation stones	each	11.5	0
		(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 OFGRAVEL WATERING WITH AN INITIAL LEAD OF 2 HECTOMETERS AND HAND ROLLER (1.5 TO 2 TONNES) ROLLING ETC., INCLUDING BARRICADING,DIVERSION OF TRAFFIC AND WETTING THE NEW CONSOLIDATION FOR A FORTNIGHT COMPLETE.			
		(For a compact thickness)			
	1 (I)	**HARD METAL**			
154	a	40 mm thickness	10 sqm	70	0
155	b	50 mm thickness	10 sqm	74	0
156	c	75 mm thickness	10 sqm	80.3	0
157	d	100 mm thickness	10 sqm	87	0
	1 (ii)	**For compact thickness of soft metal**			
158	a	50 mm thickness	10 sqm	53.8	0
159	b	75 mm thickness	10 sqm	63.9	0
160	c	100 mm thickness	10 sqm	70.1	0
161	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 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			
162	5 (a)	40 mm thickness	10 sqm	185	0

163	(b)	50 mm thickness	10 sqm	210	0
164	(c)	75 mm thickness	10 sqm	231	0
165	(d)	100 mm thickness	10 sqm	248.8	0
166	(e)	150 mm thick excluding hire charges	10 sqm	445.4	0
167	16	Structural steel/ Reinforcement steel (HYSD/TMT) Note:- As per monthly rate fixed by the sub committee	1 tonne		18.12
168	17	Cement 43Gr/ 53 Gr Note:- As per monthly rate fixed by the sub committee	1 tonne		28.81
169	18	Bitumen	1 tonne		Excise duty and vat as provided in the sanctioned estimate

Sd/-

Engineer-In-Chief (R&B) SR & CRN

Sd/-

Engineer-In-Chief(R&B) NH, CRF &Buildings

Sd/-

Chief Engineer(R&B) Rural Roads

Sd/-

Chief Engineer(R&B) Admn, COT & QC

Sd/-

Chief Engineer(R&B)D&P,LWE&RSW

Sd/-

Chief Engineer(R&B) PPP & EAP

Sd/-

Chief Engineer(R&B) CTE

For Engineer-in-Chief (R&B)
State Roads & CRN

SSR - 2015-16

Statement showing the Rates with Revided Embedded tax rates for the material rates of SoR 2015-16

Sl. No	S.S. Item No.	Description	Unit	TS SSR 2015-16	Total embedded Tax Rate (%)
1	2	3	4		
		(A) STONE AND ROAD MATERIALS			
		ROUGH STONE QUARRIED INCLUDING WEDGING, BREAKING,BURNING, SPLITING AND STACKING			
1	22.a	For R.R Masonary Work (other than Granite, Dolomite and Trap	1 cum	160	5
2	b.I	For SS Revetment work 225 mm	1 cum	160	5
3	b.ii	For SS Revetment work 300 mm	1 cum	164	5
4	b.iii	For SS Revetment work450 mm	1 cum	136	5
5	c	Jeddy Stone above 450 mm to 600 mm	1 cum	188	5
6	d I.	Laterite for revetment 225 mm	1 cum	118	5
7	d II.	Laterite for revetment 300 mm	1 cum	138	5
8	d.iii	Granite for SS revetment 225 mm	1 cum	154	5
9	d.iv	Granite for SS revetment 300 mm	1 cum	156	5
		Note:- Only when other than granite is not available			
10	e	Laterite for masonry	1 cum	136	5
11	f	Cyclopean stones above 0.2 cum	1 cum	254	5
12	g	For R.R.Masonry works (granite, dolamite and trap variety	1 cum	252	5
13		NOTE:- For items 22(a) to 22© ,22d.iii,22d.iv 22(f) and 22(g) add extra Rs /cum, wherever quarrying is done by blasting	1 cum	70	
		COURSED RUBBLE STONE QUARRYING WEDGING, BREAKING, BURNING AND SPLITTING INCLUDING STACKING FOR SS FIRST SORT WORKS			
14	23.a	Granite, dolamite and trap	1 cum	262	5
15	b	For other varieties	1 cum	188	5
16	27	Granite stone slabs for culverts, lintels and copings (3 faces dressed coarsed rubble masonry)	1 cum	1728	5
17		**NOTE**: - For items 23(a), 23(b) and 27 add extra Rs. Per Cum, wherever quarrying is done by blasting	1 cum	74	
18	28	Bond stones (600 x 200 x 200 mm)	each	30	5
19	b	Chainage stones and Centre line stones (750x150x150xmm)	each	37	5
20	31	Demarcation Stones (900 x 150 x 150 mm)	each	70	5
21	32.a	Guard Stones (1200 x 200 x 200 mm)	each	102	5
22	b	Guide Stones (800 x 150 x150 mm)	each	70	5
23	c	Carving letters and figures in stone up to 100 mm size	each	8	5
24	d	Carving letters and figures in stone above 100 mm size	each	9	5
		HARD BROKEN STONE OF GRANITE, TRAP AND DOLERITE FREE FROM DUST OBTAINED BY QUARRYING, WEDGING, BREAKING, BURNING AND SPLITTING INCLUDING STACKING.			
25	33.a	- do - 6mm size (IS383,1970)	1 cum	532	0
26	b	- do - 10mm size (IS383,1970)	1 cum	692	0
27	c	- do - 12mm size (IS383,1970)	1 cum	822	0
28	d	- do - 20mm size (IS383,1970)	1 cum	1036	0
29	e	- do - 25mm size (IS383,1970)	1 cum	994	0
30	f	- do - 40mm size (IS383,1970)	1 cum	620	0
31	g	- do - 50mm size (IS383,19705)	1 cum	456	5
32	h	- do - 60mm size (IS383,1970)	1 cum	419	5
33	I	- do - 65mm size (IS383,1970)	1 cum	379	5
34	j	- do - 75mm size (IS383,1970)	1 cum	304	5
35	k	- do - 75 to 100mm size (IS383,1970)	1 cum	248	5
36		NOTE:- (1) Add extra Rs. /- per cum for items 33 (a) to 33 (k) if the metal is obtained by blasting		70	
37		(2) Add **25%** extra per cum if the metal is obtained by machine crushing excluding cost of blasting.		25%	
38		(3) Deduct Rs. /- per cum if the metal or rubble is obtained from surface stone and boulders.		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.		17	
		SOFT BROKEN STONE SCREENED AND FREE FROM DUST INCLUDING STACKING			
40	33.l	- do - 40 mm size (IS383,1970)	1 Cum	123	0
41	33.m	- do - 50 mm size (IS383,1970)	1 Cum	111	5
42	33.n	- do - 60 mm size (IS383,1970)	1 Cum	87	5

43	33.o	- do - 65 mm size (IS383,1970)	1 Cum	78	5
44	33.p	- do - 75 mm size (IS383,1970)	1 Cum	73	5
		HARD BROKEN STONE OF GRANITE TRAP DOLERITE AND DOLAMITE FREE FROM DUST OBTAINED BY QUARRYING WEDGING, BREAKING, BURNING AND SPLITTING INCLUDING STACKING (QUARTZITE AND BASALT WITH AGGREGATE IMPACT OF LESS THAN 20)			
45	33a	-do- 2.36 mm to 5 mm size (IRC, MORTH &MORD)	1 cum	308	5
46	b	-do- 5 mm to 7 mm size (IRC, MORTH & MORD)	1 cum	504	0
47	c	-do- 9.5 mm to 11.2 mm size (IRC, MORTH & MORD)	1 cum	656	0
48	d	-do- 12mm to 14 mm size (IRC, MORTH & MORD)	1 cum	780	0
49	e	-do- 19 mm to 22 mm size (IRC,MORTH & MORD)	1 cum	984	0
50	f	-do- 25 mm to 27 mm size (IRC,MORTH &MORD)	1 cum	944	0
51	g	-do- 40 mm to 45 mm size (IRC , MORTH &MORD)	1 cum	588	0
52	h	-do- 50 mm to 55 mm size (IRC,MORTH & MORD)	1 cum	456	5
53	i	-do- 60 mm to 63 mm size (IRC, MORTH &MORD)	1 cum	419	5
54	j	-do- 65 mm size (IRC ,MORTH &MORD)	1 cum	379	5
55	k	-do- 75 mm size (IRC,MORTH &MORD)	1 cum	304	5
56	1	**NOTE**:- Add extra Rs. /- per cum for items 33 (a) to 33 (j) if the metal is obtained by blasting	1 cum	70	
57	2	Add **25%** extra per cum if the metal is obtained by machine crushing excluding cost of blasting.	1 cum	25%	
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	
		HARD BROKEN STONE OTHER THAN GRANITE SUCH AS QUARTZ, QUARTZ-NAPA AND BASALT SCREENED AND FREE FROM DUST INCLUDING STACKING			
60	33.q	- do - 10 mm size (IS383,1970)	1 Cum	386	0
61		-do- 9.5 mm to 11.2 mm size (IRC,MORTH & MORD)	1 Cum	386	0
62	r	- do - 12 mm size (IS383,1970)	1 Cum	362	0
63		-do- 12mm to 14 mm size (IRC , MORTH & MORD)	1 Cum	362	0
64	s	- do - 20 mm size (IS383,1970)	1 Cum	293	0
65		-do- 19 mm to 22 mm size (IRC,MORTH & MORD)	1 Cum	293	0
66	t	- do - 25 mm size (IS383,1970)	1 Cum	287	0
67	u	- do - 40 mm size (IS383,1970)	1 Cum	170	0
68		-do- 40 mm to 45 mm size (IRC , MORTH & MORD)	1 Cum	170	0
69	v	- do - 50 mm size (IS383,1970)	1 Cum	150	5
70		-do- 50 mm to 55 mm size (IRC,MORTH &MORD)	1 Cum	150	5
71	33.w	- do - 65 mm size (IS383,1970)	1 Cum	142	5
72		-do- 60 mm to 65 mm size (IRC, MORTH &MORD)	1 Cum	142	5
73	x	- do - 75 mm size (IS383,1970)	1 Cum	117	5
74		- do - 75 mm size (IRC ,MORTH & MORD)	1 Cum	117	5
75	y	- do - 75 to 100 mm size (IS383,1970)	1 Cum	92	5
76		- do - 75 to 100 mm (IRC, MORTH & MORD)	1 Cum	92	5
		OTHER ITEMS INCLUDING STACKING			
77	33.z1	Laterite 40 to 75 mm (ring)	1 Cum	101	5
78	z2	kankar, hard broken kankar 40 to 75 mm (ring)	1 Cum	75	5
79	z3	Soling stone of 150 mm size of granite, trap and Dolamite varieties.	1 Cum	95	5
		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	
80	z4	Soling stone of 150 mm size other than granite variety	1 Cum	66	5
81	z5	Soling Stone laterite, Kankar 150mm, surface stone	1 Cum	41	5
82	z6	Field picked metal unbroken 20 mm size	1 Cum	55	5
83	z7	- do - 25 mm size	1 Cum	42	0
84	z8	- do - 40 mm size	1 Cum	48	0
85	z9	- do - 50 mm size	1 Cum	42	5
86	z10	- do - 60 mm size	1 Cum	36	5
87	z11	- do - 80 mm size	1 Cum	32	5
	NOTE:- Add Rs. /- Per Cum for selection of stone and boulders from excavated			17	
88	34	Gravel including stacking	1 Cum	103	0
89	35 a	Quarry rubbish	1 Cum	81	5
90	b	HBG Stone Chips 2.36mm and below	1 Cum	340	5
91	36.a	Sand for mortar, ceiling coat including washing screening etc.,	1 Cum	606	5
92		Sand for concrete		462	5
93	b	Sand for filling and blindage	1 Cum	342	5
94	37	Clay for puddle and masonry Items 38 (a) to 39 (h) As per local prevailing ra	1 Cum	35	5
		(C) LIME AND CEMENT			
95	40 to 41(c)				
96	42	Cement excluding cost of empty cement bags	Metric Tonne		
	NOTE: (1) The rate is material at site (No conveyance charges to be allowed) 2)As per the				

97	42.a	Labour for mixing cement mortar	1 Cum		
98	b	Mixing of cement mortar by machine	1 Cum		
99	c	Grinding lime mortar or Surkhi mortar	1 Cum	94	5
100	d	Shell lime slaked and screened	1 Cum	940	5
		(D) MORTARS			
101	43 to 45	Items 43 to 45			
		(E) METAL AND IRON WORKS			
		(A) CLEARING SITE			
102	1.a	Clearing heavy Jungle	1 Sqm	Based on detailed analysis as	
103	b	Clearing light Jungle	1 Sqm		
104	c	Clearing Scrub Jungle	1 Sqm		
105	d	Clearing Juliflora (Prosafis) jungle including up-rooting and removing of Juliflora stumps.	1 Sqm	3.7	0
106	2.a.I	Cutting and removing Palmyrah trees including stacking of girth 30 to 100 cm.	Each	19	0
107	ii	- do - 100 to 200 cm.	Each	44	0
108	2.b.I	Uprooting and removing Palmyrah stumps including stacking of girth 30 to 100 cm.	Each	46	0
109	ii	- do - 100 to 200 cm.	Each	48	0
110	2.c.I	Cutting and removing date trees including stacking of girth 30 to 100 cm	Each	24	0
111	ii	- do - 100 to 200 cm	Each	35	0
112	d.I	Uprooting and removing stumps of date trees including stacking of girth 30 to 100 cm.	Each	24	0
113	ii	- do - 100 to 200 cm	Each	30	0
114	e I	Cutting and removing other kind of trees including stacking of girth 30 to 100 cm	Each	30	0
115	ii	- do - 100 to 200 cm	Each	46	0
116	iii	- do - above 200 cm	Each	75	0
117	f.I	Uprooting and removing stumps of other kind of trees including stacking of girth 30 to 100 cm.	Each	24	0
118	ii	- do - 100 to 200 cm	Each	33	0
119	iii	- do - above 200 cm	Each	41	0
120	3.a	Uprooting and clearing prickly pear jungle	1 Sq.m	2.3	0
121	b	- do - under 2.5 meters height including burning and burying as directed.	1 Sq.m	3	0
122	c	- do - over 2.5 meters height including burning and burying with an initial lead of conveyance	1 Sq.m	3.5	0
123	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 Sq.m	1.9	0
124	b.I	Clearing alchi, tilla	1 Sq.m	3.8	0
125	b.ii	Removal of Jammu	1 Sq.m	3.3	0
126	c.I	Removal of imponea, cornea	1 Sq.m	3.6	0
127	c.ii	Removal of water hyacinth up to 30 cm thick.	1 Sq.m	3.7	0
128	c.iii	- do - more than 30 cm thick	1 Sq.m	5	0
129	d	Removal of natchu, goobi, thooti etc., for every extra lead or lift over the initial lead or lift.	1 Sq.m	1.4	0
		(B) DISMANTLING			
	5	**DISMANTLING, CLEARING AWAY AND CAREFULLY STACKING MATERIALS USEFUL FOR REUSE.**		62.5	0
130	n.(i)	Dry rough stone revetment for aprons and stacking within 40 metres	1 cum		
		(C) QUARRYING AND BLASTING			
131	6	Blasting and removing hard granite measured in solid	1 cum		
	7	**Drilling holes in hard granite or sheet rock**			
	a)	**Manually (Hand)**			
132	I)	20 mm dia meter	1 RM	124	0
133	ii)	25 mm dia meter	1 RM	131	0
134	iii)	36 mm dia meter	1 RM	151	0
	b)	**Pneumatic Compressor**			
135	I)	20 mm dia meter	1 RM	140	0
136	ii)	25 mm dia meter	1 RM	152	0
137	iii)	36 mm dia meter	1 RM	165	0
	8	**Grouting the holes with neat cement slurry excluding cost of steel**			
138	I)	20 mm dia meter	1 RM	88	0
139	ii)	25 mm dia meter	1 RM	111	0
140	iii)	36 mm dia meter	1 RM	138	0
141	a I	White washing and colour banding for guard and guide stones including cost of materials	each	8.6	0
142	b I	Screening sand and gravel	1 cum	9.3	0
143	b 2	Screening chips and metal	1 cum	16	0
144	c 1	Removing and refixing Hectometer or Demarcation stones	each	11.5	0

		(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 OFGRAVEL WATERING WITH AN INITIAL LEAD OF 2 HECTOMETERS AND HAND ROLLER (1.5 TO 2 TONNES) ROLLING ETC., INCLUDING BARRICADING,DIVERSION OF TRAFFIC AND WETTING THE NEW CONSOLIDATION FOR A FORTNIGHT COMPLETE.			
		(For a compact thickness)			
	1 (I)	**HARD METAL**			
145	a	40 mm thickness	10 sqm	70	0
146	b	50 mm thickness	10 sqm	74	0
147	c	75 mm thickness	10 sqm	80.3	0
148	d	100 mm thickness	10 sqm	87	0
	1 (ii)	**For compact thickness of soft metal**			
149	a	50 mm thickness	10 sqm	53.8	0
150	b	75 mm thickness	10 sqm	63.9	0
151	c	100 mm thickness	10 sqm	70.1	0
	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 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			
152	5 (a)	40 mm thickness	10 sqm	185	0
153	(b)	50 mm thickness	10 sqm	210	0
154	(c)	75 mm thickness	10 sqm	231	0
155	(d)	100 mm thickness	10 sqm	248.8	0
156	(e)	150 mm thick excluding hire charges	10 sqm	445.4	0
157	16	Structural steel/ Reinforcement steel (HYSD/TMT) Note:- As per monthly rate fixed by the sub committee	1 tonne		18.12
158	17	Cement 43Gr/ 53 Gr Note:- As per monthly rate fixed by the sub committee	1 tonne		28.81
159	18	Bitumen	1 tonne		Excise duty and vat as provided in the sanctioned estimate

Sd/-

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Chief Engineer(R&B)O&P,LWE&RSW

Sd/-

Chief Engineer(R&B) PPP & EAP

Sd/-

Chief Engineer(R&B) CTE

For Engineer-in-Chief (R&B)
State Roads & CRN

SSR - 2016-17

Statement showing the Schedule of Rates with Revised embedded tax rates for the material rates items of SoR 2016-17

Sl. No	S.S. Item No.	Description	Unit	TS SSR 2016-17	Total embedded Tax Rate (%)
1	2	3	4		
		(A) STONE AND ROAD MATERIALS			
		ROUGH STONE QUARRIED INCLUDING WEDGING, BREAKING,BURNING, SPLITING AND STACKING			
1	22.a	For R.R Masonary Work (other than Granite, Dolomite and Trap	1 cum	160	5
2	b.I	For SS Revetment work 225 mm	1 cum	160	5
3	b.ii	For SS Revetment work 300 mm	1 cum	164	5
4	b.iii	For SS Revetment work450 mm	1 cum	136	5
5	c	Jeddy Stone above 450 mm to 600 mm	1 cum	188	5
6	d I.	Laterite for revetment 225 mm	1 cum	118	5
7	d II.	Laterite for revetment 300 mm	1 cum	138	5
8	d.iii	Granite for SS revetment 225 mm	1 cum	154	5
9	d.iv	Granite for SS revetment 300 mm	1 cum	156	5
		Note:- Only when other than granite is not available			
10	e	Laterite for masonry	1 cum	136	5
11	f	Cyclopean stones above 0.2 cum	1 cum	254	5
12	g	For R.R.Masonry works (granite, dolamite and trap variety	1 cum	252	5
13		NOTE:- For items 22(a) to 22© ,22d.iii,22d.iv 22(f) and 22(g) add extra Rs /cum, wherever quarrying is done by blasting	1 cum	70	
		COURSED RUBBLE STONE QUARRYING WEDGING, BREAKING, BURNING AND SPLITTING INCLUDING STACKING FOR SS FIRST SORT WORKS			
14	23.a	Granite, dolamite and trap	1 cum	262	5
15	b	For other varieties	1 cum	188	5
16	27	Granite stone slabs for culverts, lintels and copings (3 faces dressed coarsed rubble masonry)	1 cum	1728	5
		NOTE: - For items 23(a), 23(b) and 27 add extra Rs. Per Cum, wherever quarrying is done by blasting	1 cum	74	
17	28	Bond stones (600 x 200 x 200 mm)	each	30	5
18	b	Chainage stones and Centre line stones (750x150x150xmm)	each	37	5
22	31	Demarcation Stones (900 x 150 x 150 mm)	each	70	5
23	32.a	Guard Stones (1200 x 200 x 200 mm)	each	102	5
24	b	Guide Stones (800 x 150 x150 mm)	each	70	5
25	c	Carving letters and figures in stone up to 100 mm size	each	8	5
26	d	Carving letters and figures in stone above 100 mm size	each	9	5
		HARD BROKEN STONE OF GRANITE, TRAP AND DOLERITE FREE FROM DUST OBTAINED BY QUARRYING, WEDGING, BREAKING, BURNING AND SPLITTING INCLUDING STACKING.			
27	33.a	- do - 6mm size (IS383,1970)	1 cum	532	0
28	b	- do - 10mm size (IS383,1970)	1 cum	692	0
29	c	- do - 12mm size (IS383,1970)	1 cum	822	0
30	d	- do - 20mm size (IS383,1970)	1 cum	916	0
31	e	- do - 25mm size (IS383,1970)	1 cum	874	0
32	f	- do - 40mm size (IS383,1970)	1 cum	532	0
33	g	- do - 50mm size (IS383,19705)	1 cum	456	5
34	h	- do - 60mm size (IS383,1970)	1 cum	419	5
35	I	- do - 65mm size (IS383,1970)	1 cum	379	5
36	j	- do - 75mm size (IS383,1970)	1 cum	304	5
37	k	- do - 75 to 100mm size (IS383,1970)	1 cum	248	5
		NOTE:- (1) Add extra Rs. /- per cum for items 33 (a) to 33 (k) if the metal is obtained by blasting		70	
		(2) Add **25%** extra per cum if the metal is obtained by machine crushing excluding cost of blasting.		25%	
		(3) Deduct Rs. /- per cum if the metal or rubble is obtained from surface stone and boulders.		9.9	
		(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.		17	
		SOFT BROKEN STONE SCREENED AND FREE FROM DUST INCLUDING STACKING			
38	33.l	- do - 40 mm size (IS383,1970)	1 Cum	123	0
39	33.m	- do - 50 mm size (IS383,1970)	1 Cum	111	5
40	33.n	- do - 60 mm size (IS383,1970)	1 Cum	87	5
41	33.o	- do - 65 mm size (IS383,1970)	1 Cum	78	5
42	33.p	- do - 75 mm size (IS383,1970)	1 Cum	73	5

		HARD BROKEN STONE OF GRANITE TRAP DOLERITE AND DOLAMITE FREE FROM DUST OBTAINED BY QUARRYING WEDGING, BREAKING, BURNING AND SPLITTING INCLUDING STACKING (QUARTZITE AND BASALT WITH AGGREGATE IMPACT OF LESS THAN 20)			
43	33a	-do- 2.36 mm to 5 mm size (IRC, MORTH &MORD)	1 cum	320	5
44	b	-do- 5 mm to 7 mm size (IRC, MORTH & MORD)	1 cum	504	5
45	c	-do- 9.5 mm to 11.2 mm size (IRC, MORTH & MORD)	1 cum	656	0
46	d	-do- 12mm to 14 mm size (IRC, MORTH & MORD)	1 cum	717	0
47	e	-do- 19 mm to 22 mm size (IRC,MORTH & MORD)	1 cum	864	0
48	f	-do- 25 mm to 27 mm size (IRC,MORTH &MORD)	1 cum	824	0
49	g	-do- 40 mm to 45 mm size (IRC , MORTH &MORD)	1 cum	500	5
50	h	-do- 50 mm to 55 mm size (IRC,MORTH & MORD)	1 cum	456	5
51	i	-do- 60 mm to 63 mm size (IRC, MORTH &MORD)	1 cum	419	5
52	j	-do- 65 mm size (IRC ,MORTH &MORD)	1 cum	379	5
53	k	-do- 75 mm size (IRC,MORTH &MORD)	1 cum	304	5
	1	**NOTE**:- Add extra Rs. /- per cum for items 33 (a) to 33 (j) if the metal is obtained by blasting	1 cum	70	
	2	Add **25%** extra per cum if the metal is obtained by machine crushing excluding cost of blasting.	1 cum	25%	
	3	Deduct Rs. /- per cum if the metal or rubble is obtained from surface stones and boulders	1 cum	9.9	
	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	
		HARD BROKEN STONE OTHER THAN GRANITE SUCH AS QUARTZ, QUARTZ-NAPA AND BASALT SCREENED AND FREE FROM DUST INCLUDING STACKING			
54	33.q	- do - 10 mm size (IS383,1970)	1 Cum	386	0
55		-do- 9.5 mm to 11.2 mm size (IRC,MORTH & MORD)	1 Cum	386	0
56	r	- do - 12 mm size (IS383,1970)	1 Cum	362	0
57		-do- 12mm to 14 mm size (IRC , MORTH & MORD)	1 Cum	362	0
58	s	- do - 20 mm size (IS383,1970)	1 Cum	293	0
59		-do- 19 mm to 22 mm size (IRC,MORTH & MORD)	1 Cum	293	0
60	t	- do - 25 mm size (IS383,1970)	1 Cum	287	0
61	u	- do - 40 mm size (IS383,1970)	1 Cum	170	0
62		-do- 40 mm to 45 mm size (IRC , MORTH & MORD)	1 Cum	170	5
63	v	- do - 50 mm size (IS383,1970)	1 Cum	150	5
64		-do- 50 mm to 55 mm size (IRC,MORTH &MORD)	1 Cum	150	5
65	33.w	- do - 65 mm size (IS383,1970)	1 Cum	142	5
66		-do- 60 mm to 65 mm size (IRC, MORTH &MORD)	1 Cum	142	5
67	x	- do - 75 mm size (IS383,1970)	1 Cum	117	5
68		- do - 75 mm size (IRC ,MORTH & MORD)	1 Cum	117	5
69	y	- do - 75 to 100 mm size (IS383,1970)	1 Cum	92	5
70		- do - 75 to 100 mm (IRC, MORTH & MORD)	1 Cum	92	5
		OTHER ITEMS INCLUDING STACKING			
71	33.z1	Laterite 40 to 75 mm (ring)	1 Cum	101	5
72	z2	kankar, hard broken kankar 40 to 75 mm (ring)	1 Cum	75	5
73	z3	Soling stone of 150 mm size of granite, trap and Dolamite varieties.	1 Cum	95	5
		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 , 22q, 23	1 Cum	70	
74	z4	Soling stone of 150 mm size other than granite variety	1 Cum	66	5
75	z5	Soling Stone laterite, Kankar 150mm, surface stone	1 Cum	41	5
76	z6	Field picked metal unbroken 20 mm size	1 Cum	55	5
77	z7	- do - 25 mm size	1 Cum	42	0
78	z8	- do - 40 mm size	1 Cum	48	0
79	z9	- do - 50 mm size	1 Cum	42	5
80	z10	- do - 60 mm size	1 Cum	36	5
81	z11	- do - 80 mm size	1 Cum	32	5
	NOTE:- Add Rs. /- Per Cum for selection of stone and boulders from excavated spoil			17	
82	34	Gravel including stacking	1 Cum	103	0
83	35 a	Quarry rubbish	1 Cum	81	5
84	b	HBG Stone Chips 2.36mm and below	1 Cum	360	5
85	36.a	Sand for mortar, ceiling coat including washing screening etc.,	1 Cum	760	5
86		Sand for concrete		560	5
87	b	Sand for filling and blindage	1 Cum	560	5
88	37	Clay for puddle and masonry Items 38 (a) to 39 (h) As per local prevailing rates b	1 Cum	35	5
		(C) LIME AND CEMENT			
	40 to 41(c)				
89	42	Cement excluding cost of empty cement bags	Metric Tonne		
	NOTE: (1) The rate is material at site (No conveyance charges to be allowed) 2)As per the rates				
90	42.a	Labour for mixing cement mortar	1 Cum		
91	b	Mixing of cement mortar by machine	1 Cum		
92	c	Grinding lime mortar or Surkhi mortar	1 Cum	94	5
93	d	Shell lime slaked and screened	1 Cum	940	5

		(D) MORTARS			
94	43 to 45	Items 43 to 45			
		(E) METAL AND IRON WORKS			
		(A) CLEARING SITE			
95	1.a	Clearing heavy Jungle	1 Sqm		
96	b	Clearing light Jungle	1 Sqm		
97	c	Clearing Scrub Jungle	1 Sqm		
98	d	Clearing Juliflora (Prosafis) jungle including up-rooting and removing of Juliflora stumps.	1 Sqm	3.7	0
99	2.a.I	Cutting and removing Palmyrah trees including stacking of girth 30 to 100 cm.	Each	19	0
100	ii	- do - 100 to 200 cm.	Each	44	0
101	2.b.I	Uprooting and removing Palmyrah stumps including stacking of girth 30 to 100 cm.	Each	46	0
102	ii	- do - 100 to 200 cm.	Each	48	0
103	2.c.I	Cutting and removing date trees including stacking of girth 30 to 100 cm	Each	24	0
104	ii	- do - 100 to 200 cm	Each	35	0
105	d.I	Uprooting and removing stumps of date trees including stacking of girth 30 to 100 cm.	Each	24	0
106	ii	- do - 100 to 200 cm	Each	30	0
107	e I	Cutting and removing other kind of trees including stacking of girth 30 to 100 cm	Each	30	0
108	ii	- do - 100 to 200 cm	Each	46	0
109	iii	- do - above 200 cm	Each	75	0
110	f.I	Uprooting and removing stumps of other kind of trees including stacking of girth 30 to 100 cm.	Each	24	0
111	ii	- do - 100 to 200 cm	Each	33	0
112	iii	- do - above 200 cm	Each	41	0
113	3.a	Uprooting and clearing prickly pear jungle	1 Sq.m	2.3	0
114	b	- do - under 2.5 meters height including burning and burying as directed.	1 Sq.m	3	0
115	c	- do - over 2.5 meters height including burning and burying with an initial lead of conveyance	1 Sq.m	3.5	0
116	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 Sq.m	1.9	0
117	b.I	Clearing alchi, tilla	1 Sq.m	3.8	0
118	b.ii	Removal of Jammu	1 Sq.m	3.3	0
119	c.I	Removal of imponea, cornea	1 Sq.m	3.6	0
120	c.ii	Removal of water hyacinth up to 30 cm thick.	1 Sq.m	3.7	0
121	c.iii	- do - more than 30 cm thick	1 Sq.m	5	0
122	d	Removal of natchu, goobi, thooti etc., for every extra lead or lift over the initial lead or lift.	1 Sq.m	1.4	0
		(B) DISMANTLING			
	5	**DISMANTLING, CLEARING AWAY AND CAREFULLY STACKING MATERIALS USEFUL FOR REUSE.**		62.5	0
123	n.(i)	Dry rough stone revetment for aprons and stacking within 40 metres	1 cum		
		(C) QUARRYING AND BLASTING			
124	6	Blasting and removing hard granite measured in solid	1 cum		
	7	**Drilling holes in hard granite or sheet rock**			
	a)	**Manually (Hand)**			
125	I)	20 mm dia meter	1 RM	124	0
126	ii)	25 mm dia meter	1 RM	131	0
127	iii)	36 mm dia meter	1 RM	151	0
	b)	**Pneumatic Compressor**			
128	I)	20 mm dia meter	1 RM	140	-
129	ii)	25 mm dia meter	1 RM	152	-
130	iii)	36 mm dia meter	1 RM	165	-
	8	**Grouting the holes with neat cement slurry excluding cost of steel**			
131	I)	20 mm dia meter	1 RM	88	0
132	ii)	25 mm dia meter	1 RM	111	0
133	iii)	36 mm dia meter	1 RM	138	0
134	a I	White washing and colour banding for guard and guide stones including cost of materials	each	8.6	0
135	b I	Screening sand and gravel	1 cum	9.3	0
136	b 2	Screening chips and metal	1 cum	16	0
137	c 1	Removing and refixing Hectometer or Demarcation stones	each	11.5	0

		(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 OFGRAVEL WATERING WITH AN INITIAL LEAD OF 2 HECTOMETERS AND HAND ROLLER (1.5 TO 2 TONNES) ROLLING ETC., INCLUDING BARRICADING,DIVERSION OF TRAFFIC AND WETTING THE NEW CONSOLIDATION FOR A FORTNIGHT COMPLETE.			
		(For a compact thickness)			
	1 (I)	**HARD METAL**			
138	a	40 mm thickness	10 sqm	70	0
139	b	50 mm thickness	10 sqm	74	0
140	c	75 mm thickness	10 sqm	80.3	0
141	d	100 mm thickness	10 sqm	87	0
	1 (ii)	**For compact thickness of soft metal**			
142	a	50 mm thickness	10 sqm	53.8	0
143	b	75 mm thickness	10 sqm	63.9	0
144	c	100 mm thickness	10 sqm	70.1	0
	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 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			
145	5 (a)	40 mm thickness	10 sqm	185	0
146	(b)	50 mm thickness	10 sqm	210	0
147	(c)	75 mm thickness	10 sqm	231	0
148	(d)	100 mm thickness	10 sqm	248.8	0
149	(e)	150 mm thick excluding hire charges	10 sqm	445.4	0
150	16	Structural steel/ Reinforcement steel (HYSD/TMT) Note:- As per monthly rate fixed by the sub committee	1 tonne		18.12
151	17	Cement 43Gr/ 53 Gr Note:- As per monthly rate fixed by the sub committee	1 tonne		28.81
152	18	Bitumen	1 tonne		Excise duty and vat as provided in the sanctioned estimate

Sd/-

Engineer-In-Chief (R&B) SR & CRN

Sd/-

Engineer-In-Chief(R&B) NH, CRF &Buildings

Sd/-

Chief Engineer(R&B) Rural Roads

Sd/-

Chief Engineer(R&B) Admn, COT & QC

Sd/-

Chief Engineer(R&B)D&P,LWE&RSW

Sd/-

Chief Engineer(R&B) PPP & EAP

Sd/-

Chief Engineer(R&B) CTE

For Engineer-in-Chief (R&B)
State Roads & CRN

Model Calculation

ROAD METAL RATES

NAME OF WORK ::-

Sl.No	Description of Metal	Lead in Kms	Initial cost less stacking	Embedded Tax Rate%	(1+(Tax Rate/100))	Basic Rate (Col 4/Col6)	Embedded tax (col 4- Col 7)
1	2	3	4	5	6	7	9
	A) FOR ROAD WORKS						
1	60 to 63 mm IRC and MoRTH HBG metal	10	419.00	5.00	1.05	399.05	19.95
2	50 to 55 mm IRC and MoRTH HBG metal	10	456.00	5.00	1.05	434.29	21.71
3	40 to 45 mm IRC and MoRTH HBG metal	10	500.00	5.00	1.05	476.19	23.81
4	SS Revetment work 300mm	10	164.00	5.00	1.05	156.19	7.81
5	Quarry spall(Field picked metal) Av. Of rate 25mm & 40mm	10	45.00	0.00	1.00	45.00	0.00
6	150 mm soling stone HBG metal	10	95.00	5.00	1.05	90.48	4.52
1	**40 to 45 mm IRC and MoRTH HBG M/C metal**	10	500.00	0.00	1.00	500.00	0.00
2	25 to 27 mm IRC and MoRTH HBG M/C metal	10	824.00	0.00	1.00	824.00	0.00
3	19 to 22 mm IRC and MoRTH HBG M/C metal	10	864.00	0.00	1.00	864.00	0.00
4	12 to 14 mm IRC and MoRTH HBG M/C metal	10	717.00	0.00	1.00	717.00	0.00
5	9.5 to 11.20 mm IRC and MoRTH HBG M/C metal	10	656.00	0.00	1.00	656.00	0.00
6	5 to 7 mm IRC and MoRTH HBG M/C metal	10	504.00	0.00	1.00	504.00	0.00
7	2.36 to 5 mm IRC and MoRTH HBG M/C metal	10	320.00	5.00	1.05	304.76	15.24
8	HBG Stone chips 2.36mm and below	10	360.00	5.00	1.05	342.86	17.14
8(a)	Rubble stone/ Stone masonry 1st sort deressing 5 faces	10	2705.00	5.00	1.05	2576.19	128.81
8(b)	Bond stone each	10	30.00	5.00	1.05	28.57	1.43
8(c)	CRS Stone	10	262.00	5.00	1.05	249.52	12.48
9	Gravel	5	103.00				103.00
	B) FOR C.D. WORKS						0.00
10	40 mm SS-5 HBG M/C metal	10	532.00	0.00	1.00	532.00	0.00
11	25 mm SS-5 HBG M/C metal	10	874.00	0.00	1.00	874.00	0.00
12	20 mm SS-5 HBG M/C metal	10	916.00	0.00	1.00	916.00	0.00
13	12 mm SS-5 HBG M/C metal	10	822.00	0.00	1.00	822.00	0.00
14	10 mm SS-5 HBG M/C metal	10	692.00	0.00	1.00	692.00	0.00
15	6 mm SS-5 HBG M/C metal	10	532.00	0.00	1.00	532.00	0.00
16	Sand for Mortar	87	760.00	5.00	1.05	723.81	36.19
17	Sand for concrete	87	560.00	5.00	1.05	533.33	26.67
18	Sand for Filling	87	560.00	5.00	1.05	533.33	26.67
19	HYSD Steel		38000.00	18.12	1.1812	32170.67	5829.33
20	6mm Mild Steel		37000.00	18.12	1.1812	31324.08	5675.92
21	Mild Steel		38000.00	18.12	1.1812	32170.67	5829.33
22	Cement		5200.00	28.81	1.2881	4036.95	1163.05

COST OF BITUMEN / MT (ZERO LEADS)

Name of Work:-

Ref ::- **For Emulsion (Bulk) :-** **Dated:-** 16.05.2017

For Bulk Bitumen VG-10, VG-30

				Bulk 80/100 Grade VG -10	Bulk 60/70 Grade VG-30	Emulsion (Bulk) (RS1)	Emulsion (MS)	Emulsion (SS1)
				Vizag HPCL / IOCL Emulsion				
Basic Price including				24876	24826	21156	21066	33546
excise duty	@	14%	(a)	3483	3476	2962	2949	4696
				28359	28302	24118	24015	38242
CST	@	2%	(b)	567	566	482	480	765
Lead from 0.00								
		610		0	0	0	0	0
Lead charges for Bulk @		0.00	per KM					
Rates of Bitumen / Emulsion including taxes				28926	28868	24600	24496	39007
Basic Rate of Bitumen / Emulsion				24876	24826	21156	21066	33546
Embedded tax amount - (a) + (b) =				**4049.81**	**4041.67**	**3444.20**	**3429.54**	**5461.29**

	Quantity	Description of Item	Rate	per	Amount
1		Construction of Granular sub-base by providing HBG/HBG material confirming to Grading - VI of MoRT&H Table 400-1 including cost, (excluding seigniorage) charges and conveyance of all materials to work site and spreading in uniform layers with motor grader or by approved means, on prepared surface mixing by mix in place method with Rotavator / approved means at OMC and compacting with vibratory roller to achieve the desired density etc., complete for finished item of work as per MoRT&H Specification 401 (5th revision) and as directed by the Engineer-in-charge. (Payment will be made based on levels for finished item of work).			
	Unit = cum				
	Taking output = 300 cum	**Page 95 of MoRT&H SDB**			
	(A) Labour				
	0.48 day	Mate		day	0.00
	2.00 day	Mazdoor skilled		day	0.00
	10.00 day	Mazdoor unskilled		day	0.00
		Total			0.00
	(B) Machinery				
	6.00 hr	Motor grader 3.35M Blade @50 cum/Hr		hr	0.00
	12.00 hr	Tractor with Rotavator		hr	0.00
	6.00 hr	Vibratory roller 8T		hr	0.00
	3.00 hr	Water tanker 6 KL		hr	0.00
		Total			0.00
	(C) Material				
		Coarse graded Granular sub-base material as per Table 400-1 of MORT&H			
	134.4 cum	45mm-9.50 IRC & MORT&H HBG/HBG Chips @ 35%	0	Cum	0.00
	182.40 cum	9.5mm to 4.75mm @ 47.5% (Av. rate of 9.5-11.2mm , 5-7mm & 2.36 - 5mm HBG M/C metal)	5.08	Cum	926.48
	67.20 cum	2.36mm and below @17.5% (Rate of 2.36mm & below HBG metal)	17.14	Cum	1152.00
		Total			2078.48
	(D) Over head charges @ 5% (10%-VAT)				
	0%	Add for Over head charges on (A)+(B)+(C)			0.00
	(E) Total of (A) + (B)+(C)+(D)				**2078.48**
	(F) Add Contractors Profit at 10% on (E)	0%			**0.00**
		Cost per 300 cum (E) + (F)			**2078.48**
		Rate per 1 cum			6.93
					1 Cum
2		Providing, Laying, Spreading and compacting graded HBG/HBG crushed stone aggregate to Wet Mix macadem specification including cost of all materials and including premixing the material with water at OMC in Mechanical mix plant carriage of mixed material by tipper to site , laying in uniform layers with paver in base courses on well prepared surface and compacting with Vibratory roller to acheive the desired density etc., as directed by the Engineer-in-Charge and as per MoRT&H specification.406 (5th revision) for finished item of work. (Payment based on levels for finished item of work)			
	Unit = cum	**Page 110,111 of MoRT&H SDB**			
	Taking output = 225 cum				
	(A) Labour				
	0.48 nos.	Mate		day	0.00
	2.00 nos.	Mazdoor skilled		day	0.00
	10.00 nos.	Mazdoor		day	0.00

	Quantity		Description of Item	Rate	per	Amount
			Total			0.00
	(B)	**Machinery**				
	6.60	hr	Wet mix plant of 60 tonne hr. capacity		hr	0.00
	6.00	hr	Electric generating set 125 KVA		hr	0.00
	6.00	hr	front end loader 1 cum capacity		hr	0.00
	6.00	hr	Hydero static sensor Paver finisher		hr	0.00
	3.90	hr	Vibratory roller 8-10 T		hr	0.00
	3.00	hr	Water tanker		hr	0.00
			Total			0.00
	(C)	**Material**				
	89.10	cum	45 to 22.40mm IRC&MoRT&H HBG M/C metal@ 30% (Av. Of 40-45, 25-27, 19-22mm)	0.00	cum	0.00
	118.80	cum	22.4 to 2.36mm IRC&MoRT&H HBG M/C metal@40% (Av. Of 19-22mm, 12-14mm, 9.5-11.2mm, 5-7mm, 2.36 - 5mm)	3.05	cum	362.06
	89.10	cum	2.36mm to 75 micron @ 30% (2.36mm & below)	17.14	cum	1527.43
			Total			1889.49
		(D)	**Over head charges @**			
	0%		Add for Over head charges on (A)+(B)+(C)			0.00
		(E)	**Total of (A) + (B)+(C)+(D)**			**1889.49**
		(F)	**Add Contractors Profit at 10% on (E)** 0%			**0.00**
			Cost per 225 cum (E) + (F)			**1889.49**
			Rate per 1 cum			8.40
						Cum
3	Providing and applying tack coat with bitumenemulsion (Rapid settting) (Bulk) using Emulsion pressure distributor at the rate of 0.20 kgs per sqm on the prepared bituminous/granular surface cleaned with mechanical broom for finished item of work as per MoRT&H Specification 503 (5th revision) and as directed by the Engineer-in-Charge.					
	unit = sqm		**Page 124 of MoRT&H SDB**			
	Taking output = 3500 sqm					
	(A)	**Labour**				
	0.08	nos	Mate		day	0.00
	2.00	nos	Mazdoor		day	0.00
			Total			0.00
	(B)	**Machinery**				
	2.80	hr	Mechanical broom Hydraulic @ 1250 sqm/hr.		hr	0.00
	2.80	hr	Air compressor 250 cfm		hr	0.00
	2.00	hr	Emulsion pressure distributor @1750 sqm/hr		hr	0.00
			Total			0.00
	(C)	**Material**				
	0.70	MT	Bitumen emulsion @ 0.20 Kgs/sqm	**3,444.20**	MT	2410.94
			Total			2410.94
		(D)	**Over head charges @**			
	0%		Add for Over head charges on (A)+(B)+(C)			0.00
		(E)	**Total of (A) + (B)+(C)+(D)**			**2410.94**
		(F)	**Add Contractors Profit at 10% on (E)** 0%			**0.00**
			Cost per 3500 sqm (E) + (F)			**2410.94**
			Rate per 1 sqm			0.69
						1 Sqm

	Quantity	Description of Item	Rate	per	Amount
4	Providing and applying primer coat with Bitumen Emulsion (Slow Setting-1) on the prepared surface of granular base including clearing of road surface and sparaying primer at the rate of 0.70kg/sqm using mechanical means for finished item of work as per MoRT&H Specification 502 (5th revision) and as directed by the Engineer-in-Charge.				
	unit = sqm	**Page 123 of MoRT&H SDB**			
	Taking output = 3500 sqm				
	(A) Labour				
	0.08 nos	Mate		day	0.00
	2.00 nos	Mazdoor		day	0.00
		Total			0.00
	(B) Machinery				
	2.80 hr	Mechanical broom Hydraulic @ 1250 sqm/hr.		hr	0.00
	2.80 hr	Air compressor 250 cfm		hr	0.00
	2.00 hr	Bitumen pressure distributor @1750 sqm/hr		hr	0.00
	1.00 hr	Water tanker 6 KL capacity @ 1 trip per hour		hr	0.00
		Total			0.00
	(C) Material				
	2.45 MT	Bitumen Emulsion @ 0.70 Kgs/sqm	**5461.29**	MT	13380.16
	6.00 KL	Cost of water	**0**		0.00
		Total			13380.16
	(D) Over head charges @				
	0%	Add for Over head charges on (A)+(B)+(C)			0.00
	(E) Total of (A) + (B)+(C)+(D)				**13380.16**
	(F) Add Contractors Profit at 10% on (E)	0%			**0.00**
		Cost per 3500 sqm (E) + (F)			**13380.16**
		Rate per 1 sqm			3.82
					1 Sqm
5	Providing and Laying 40/30mm thick Bituminous concrete with 100 to 120 TPH batch type hot mix plant using HBG crushed aggregates of Grading-2 as per table 500-17 of Specification 507 of MoRT&H (5th revesion), premixed with Bituminious binder VG-30 Grade @ 5.4% of mix and filler, transporting the hot mix to work site, laying with Hydro static sensor paver finisher to the required grade, level and alignment, rolling with smooth wheeled,vibratory and tandem rollers to achieve the desired compaction as per MoRT&H Specification 507 (5th Revision) complete for finished item of work in all respects excluding seiniorage charges and as directed by Engineer-in-charge.(Excluding taxes Charges)				
	Unit = cum	**Page 138 of MoRT&H SDB**			
	Taking output = 191 cum (450 tonnes.)				
	(A) Labour				
	0.84 nos.	Mate		day	0.00
	14.00 nos.	Mazdoor working with HMP, Mechanical broom,		day	0.00
	5.00 nos.	Skilled Mazdoor for checking line and levels.		day	0.00
		Total			0.00
	(B) Machinary				
	6.00 hr	Batch Mix HMP @ 100 to 120TPH		hr	0.00
	6.00 hr	**Hydero static sensor Paver finisher**		hr	0.00
	6.00 hr	Generator 250 KVA		hr	0.00
	6.00 hr	Front end loader 1 cum capacity		hr	0.00
	3.90 hr	Power road roller 8 tonne for initial break down rolling		hr	0.00
	3.90 hr	**Pneumatic road Roller**		hr	0.00
	3.90 hr	smooth wheeled roller 8 Ton		hr	0.00
		Total			0.00
	(C) Material				
	24.30 M.T	(I) Bitumen VG-30 @ 5.40% by weight of mix =191*2.356=450 ton	4041.67	MT	98212.65
		(ii) Aggregate			

	Quantity		Description of Item	Rate	per	Amount
			total wt of mix 450T-24.30=425.70T			
			For Grading I			
	56.760	cum	IRC &MORT&H HBG M/C chip Avg. of (14-12),(9.5-11.2) @ 20%	0	cum	0.00
	70.950	cum	IRC &MORT&H HBG M/C chipsAvg. of (9.5-11.2),(5-7) 25%	0	cum	0.00
	150.410	cum	IRC &MORT&H HBG M/C chips2.36 to 5mm, 2.36 & above 53%	16.190	cum	2435.21
	2.838	cum	Filler @ 1% of weight of aggregates.	17.14	cum	48.65
	4.257	MT	Filler (Cement) @ 1% of weight of aggregates.	1163.05	MT	4951.09
	285.22		Total			105647.60
		(D)	**Over head charges @**			
	0%		Add for Over head charges on (A)+(B)+(C)			0.00
		(E)	**Total of (A) + (B)+(C)+(D)**			**105647.60**
		(F)	**Add Contractors Profit at 10% on (E)** 0%			**0.00**
			Cost per 191 cum (E) + (F)			**105647.60**
			Rate per 1 cum			553.13
						1 Cum

6	Providing and laying **Dense graded bituminous macadam with 100-120 TPH batch type HMP** using HBG crushed aggregates of **Grading-II** as per table 500-10 of MoRT&H Specification 505 (5th revision) premixed with bituminous binder of VG-30 grade @ 4.5% of weight of total mixture, transporting the hot mix to work site, laid over a previously prepared surface with sensor paver finisher to the required grade, level and alignment, rolled as per Clauses 501.6 and 501.7 to achive the desired compaction for finished item of work as directed by the Engineer-In-Charge including hire and operational charges all T&P and all other contingent charges necessary excluding cost of seiniorage charges of all materials etc., completes and as per MoRT&H specification No.505 (5th revision) (Excluding VAT charges)

Quantity		Description of Item	Rate	per	Amount
Unit = cum					
Taking out put = 195 cum (450 tonne)		**Page 132,133 of MoRT&H SDB**			
(A)		**Labour**			
0.84	nos.	Mate		nos.	0.00
14.00	nos.	Mazdoor working with HMP, mechanical broom,		nos.	0.00
5.00	nos.	Mazdoor skilled		nos.	0.00
					0.00
0.00	%	Municipal area allowance			0.00
		Total			0.00
(B)		**Machinery**			
6.00	hr	Batch Mix HMP @ 100 to 120TPH		hr	0.00
6.00	hr	**Hydero static sensor Paver finisher**		hr	0.00
6.00	hr	Generator 250 KVA		hr	0.00
6.00	hr	Front end loader 1 cum bucket capacity		hr	0.00
3.90	hr	Smooth wheeled roller 8-10 tonnes for initial break		hr	0.00
3.90	hr	Pneumatic road Roller		hr	0.00
3.90	hr	smooth wheeled roller 8 Ton		hr	0.00
		Total			0.00
(C)		**Material**			
20.25	MT	Bitumen VG-30 @ 4.5 % of weight of mix=195x2.31=450 tonne	4041.67	MT	81843.87
		ii) Aggregate			
		Total weight of mix = 450 tonnes			
		weight of bitumen - 20.25 tonnes			
		Weight of aggregate = 450-20.25 = 429.75 tonnes			
		Taking density of aggregate = 1.5 tonne/cum			

	Quantity		Description of Item	Rate	per	Amount
			Volume of aggregate = 286.50 cum			
			Grading - II (19mm nominal size)			
			25-10mm @ 30%			
	85.95	cum	IRC &MORT&H HBG M/C chips 25 to 10mm @ 30%	0.00	cum	0.00
			Average rate of IRC&MoRT&H HBG M/C metal of sizes 25-27mm, 19-22mm, 12-14mm, 9.5-11.2mm			
	80.22	cum	IRC &MORT&H HBG M/C chips 10 to 5mm @ 40%	0.00	cum	0.00
			Average rate of IRC&MoRT&H HBG M/C metal of sizes 9.5-11.2mm, 5 to 7mm			
	114.60	cum	IRC &MORT&H HBG M/C chips 5mm and below @ 20%	16.19	cum	1855.43
			Average rate of IRC&MoRT&H HBG M/C metal of sizes 2.36 to 5mm and 2.36mm& below			
	5.73	cum	Filler @ 2% of weight of aggregates	17.14	cum	98.23
			Total			83797.53
		(D)	**Over head charges @**			
	0%		Add for Over head charges on (A)+(B)+(C)			0.00
		(E)	**Total of (A) + (B)+(C)+(D)**			**83797.53**
		(F)	**Add Contractors Profit at 10% on (E)** 0%			**0.00**
			Cost per 195 cum (E) + (F)			**83797.53**
			Rate per 1 cum			429.73
						1 Cum

Data's with 100% Rock Sand

	Quantity	Description of Item	Rate	per	Amount
7	Providing Vibrated Cement Concrete (1:4:8) mix using 40mm size HBG crushed stone aggregate and fine aggregate conforming to table 1000-2 of MoRT&H including cost, conveyance of all materials to site and labour charges, centering, machine mixing, laying, Vibrating, curing etc., including all other incidental and operational charges of all T&P etc., complete for finished item of work as per MoRT&H specification 1500,1700, 2100 (5th Revision) and as directed by the Engineer-in-Charge for base coarse below CC Pavement.				
		Unit = cum			
		Taking output = 15 cum			
	(A) Labour				
	0.64 nos	Mate		day	0.00
	1.00 nos	Mason		day	0.00
	15.00 nos	Mazdoor		day	0.00
		Total			0.00
	(B) Material				
	13.50 cum	Cost of 40mm SS-5 HBG M/C metal	0.00	cum	0.00
	3.375 cum	Stone dust	17.14	cum	57.86
	3.375 cum	Stone dust	17.14	cum	57.86
	2.43 MT	Cement at site	1163.05	MT	2826.20
		Total			2941.92
	(C) Machinery				
	6.00 hr	Concrete mixer 0.4/0.28 cum		hr	0.00
	6.00 hr	Generator set 35 KVA		hr	0.00
	2.00 hr	Water tanker 6 KL		hr	0.00
		Total			0.00
	(D) Over head charges @				
	0%	Add for Over head charges on (A)+(B)+(C)			0.00
	(E) Total of (A) + (B)+(C)+(D)				**2941.92**
	(F) Add Contractors Profit at 10% on (E)	0%			**0.00**
	13.50 40mm SS-5 HBG M/C metal				**0.00**
	3.38 Sand				**0.00**
		Cost per 15 cum			**2941.92**
		Rate for 1 cum			196.13
					1 Cum
8	Vibrated cement concrete M 40 grade using 20mm & 10mm HBG crushed stone aggregate (Coarse aggregate conforming to table 1000-1 and fine aggregate conforming to table 1000-2) including cost, conveyance of all materials to site and labour charges, centering, machine mixing, laying, vibrating, curing etc., including all other incidental and operational charges of all T&P etc., complete for finished item of work as per MoRT&H specification 1500, 1700, 2100 & 2702 (5th revision) and as directed by the Engineer-in-Charge for C.C Pavement.				
		Unit = cum **Page 345,346 of MoRT&H SDB**			
		Taking output = 15 cum			
	(A) Labour				
	0.86 nos	Mate		day	0.00
	1.50 nos	Mason		day	0.00
	20.00 nos	Mazdoor		day	0.00
		Total			0.00
	(B) Material				
	8.10 cum	Cost of 20mm SS-5 HBG M/C metal	0.00	cum	0
	5.40 cum	Cost of 10mm SS-5 HBG M/C metal	0.00	cum	0
	3.375 cum	Stone dust	17.14	cum	57.86
	3.375 cum	Stone dust	17.14	cum	57.86
	6.45 MT	Cement at site	1163.05	MT	7501.65
		Total			7617.37
	© Machinery				
	6.00 hr	Concrete mixer 0.4/0.28 cum		hr	0.00
	6.00 hr	Generator set 35 KVA		hr	0.00

	Quantity		Description of Item		Rate	per	Amount
							0.00
		(D)	**Form work**				
	3.50	%	Form work @ 3.50% on (A)+(B)+(C)			Cum	0.00
		(E)	**Over head charges @**				
	0%		Add for Over head charges on (A)+(B)+(C)+(D)				0.00
		(F)	**Total of (A) + (B)+(C)+(D)+(E)**				**7617.37**
		(G)	**Add Contractors Profit at 10% on (F)**	0%			**0.00**
			Cost per 15 cum (F)+(G)				**7617.37**
			Rate for 1 cum				507.82
							1 Cum
9	Vibrated cement concrete M 35 grade using 20mm & 10mm HBG crushed stone aggregate (Coarse aggregate conforming to table 1000-1 and fine aggregate conforming to table 1000-2) including cost, conveyance of all materials to site and labour charges, centering, machine mixing, laying, vibrating, curing etc., including all other incidental and operational charges of all T&P etc., complete for finished item of work as per MoRT&H specification 1500, 1700, 2100 & 2702 (5th revision) and as directed by the Engineer-in-Charge for C.C Pavement.						
			Unit = cum	**Page 345,346 of MoRT&H SDB**			
			Taking output = 15 cum				
		(A)	**Labour**				
	0.86	nos	Mate			day	0.00
	1.50	nos	Mason			day	0.00
	20.00	nos	Mazdoor			day	0.00
			Total				0.00
		(B)	**Material**				
	8.10	cum	Cost of 20mm SS-5 HBG M/C metal		0.00	cum	0
	5.40	cum	Cost of 10mm SS-5 HBG M/C metal		0.00	cum	0
	3.375	cum	Stone dust		17.14	cum	57.86
	3.375	cum	Stone dust		17.14	cum	57.86
	6.33	MT	Cement at site		1163.05	MT	7362.08
			Total				7477.8
		©	**Machinery**				
	6.00	hr	Concrete mixer 0.4/0.28 cum			hr	0.00
	6.00	hr	Generator set 35 KVA			hr	0.00
							0.00
		(D)	**Form work**				
	3.50	%	Form work @ 3.50% on (A)+(B)+(C)			Cum	0.00
		(E)	**Over head charges @**				
	0%		Add for Over head charges on (A)+(B)+(C)+(D)				0.00
		(F)	**Total of (A) + (B)+(C)+(D)+(E)**				**7477.80**
		(G)	**Add Contractors Profit at 10% on (F)**	0%			**0.00**
			Cost per 15 cum (F)+(G)				**7477.80**
			Rate for 1 cum				498.52
							1 Cum
10	Vibrated cement concrete M 15 Grade Concrete using 40mm , 20mm and 10mm size HBG crushed stone aggregate (Coarse aggregate conforming to table 1000-1 and fine aggregate conforming to table 1000-2) including cost and conveyance of all materials to site and all labour charges for machine mixing,laying in position, Compacting , Vibrating and curing including all other incidental and all other operational charges of T&P required etc., complete as per MoRT&H Specification 1500,1700, 2100 (5th revision) for footings and Raft foundation .						
			Unit = cum	**Page 335 of MoRT&H SDB**			
			Taking output = 15 cum				
		(A)	**Labour**				
	0.86	nos	Mate			day	0.00
	1.50	nos	Mason			day	0.00
	20.00	nos	Mazdoor			day	0.00
			Total				0.00

	Quantity		Description of Item	Rate	per	Amount
		(B) Material				
	8.10	cum	Cost of 40mm SS-5 HBG M/C metal	0.00	cum	0.00
	4.05	cum	Cost of 20mm SS-5 HBG M/C metal	0.00	cum	0.00
	1.35	cum	Cost of 10mm SS-5 HBG M/C metal	0.00	cum	0.00
	3.38	cum	Manufactured rock sand	17.14	cum	57.86
	3.38	cum	Manufactured rock sand	17.14	cum	57.86
	4.13	MT	Cement at site	1163.05	MT	4803.38
			Total			4919.10
		© Machinery				
	6.00	hr	Concrete mixer 0.4/0.28 cum		hr	0.00
	6.00	hr	Generator set 35 KVA		hr	0.00
						0.00
		(D) Form work				
	4.00	%	Form work @ 4% on (A)+(B)+(C)		Cum	0.00
		(E) Over head charges @				
	0%		Add for Over head charges on (A)+(B)+(C)+(D)			0.00
		(F) Total of (A) + (B)+(C)+(D)+(E)				**4919.10**
		(G) Add Contractors Profit at 10% on (F)	0%			**0.00**
			Cost per 15 cum (F)+(G)+(H)			**4919.10**
			Rate for 1 cum			327.94
						1 Cum
11	Vibrated cement concrete M 15 Grade Concrete using 40mm , 20mm and 10mm size HBG crushed stone aggregate (Coarse aggregate conforming to table 1000-1 and fine aggregate conforming to table 1000-2) including cost, and conveyance of all materials to site and all labour charges for machine mixing, laying in position,Compacting, Vibrating and curing including all other incidental and all other operational charges of T&P required etc., complete as per MoRT&H Specification 1500,1700, 2200 (5th revision) for Sub structure .					
			Unit = cum **Page 335,455 of MoRT&H SDB**			
			Taking output = 15 cum			
		(A) Labour				
	0.86	nos	Mate		day	0.00
	1.50	nos	Mason		day	0.00
	20.00	nos	Mazdoor		day	0.00
			Total			0.00
		(B) Material				
	8.10	cum	Cost of 40mm SS-5 HBG M/C metal	0.00	cum	0.00
	4.05	cum	Cost of 20mm SS-5 HBG M/C metal	0.00	cum	0.00
	1.35	cum	Cost of 10mm SS-5 HBG M/C metal	0.00	cum	0.00
	3.38	cum	Manufactured rock sand	17.14	cum	57.86
	3.38	cum	Manufactured rock sand	17.14	cum	57.86
	4.13	MT	Cement at site	1163.05	MT	4803.38
			Total			4919.10
		© Machinery				
	6.00	hr	Concrete mixer 0.4/0.28 cum		hr	0.00
	6.00	hr	Generator set 35 KVA		hr	0.00
						0.00
		(D) Form work				
	10.00	%	Form work @ 10% on (A)+(B)+(C)		Cum	0.00
		(E) Over head charges @				
	0%		Add for Over head charges on (A)+(B)+(C)+(D)			0.00
		(F) Total of (A) + (B)+(C)+(D)+(E)				**4919.10**
		(G) Add Contractors Profit at 10% on (F)	0%			**0.00**
			Cost per 15 cum (F)+(G)			**4919.10**
			Rate for 1 cum			327.94
						1 Cum

	Quantity	Description of Item	Rate	per	Amount
23	Providing and laying of filter media using 50% of 150 mm IRC soling stone and 50 % of 40 mm HBG metal satisfying the requirements laid down in clause 2504.2.2 of MoRT&H specifications to athickness of not less than 600mm with smaller size towards the soil and bigger size towards the wall and provided over the entire surface behind the abutment, wing wall and return wall to the full height compacted to a firm condition including cost and conveyance of all metal seignorage charges ,and all labour charges as directed by the departmental officers as per drawing and Technical specifications as per clause 710.1.1 of IRC:78 and Clause 2200 of MoRT&H (5th revision) for finished item of work.				
		Unit = cum **Page 463 of MoRT&H SDB**			
		Taking output = 10 cum			
		(A) Labour			
	0.32 nos	Mate		day	0.00
	7.00 nos	Mazdoor for filling watering, ramming etc		day	0.00
	1.00 nos	Mazdoor skilled		day	0.00
		Total			0.00
		(B) Material			
		Filter media of stone aggregate conforming to clause 2504.2.2 of MoRT&H			
	6.00 cum	Cost of 150mm size IRC soling stone (HBG)	4.52	cum	27.14
	6.00 cum	Cost of 40mm size IRC HBG metal	23.81	cum	142.86
		Total			170.00
		© Machinery			
	0.06 hr	Water tanker 6 KL capacity		hr	0.00
		Total			0.00
		(D) Over head charges @			
		Cost per 10 cum (E)+(F)			**170.00**
		Rate for 1 cum			17.00
					1 Cum
12	Vibrated cement concrete M 20 Grade Concrete using 40mm , 20mm and 10mm size HBG crushed stone aggregate (Coarse aggregate conforming to table 1000-1 and fine aggregate conforming to table 1000-2) including cost, (excluding seigniorage) and conveyance of all materials to site and all labour charges , centering, machine mixing, laying in position, Compacting, Vibrating and curing including all other incidental and all other operational charges of T&P required etc., complete as per MoRT&H Specification 1500,1700, 2200 (5th Revision) for Sub structure .				
		Unit = cum **Page 335,455 of MoRT&H SDB**			
		Taking output = 15 cum			
		(A) Labour			
	0.86 nos	Mate		day	0.00
	1.50 nos	Mason		day	0.00
	20.00 nos	Mazdoor		day	0.00
		Total			0.00
		(B) Material			
	5.40 cum	Cost of 40mm SS-5 HBG M/C metal	0.00	cum	0.00
	5.40 cum	Cost of 20mm SS-5 HBG M/C metal	0.00	cum	0.00
	2.70 cum	Cost of 10mm SS-5 HBG M/C metal	0.00	cum	0.00
	3.38 cum	Manufactured rock sand	17.14	cum	57.86
	3.38 cum	Manufactured rock sand	17.14	cum	57.86
	5.16 MT	Cement at site	1163.05	MT	6001.32
		Total			6117.04
		© Machinery			
	6.00 hr	Concrete mixer 0.4/0.28 cum		hr	0.00
	6.00 hr	Generator set 35 KVA		hr	0.00
					0.00
		(D) Form work			
	4.00 %	Form work @ 10% on (A)+(B)+(C)		Cum	0.00

	Quantity	Description of Item		Rate	per	Amount
		(E) Over head charges @				
	0%	Add for Over head charges on (A)+(B)+(C)+(D)				0.00
		(F) Total of (A) + (B)+(C)+(D)+(E)				**6117.04**
		(G) Add Contractors Profit at 10% on (F)	0%			**0.00**
		Cost per 15 cum (F)+(G)				**6117.04**
		Rate for 1 cum				407.80
						1 Cum

Data's with 50% sand & 50% Rock Sand

	Quantity	Description of Item	Rate	per	Amount
7	Providing Vibrated Cement Concrete (1:4:8) mix using 40mm size HBG crushed stone aggregate and fine aggregate conforming to table 1000-2 of MoRT&H including cost, conveyance of all materials to site and labour charges, centering, machine mixing, laying, Vibrating, curing etc., including all other incidental and operational charges of all T&P etc., complete for finished item of work as per MoRT&H specification 1500,1700, 2100 (5th Revision) and as directed by the Engineer-in-Charge for base coarse below CC Pavement.				
		Unit = cum			
		Taking output = 15 cum			
	(A)	**Labour**			
	0.64 nos	Mate		day	0.00
	1.00 nos	Mason		day	0.00
	15.00 nos	Mazdoor		day	0.00
		Total			0.00
	(B)	**Material**			
	13.50 cum	Cost of 40mm SS-5 HBG M/C metal	0.00	cum	0.00
	3.375 cum	Manufactured rock sand	17.14	cum	57.86
	3.375 cum	Sand for concrete	26.67	cum	90.00
	2.43 MT	Cement at site	1163.05	MT	2826.20
		Total			2974.06
	(C)	**Machinery**			
	6.00 hr	Concrete mixer 0.4/0.28 cum		hr	0.00
	6.00 hr	Generator set 35 KVA		hr	0.00
	2.00 hr	Water tanker 6 KL		hr	0.00
		Total			0.00
	(D)	**Over head charges @**			
	0%	Add for Over head charges on (A)+(B)+(C)			0.00
	(E)	**Total of (A) + (B)+(C)+(D)**			**2974.06**
	(F)	**Add Contractors Profit at 10% on (E)** 0%			**0.00**
	13.50	40mm SS-5 HBG M/C metal			**0.00**
	3.38	Sand			**0.00**
		Cost per 15 cum			**2974.06**
		Rate for 1 cum			198.27
					1 Cum
8	Vibrated cement concrete M 40 grade using 20mm & 10mm HBG crushed stone aggregate (Coarse aggregate conforming to table 1000-1 and fine aggregate conforming to table 1000-2) including cost, conveyance of all materials to site and labour charges, centering, machine mixing, laying, vibrating, curing etc., including all other incidental and operational charges of all T&P etc., complete for finished item of work as per MoRT&H specification 1500, 1700, 2100 & 2702 (5th revision) and as directed by the Engineer-in-Charge for C.C Pavement.				
		Unit = cum **Page 345,346 of MoRT&H SDB**			
		Taking output = 15 cum			
	(A)	**Labour**			
	0.86 nos	Mate		day	0.00
	1.50 nos	Mason		day	0.00
	20.00 nos	Mazdoor		day	0.00
		Total			0.00
	(B)	**Material**			
	8.10 cum	Cost of 20mm SS-5 HBG M/C metal	0.00	cum	0
	5.40 cum	Cost of 10mm SS-5 HBG M/C metal	0.00	cum	0
	3.375 cum	Manufactured rock sand	17.14	cum	57.86
	3.375 cum	Sand for concrete	26.67	cum	90
	6.45 MT	Cement at site	1163.05	MT	7501.65
		Total			7649.51
	©	**Machinery**			
	6.00 hr	Concrete mixer 0.4/0.28 cum		hr	0.00
	6.00 hr	Generator set 35 KVA		hr	0.00

	Quantity		Description of Item		Rate	per	Amount
							0.00
		(D)	**Form work**				
	3.50	%	Form work @ 3.50% on (A)+(B)+(C)			Cum	0.00
		(E)	**Over head charges @**				
	0%		Add for Over head charges on (A)+(B)+(C)+(D)				0.00
		(F)	**Total of (A) + (B)+(C)+(D)+(E)**				**7649.51**
		(G)	**Add Contractors Profit at 10% on (F)**	0%			**0.00**
			Cost per 15 cum (F)+(G)				**7649.51**
			Rate for 1 cum				509.97
							1 Cum
9	Vibrated cement concrete M 35 grade using 20mm & 10mm HBG crushed stone aggregate (Coarse aggregate conforming to table 1000-1 and fine aggregate conforming to table 1000-2) including cost, conveyance of all materials to site and labour charges, centering, machine mixing, laying, vibrating, curing etc., including all other incidental and operational charges of all T&P etc., complete for finished item of work as per MoRT&H specification 1500, 1700, 2100 & 2702 (5th revision) and as directed by the Engineer-in-Charge for C.C Pavement.						
			Unit = cum	**Page 345,346 of MoRT&H SDB**			
			Taking output = 15 cum				
		(A)	**Labour**				
	0.86	nos	Mate			day	0.00
	1.50	nos	Mason			day	0.00
	20.00	nos	Mazdoor			day	0.00
			Total				0.00
		(B)	**Material**				
	8.10	cum	Cost of 20mm SS-5 HBG M/C metal		0.00	cum	0
	5.40	cum	Cost of 10mm SS-5 HBG M/C metal		0.00	cum	0
	3.375	cum	Manufactured rock sand		17.14	cum	57.86
	3.375	cum	Sand for concrete		26.67	cum	90
	6.33	MT	Cement at site		1163.05	MT	7362.08
			Total				7509.94
		©	**Machinery**				
	6.00	hr	Concrete mixer 0.4/0.28 cum			hr	0.00
	6.00	hr	Generator set 35 KVA			hr	0.00
							0.00
		(D)	**Form work**				
	3.50	%	Form work @ 3.50% on (A)+(B)+(C)			Cum	0.00
		(E)	**Over head charges @**				
	0%		Add for Over head charges on (A)+(B)+(C)+(D)				0.00
		(F)	**Total of (A) + (B)+(C)+(D)+(E)**				**7509.94**
		(G)	**Add Contractors Profit at 10% on (F)**	0%			**0.00**
			Cost per 15 cum (F)+(G)				**7509.94**
			Rate for 1 cum				500.66
							1 Cum
10	Vibrated cement concrete M 15 Grade Concrete using 40mm , 20mm and 10mm size HBG crushed stone aggregate (Coarse aggregate conforming to table 1000-1 and fine aggregate conforming to table 1000-2) including cost and conveyance of all materials to site and all labour charges for machine mixing,laying in position, Compacting , Vibrating and curing including all other incidental and all other operational charges of T&P required etc., complete as per MoRT&H Specification 1500,1700, 2100 (5th revision) for footings and Raft foundation .						
			Unit = cum	**Page 335 of MoRT&H SDB**			
			Taking output = 15 cum				
		(A)	**Labour**				
	0.86	nos	Mate			day	0.00
	1.50	nos	Mason			day	0.00
	20.00	nos	Mazdoor			day	0.00
			Total				0.00

	Quantity		Description of Item	Rate	per	Amount
		(B) Material				
	8.10	cum	Cost of 40mm SS-5 HBG M/C metal	0.00	cum	0.00
	4.05	cum	Cost of 20mm SS-5 HBG M/C metal	0.00	cum	0.00
	1.35	cum	Cost of 10mm SS-5 HBG M/C metal	0.00	cum	0.00
	3.375	cum	Manufactured rock sand	17.14	cum	57.86
	3.375	cum	Sand for concrete	26.67	cum	90.00
	4.13	MT	Cement at site	1163.05	MT	4803.38
			Total			4951.24
		© Machinery				
	6.00	hr	Concrete mixer 0.4/0.28 cum		hr	0.00
	6.00	hr	Generator set 35 KVA		hr	0.00
						0.00
		(D) Form work				
	4.00	%	Form work @ 4% on (A)+(B)+(C)		Cum	0.00
		(E) Over head charges @				
	0%		Add for Over head charges on (A)+(B)+(C)+(D)			0.00
		(F) Total of (A) + (B)+(C)+(D)+(E)				**4951.24**
		(G) Add Contractors Profit at 10% on (F)	0%			**0.00**
			Cost per 15 cum (F)+(G)+(H)			**4951.24**
			Rate for 1 cum			330.08
						1 Cum
11	Vibrated cement concrete M 15 Grade Concrete using 40mm , 20mm and 10mm size HBG crushed stone aggregate (Coarse aggregate conforming to table 1000-1 and fine aggregate conforming to table 1000-2) including cost, and conveyance of all materials to site and all labour charges for machine mixing, laying in position,Compacting, Vibrating and curing including all other incidental and all other operational charges of T&P required etc., complete as per MoRT&H Specification 1500,1700, 2200 (5th revision) for Sub structure .					
			Unit = cum **Page 335,455 of MoRT&H SDB**			
			Taking output = 15 cum			
		(A) Labour				
	0.86	nos	Mate		day	0.00
	1.50	nos	Mason		day	0.00
	20.00	nos	Mazdoor		day	0.00
			Total			0.00
		(B) Material				
	8.10	cum	Cost of 40mm SS-5 HBG M/C metal	0.00	cum	0.00
	4.05	cum	Cost of 20mm SS-5 HBG M/C metal	0.00	cum	0.00
	1.35	cum	Cost of 10mm SS-5 HBG M/C metal	0.00	cum	0.00
	3.375	cum	Manufactured rock sand	17.14	cum	57.86
	3.375	cum	Sand for concrete	26.67	cum	90.00
	4.13	MT	Cement at site	1163.05	MT	4803.38
			Total			4951.24
		© Machinery				
	6.00	hr	Concrete mixer 0.4/0.28 cum		hr	0.00
	6.00	hr	Generator set 35 KVA		hr	0.00
						0.00
		(D) Form work				
	10.00	%	Form work @ 10% on (A)+(B)+(C)		Cum	0.00
		(E) Over head charges @				
	0%		Add for Over head charges on (A)+(B)+(C)+(D)			0.00
		(F) Total of (A) + (B)+(C)+(D)+(E)				**4951.24**
		(G) Add Contractors Profit at 10% on (F)	0%			**0.00**
			Cost per 15 cum (F)+(G)			**4951.24**
			Rate for 1 cum			330.08
						1 Cum

	Quantity	Description of Item	Rate	per	Amount
23	Providing and laying of filter media using 50% of 150 mm IRC soling stone and 50 % of 40 mm HBG metal satisfying the requirements laid down in clause 2504.2.2 of MoRT&H specifications to athickness of not less than 600mm with smaller size towards the soil and bigger size towards the wall and provided over the entire surface behind the abutment, wing wall and return wall to the full height compacted to a firm condition including cost and conveyance of all metal seignorage charges ,and all labour charges as directed by the departmental officers as per drawing and Technical specifications as per clause 710.1.1 of IRC:78 and Clause 2200 of MoRT&H (5th revision) for finished item of work.				
		Unit = cum **Page 463 of MoRT&H SDB**			
		Taking output = 10 cum			
	(A) Labour				
	0.32 nos	Mate		day	0.00
	7.00 nos	Mazdoor for filling watering, ramming etc		day	0.00
	1.00 nos	Mazdoor skilled		day	0.00
		Total			0.00
	(B) Material				
		Filter media of stone aggregate conforming to clause 2504.2.2 of MoRT&H			
	6.00 cum	Cost of 150mm size IRC soling stone (HBG)	4.52	cum	27.14
	6.00 cum	Cost of 40mm size IRC HBG metal	23.81	cum	142.86
		Total			170.00
	© Machinery				
	0.06 hr	Water tanker 6 KL capacity		hr	0.00
		Total			0.00
	(D) Over head charges @				
		Cost per 10 cum (E)+(F)			**170.00**
		Rate for 1 cum			17.00
					1 Cum
12	Vibrated cement concrete M 20 Grade Concrete using 40mm , 20mm and 10mm size HBG crushed stone aggregate (Coarse aggregate conforming to table 1000-1 and fine aggregate conforming to table 1000-2) including cost, (excluding seigniorage) and conveyance of all materials to site and all labour charges , centering, machine mixing, laying in position, Compacting, Vibrating and curing including all other incidental and all other operational charges of T&P required etc., complete as per MoRT&H Specification 1500,1700, 2200 (5th Revision) for Sub structure .				
		Unit = cum **Page 335,455 of MoRT&H SDB**			
		Taking output = 15 cum			
	(A) Labour				
	0.86 nos	Mate		day	0.00
	1.50 nos	Mason		day	0.00
	20.00 nos	Mazdoor		day	0.00
		Total			0.00
	(B) Material				
	5.40 cum	Cost of 40mm SS-5 HBG M/C metal	0.00	cum	0.00
	5.40 cum	Cost of 20mm SS-5 HBG M/C metal	0.00	cum	0.00
	2.70 cum	Cost of 10mm SS-5 HBG M/C metal	0.00	cum	0.00
	3.375 cum	Manufactured rock sand	17.14	cum	57.86
	3.375 cum	Sand for concrete	26.67	cum	90.00
	5.16 MT	Cement at site	1163.05	MT	6001.32
		Total			6149.18
	© Machinery				
	6.00 hr	Concrete mixer 0.4/0.28 cum		hr	0.00
	6.00 hr	Generator set 35 KVA		hr	0.00
					0.00
	(D) Form work				
	4.00 %	Form work @ 10% on (A)+(B)+(C)		Cum	0.00

	Quantity	Description of Item	Rate	per	Amount
		(E) Over head charges @			
	0%	Add for Over head charges on (A)+(B)+(C)+(D)			0.00
		(F) Total of (A) + (B)+(C)+(D)+(E)			**6149.18**
		(G) Add Contractors Profit at 10% on (F) 0%			**0.00**
		Cost per 15 cum (F)+(G)			**6149.18**
		Rate for 1 cum			409.95
					1 Cum

Data's with 100% Sand

	Quantity	Description of Item	Rate	per	Amount
7	Providing Vibrated Cement Concrete (1:4:8) mix using 40mm size HBG crushed stone aggregate and fine aggregate conforming to table 1000-2 of MoRT&H including cost, conveyance of all materials to site and labour charges, centering, machine mixing, laying, Vibrating, curing etc., including all other incidental and operational charges of all T&P etc., complete for finished item of work as per MoRT&H specification 1500,1700, 2100 (5th Revision) and as directed by the Engineer-in-Charge for base coarse below CC Pavement.				
		Unit = cum			
		Taking output = 15 cum			
	(A) Labour				
	0.64 nos	Mate		day	0.00
	1.00 nos	Mason		day	0.00
	15.00 nos	Mazdoor		day	0.00
		Total			0.00
	(B) Material				
	13.50 cum	Cost of 40mm SS-5 HBG M/C metal	0.00	cum	0.00
	3.375 cum	Sand for concrete	26.67	cum	90.00
	3.375 cum	Sand for concrete	26.67	cum	90.00
	2.43 MT	Cement at site	1163.05	MT	2826.20
		Total			3006.20
	(C) Machinery				
	6.00 hr	Concrete mixer 0.4/0.28 cum		hr	0.00
	6.00 hr	Generator set 35 KVA		hr	0.00
	2.00 hr	Water tanker 6 KL		hr	0.00
		Total			0.00
	(D) Over head charges @				
	0%	Add for Over head charges on (A)+(B)+(C)			0.00
	(E) Total of (A) + (B)+(C)+(D)				**3006.20**
	(F) Add Contractors Profit at 10% on (E)	0%			**0.00**
	13.50 40mm SS-5 HBG M/C metal				**0.00**
	3.38 Sand				**0.00**
		Cost per 15 cum			**3006.20**
		Rate for 1 cum			200.41
					1 Cum
8	Vibrated cement concrete M 40 grade using 20mm & 10mm HBG crushed stone aggregate (Coarse aggregate conforming to table 1000-1 and fine aggregate conforming to table 1000-2) including cost, conveyance of all materials to site and labour charges, centering, machine mixing, laying, vibrating, curing etc., including all other incidental and operational charges of all T&P etc., complete for finished item of work as per MoRT&H specification 1500, 1700, 2100 & 2702 (5th revision) and as directed by the Engineer-in-Charge for C.C Pavement.				
		Unit = cum **Page 345,346 of MoRT&H SDB**			
		Taking output = 15 cum			
	(A) Labour				
	0.86 nos	Mate		day	0.00
	1.50 nos	Mason		day	0.00
	20.00 nos	Mazdoor		day	0.00
		Total			0.00
	(B) Material				
	8.10 cum	Cost of 20mm SS-5 HBG M/C metal	0.00	cum	0
	5.40 cum	Cost of 10mm SS-5 HBG M/C metal	0.00	cum	0
	3.375 cum	Sand for concrete	26.67	cum	90
	3.375 cum	Sand for concrete	26.67	cum	90
	6.45 MT	Cement at site	1163.05	MT	7501.65
		Total			7681.65
	© Machinery				
	6.00 hr	Concrete mixer 0.4/0.28 cum		hr	0.00
	6.00 hr	Generator set 35 KVA		hr	0.00

	Quantity		Description of Item		Rate	per	Amount
							0.00
		(D)	**Form work**				
	3.50	%	Form work @ 3.50% on (A)+(B)+(C)			Cum	0.00
		(E)	**Over head charges @**				
	0%		Add for Over head charges on (A)+(B)+(C)+(D)				0.00
		(F)	**Total of (A) + (B)+(C)+(D)+(E)**				**7681.65**
		(G)	**Add Contractors Profit at 10% on (F)**	0%			**0.00**
			Cost per 15 cum (F)+(G)				**7681.65**
			Rate for 1 cum				512.11
							1 Cum
9	Vibrated cement concrete M 35 grade using 20mm & 10mm HBG crushed stone aggregate (Coarse aggregate conforming to table 1000-1 and fine aggregate conforming to table 1000-2) including cost, conveyance of all materials to site and labour charges, centering, machine mixing, laying, vibrating, curing etc., including all other incidental and operational charges of all T&P etc., complete for finished item of work as per MoRT&H specification 1500, 1700, 2100 & 2702 (5th revision) and as directed by the Engineer-in-Charge for C.C Pavement.						
			Unit = cum	**Page 345,346 of MoRT&H SDB**			
			Taking output = 15 cum				
		(A)	**Labour**				
	0.86	nos	Mate			day	0.00
	1.50	nos	Mason			day	0.00
	20.00	nos	Mazdoor			day	0.00
			Total				0.00
		(B)	**Material**				
	8.10	cum	Cost of 20mm SS-5 HBG M/C metal		0.00	cum	0
	5.40	cum	Cost of 10mm SS-5 HBG M/C metal		0.00	cum	0
	3.375	cum	Sand for concrete		26.67	cum	90
	3.375	cum	Sand for concrete		26.67	cum	90
	6.33	MT	Cement at site		1163.05	MT	7362.08
			Total				7542.08
		©	**Machinery**				
	6.00	hr	Concrete mixer 0.4/0.28 cum			hr	0.00
	6.00	hr	Generator set 35 KVA			hr	0.00
							0.00
		(D)	**Form work**				
	3.50	%	Form work @ 3.50% on (A)+(B)+(C)			Cum	0.00
		(E)	**Over head charges @**				
	0%		Add for Over head charges on (A)+(B)+(C)+(D)				0.00
		(F)	**Total of (A) + (B)+(C)+(D)+(E)**				**7542.08**
		(G)	**Add Contractors Profit at 10% on (F)**	0%			**0.00**
			Cost per 15 cum (F)+(G)				**7542.08**
			Rate for 1 cum				502.81
							1 Cum
10	Vibrated cement concrete M 15 Grade Concrete using 40mm , 20mm and 10mm size HBG crushed stone aggregate (Coarse aggregate conforming to table 1000-1 and fine aggregate conforming to table 1000-2) including cost and conveyance of all materials to site and all labour charges for machine mixing,laying in position, Compacting , Vibrating and curing including all other incidental and all other operational charges of T&P required etc., complete as per MoRT&H Specification 1500,1700, 2100 (5th revision) for footings and Raft foundation .						
			Unit = cum	**Page 335 of MoRT&H SDB**			
			Taking output = 15 cum				
		(A)	**Labour**				
	0.86	nos	Mate			day	0.00
	1.50	nos	Mason			day	0.00
	20.00	nos	Mazdoor			day	0.00
			Total				0.00

	Quantity		Description of Item	Rate	per	Amount
		(B) Material				
	8.10	cum	Cost of 40mm SS-5 HBG M/C metal	0.00	cum	0.00
	4.05	cum	Cost of 20mm SS-5 HBG M/C metal	0.00	cum	0.00
	1.35	cum	Cost of 10mm SS-5 HBG M/C metal	0.00	cum	0.00
	3.375	cum	Sand for concrete	26.67	cum	90.00
	3.375	cum	Sand for concrete	26.67	cum	90.00
	4.13	MT	Cement at site	1163.05	MT	4803.38
			Total			4983.38
		© Machinery				
	6.00	hr	Concrete mixer 0.4/0.28 cum		hr	0.00
	6.00	hr	Generator set 35 KVA		hr	0.00
						0.00
		(D) Form work				
	4.00	%	Form work @ 4% on (A)+(B)+(C)		Cum	0.00
		(E) Over head charges @				
	0%		Add for Over head charges on (A)+(B)+(C)+(D)			0.00
		(F) Total of (A) + (B)+(C)+(D)+(E)				**4983.38**
		(G) Add Contractors Profit at 10% on (F)	0%			**0.00**
			Cost per 15 cum (F)+(G)+(H)			**4983.38**
			Rate for 1 cum			332.23
						1 Cum
11	Vibrated cement concrete M 15 Grade Concrete using 40mm , 20mm and 10mm size HBG crushed stone aggregate (Coarse aggregate conforming to table 1000-1 and fine aggregate conforming to table 1000-2) including cost, and conveyance of all materials to site and all labour charges for machine mixing, laying in position,Compacting, Vibrating and curing including all other incidental and all other operational charges of T&P required etc., complete as per MoRT&H Specification 1500,1700, 2200 (5th revision) for Sub structure .					
			Unit = cum **Page 335,455 of MoRT&H SDB**			
			Taking output = 15 cum			
		(A) Labour				
	0.86	nos	Mate		day	0.00
	1.50	nos	Mason		day	0.00
	20.00	nos	Mazdoor		day	0.00
			Total			0.00
		(B) Material				
	8.10	cum	Cost of 40mm SS-5 HBG M/C metal	0.00	cum	0.00
	4.05	cum	Cost of 20mm SS-5 HBG M/C metal	0.00	cum	0.00
	1.35	cum	Cost of 10mm SS-5 HBG M/C metal	0.00	cum	0.00
	3.375	cum	Sand for concrete	26.67	cum	90.00
	3.375	cum	Sand for concrete	26.67	cum	90.00
	4.13	MT	Cement at site	1163.05	MT	4803.38
			Total			4983.38
		© Machinery				
	6.00	hr	Concrete mixer 0.4/0.28 cum		hr	0.00
	6.00	hr	Generator set 35 KVA		hr	0.00
						0.00
		(D) Form work				
	10.00	%	Form work @ 10% on (A)+(B)+(C)		Cum	0.00
		(E) Over head charges @				
	0%		Add for Over head charges on (A)+(B)+(C)+(D)			0.00
		(F) Total of (A) + (B)+(C)+(D)+(E)				**4983.38**
		(G) Add Contractors Profit at 10% on (F)	0%			**0.00**
			Cost per 15 cum (F)+(G)			**4983.38**
			Rate for 1 cum			332.23
						1 Cum

	Quantity	Description of Item	Rate	per	Amount
23	Providing and laying of filter media using 50% of 150 mm IRC soling stone and 50 % of 40 mm HBG metal satisfying the requirements laid down in clause 2504.2.2 of MoRT&H specifications to athickness of not less than 600mm with smaller size towards the soil and bigger size towards the wall and provided over the entire surface behind the abutment, wing wall and return wall to the full height compacted to a firm condition including cost and conveyance of all metal seignorage charges ,and all labour charges as directed by the departmental officers as per drawing and Technical specifications as per clause 710.1.1 of IRC:78 and Clause 2200 of MoRT&H (5th revision) for finished item of work.				
		Unit = cum **Page 463 of MoRT&H SDB**			
		Taking output = 10 cum			
	(A) Labour				
	0.32 nos	Mate		day	0.00
	7.00 nos	Mazdoor for filling watering, ramming etc		day	0.00
	1.00 nos	Mazdoor skilled		day	0.00
		Total			0.00
	(B) Material				
		Filter media of stone aggregate conforming to clause 2504.2.2 of MoRT&H			
	6.00 cum	Cost of 150mm size IRC soling stone (HBG)	4.52	cum	27.14
	6.00 cum	Cost of 40mm size IRC HBG metal	23.81	cum	142.86
		Total			170.00
	© Machinery				
	0.06 hr	Water tanker 6 KL capacity		hr	0.00
		Total			0.00
	(D) Over head charges @				
		Cost per 10 cum (E)+(F)			**170.00**
		Rate for 1 cum			17.00
					1 Cum
12	Vibrated cement concrete M 20 Grade Concrete using 40mm , 20mm and 10mm size HBG crushed stone aggregate (Coarse aggregate conforming to table 1000-1 and fine aggregate conforming to table 1000-2) including cost, (excluding seigniorage) and conveyance of all materials to site and all labour charges , centering, machine mixing, laying in position, Compacting, Vibrating and curing including all other incidental and all other operational charges of T&P required etc., complete as per MoRT&H Specification 1500,1700, 2200 (5th Revision) for Sub structure .				
		Unit = cum **Page 335,455 of MoRT&H SDB**			
		Taking output = 15 cum			
	(A) Labour				
	0.86 nos	Mate		day	0.00
	1.50 nos	Mason		day	0.00
	20.00 nos	Mazdoor		day	0.00
		Total			0.00
	(B) Material				
	5.40 cum	Cost of 40mm SS-5 HBG M/C metal	0.00	cum	0.00
	5.40 cum	Cost of 20mm SS-5 HBG M/C metal	0.00	cum	0.00
	2.70 cum	Cost of 10mm SS-5 HBG M/C metal	0.00	cum	0.00
	3.375 cum	Sand for concrete	26.67	cum	90.00
	3.375 cum	Sand for concrete	26.67	cum	90.00
	5.16 MT	Cement at site	1163.05	MT	6001.32
		Total			6181.32
	© Machinery				
	6.00 hr	Concrete mixer 0.4/0.28 cum		hr	0.00
	6.00 hr	Generator set 35 KVA		hr	0.00
					0.00
	(D) Form work				
	4.00 %	Form work @ 10% on (A)+(B)+(C)		Cum	0.00

	Quantity	Description of Item	Rate	per	Amount
		(E) Over head charges @			
	0%	Add for Over head charges on (A)+(B)+(C)+(D)			0.00
		(F) Total of (A) + (B)+(C)+(D)+(E)			**6181.32**
		(G) Add Contractors Profit at 10% on (F) 0%			**0.00**
		Cost per 15 cum (F)+(G)			**6181.32**
		Rate for 1 cum			412.09
					1 Cum

Sd/-

Engineer-In-Chief (R&B) SR & CRN

Sd/-

Engineer-In-Chief(R&B) NH, CRF &Buildings

Sd/-

Chief Engineer(R&B) Rural Roads

Sd/-

Chief Engineer(R&B) Admn, COT & QC

Sd/-

Chief Engineer(R&B)D&P,LWE&RSW

Sd/-

Chief Engineer(R&B) PPP & EAP

Sd/-

Chief Engineer(R&B) CTE

For Engineer-in-Chief (R&B)
State Roads & CRN

MINUTES OF 1st BOARD OF CHIEF ENGINEERS MEETING FOR THE YEAR 2019 HELD ON 23.03.2019 @ 4.00PM IN THE BOCE CONFERENCE HALL OF ENGINEER-IN-CHIEF (AW), I & CAD DEPARTMENT, ERRUM MANZIL, HYDERABAD.

At the outset the Engineer-in-Chief (AW), Chairman, Board of Chief Engineers has welcomed all the participants and placed the following agenda for discussions by the members of the Board of Chief Engineers. The names of the officers attended the meeting is appended vide Annexure-I. The Engineer-in-Chief (AW) has initiated the discussions.

Based on the request of Builders Association of India (BAI), the representatives of BAI were allowed to submit their plea before the Board of Chief Engineers on issues related to implementation of GST for the ongoing works i.e., exemption of embedded taxes in hire charges of machinery and common materials like Bricks, Fine & Coarse aggregate

Agenda item No – 1:

I & CAD Department – **Exemption of on hand works pending for want of statutory clearances** such as Forest clearance, Wild life clearance, Environmental clearance and also Road permissions, Railway permissions, N.H Clearances **while calculating 'B' value in arriving Bid capacity of Bidders in Tenders Evaluation** – Placed before the Board of Chief Engineers - For discussion and necessary recommendations - Regarding

Proposed by Engineer-in-Chief (AW), I&CAD Dept and Commissioner, COT, Hyd

Certain instances have come up, wherein the bidders have represented that some of their works are getting delayed because of delay in clearance of forest land and LA of private land and other statutory Government clearances due to which such works are delayed abnormally. This is affecting their Bid capacity criteria which is one of the main eligibility criteria for tender qualification & requested to exempt all pending projects (where the delay is not on account of contractor) in calculating

eligibility criteria like Bid capacity (B Value) to enable all the contractors to get the required Bid Capacity.

Further, Government vide Memo .No.28647/Reforms-A1/2011, dt:21.12.2011, have requested to examine the proposal by placing in the BOCE and furnish the minutes with specific remarks to Government for taking further necessary action.

In this regard, the Senior Technical officer,(Andhra Region),A.P Secretariat, Hyderabad vide Lr dt 04-07-2012 has requested the Commissioner, COT to examine the representation of M/s SEW Infrastructure Ltd., Hyderabad pertaining to the exemption of some of the on hand works for the reasons quoted by the agency.

The Commissionerate of Tenders (COT) in its meeting held on 11-07-2012 has opined that it is not advisable to exempt some of the on hand works for the reasons furnished by M/s SEW Infrastructure Ltd., Hyderabad as this will become precedence for other agencies to approach the Government or to the Court for such exemptions.

Further, as long as the agreements are in force, all those works shall be considered as on hand works while calculating Bid Capacity of the bidder till the agreement (i.e. balance works concerned) are closed by the Competent Authority.

In this connection, the agenda of Exemption in Bid capacity of EPC, Major Irrigation works to participate in tenders was discussed by the Board of Chief Engineers during its 3rd meeting for the year 2012 held on dt 23.08.2012.

" The Board of Chief Engineers has discussed the issue and opined to recommend the Government that it is not advisable to exempt some of the on hand works as this will become precedence for other agencies to approach the Government. or to the Court for such exemptions. As long as the agreement is in force, all those works shall be considered as on hand works while calculating Bid Capacity of the bidder till the agreement (i.e. balance works concerned) are closed by the Competent Authority. However a procedure has to be evolved for solving the issue in case of the agencies who are having a large number of non-started or standstill works which are not due to the account of the agencies."

The subject issue was once again placed for discussion before COT Committee meeting held on 01.12.2018 and the members have opine to refer the matter to BOCEs for its detailed discussion and necessary recommendations in the matter.

The Board of Chief Engineers has deliberated the issue in detail and opined that on hand works pending due to delay in Forest clearance, Environmental clearance and Interstate issues may be considered for exemption in calculating 'B' Value for arriving Bid Capacity of Bidders based on the specific reports by the concerned ENC/CE with detailed reasons thereof. In this regard, the Government is to be addressed for issue of necessary GO in the matter.

Action: Engineer-in-Chief (AW), I&CAD Dept and Commissioner, COT, Hyd

Agenda Item No 2 :

GHMC **– Implementation of GST** for **ongoing Building Works** Contract **–** Implementation of GST for payment of bills in respect of 2BHK Housing Projects executed on or after 01.07.2017 – Payment issues – Committee constituted by the Govt to examine the issues- Report submitted - **Request of BAI to allow 5% as Embedded Tax component as final settlement for the ongoing Works Contracts of Building works -** Placed before the Board of Chief Engineers - For discussion and necessary recommendations– Regarding

Proposed by Chief Engineer(H&A) GHMC, Hyd

The Government in Memo No: 33/WP/A2/2017, dt: 08-08-2017 of Finance (WP) Dept have issued certain instructions for implementation of GST for payment of bills in respect of ongoing works executed on or after 01-07-2017 duly allowing 5% GST of the value of the work as interim arrangement subject to GSTDS as and when applicable and subject to final adjustment as per actual GST liability and ITC.

The Government vide Memo No: 33/WP/A2/2017, dt: 10-08-2017 of Finance (WP) Dept has constituted a committee for specific recommendations regarding implementation of GST provisions with respect to work contracts which are (a) Executed before 30-06-2017, (b) Ongoing after 01-07-2017 & (c) New works which would be let out. The Government further directed that the committee shall make their recommendations based on the Board of Chief Engineers report and also feedback obtained from other states.

As the matter stood thus, subsequently the Government vide G.O. Ms. No. 67 of I & CAD (Reforms) Department, Dt: 04-07-2018 have issued certain guidelines on implementation of Goods & Service Tax for regulating work bills for all Engineering departments in the state. As per the guidelines issued for the ongoing contracts for which the estimates were prepared with SoR prior to 2017-18 (in which Taxes are included) the net GST payable to the contractors shall be @ 5% or 12% or 18% whichever is applicable on amount of work bill after deducting embedded taxes.

The Government further directed that, the Board of Chief Engineers (BoCEs) shall quantify the embedded taxes in various types/component of works, within a fortnight of issue of the above order, so as to have uniformity across the state. The Government in the above G.O. further stated that, the 5% additional amount paid towards GST for the intervening period based on the instructions issued by the Government vide Memo No. 33/WP/A2/2017, Dt: 08-08-2017 has to be taken in to account while adjusting GST payable.

Accordingly, the BoCE has worked out the embedded taxes and published on the irrigation department website. Aggrieved by the procedure adopted for calculating embedded taxes, the BAI has approached the Chief Secretary to government with a request to intervene in the matter and to instruct the concerned to consider the exemptions, which were allowed under VAT regime, while calculating the embedded taxes for all the ongoing works.

A meeting was conducted by the Chief Secretary to Government with Builders Association of India (BAI) Telangana State and other concerned Government officials on 06-10-2018 and as per the decision taken during the meeting the Government vide G.O. Rt. No. 620 of T, R&B (R-I) Department, dt: 08-11-2018 has issued orders constituting a committee to examine the issues regarding GST with the following terms of reference.

a. The Committee shall discuss with the concerned departments and various agencies executing the works and list out the issues post implementation of GST from 1st July-2017 with reference to the works commenced under VAT and spill over under GST.

b. These issues are to be examined in detail with reference to the provisions of the relevant Acts like Value Added Tax -2005 Act, Central Sales Tax -1956, Goods and Services Tax -2017, Central Excise Act -1994, Finance Act -1994 on Service Tax and suggest ways to address the same.

c. Any other issues and legal aspects related to the above.

In compliance to the above orders issued by the Government several meetings were held by the GST committee on 15-11-2018, 19-11-2018, 24-11-2018, 29-11-2018, 01-12-2018, 29-01-2019, 31-01-2019 at Commissioner of States Taxes office, Nampally, Hyderabad. In the meetings the BAI has represented to consider the exemptions allowed under VAT regime.

The Builders Association of India, Telangana State vide their representation dated 09.02.2019 has informed that as per the existing rule positions under VAT era (under composition Scheme) the contractors are eligible to purchase materials under CST (Interstate purchases) and from TOT/unregistered dealers.And also they have stated that since no input tax credit is allowable on machinery in composition scheme under VAT era, there should not be any deduction towards the same while calculating embedded taxes in the present GST era.

The BAI have further informed that their association members together with engineering department officials have made calculations duly considering the above provisions under VAT act to ascertain embedded taxes in the 2BHK housing project work construction of 4428 2BHK houses at Ahmedguda of Medchal Constituency taken up by GHMC, and the embedded taxes have been arrived at 3.95 % of value of work. Therefore the BAI has requested that they are ready to accept reimbursement of

GST @ 5% to avoid further exact amount of Hypothetical values and to save valuable Government time and Engineering hours.

In this regard the CE(H&A)/GHMC has submitted that the 2BHK housing projects were sanctioned/tendered based on SSR 2016-17 (rates including taxes) with 5% provision towards VAT on value of work with the all applicable provisions and exemptions available under VAT regime. Therefore accordingly the agencies have quoted their tenders duly taking into considerations all provisions and existing rules under VAT regime.

The embedded taxes are worked out for the above project of 2BHK scheme in considering the allowable provisions of composition scheme under VAT act like Inter State purchase of materials (CST), purchase of materials from unregistered/TOT dealers and no input tax credit allowable on machinery in composition scheme under VAT era etc., is found to be 3.95 % on value of work subject to legally eligible of claims made by BAI. On the other hand the embedded tax component adopting BOCE communicated rates is working out to be 8.61 %.

Therefore changes in the tax structure subsequently should neither provide any undue advantage to the contractors nor punish them. Calculation of embedded taxes without considering the provisions available at the time of sanction/tenders which are working to 8.61% will result in recovery of 1.61% from contractors work bills and therefore will affect the financial position and may lead to contractual litigations, legal complications and stoppage of works.

On the other hand, considering the existing provisions under VAT regime, the embedded taxes are working out to be 3.95% and therefore result in additional financial burden of 3.05% on the Government due to release of GST @ 8.05% to the agencies.

However considering VAT provision of only 5% available as per Administrative sanction/ Sanctioned estimates, the request of the BAI to allow 5%

GST as final settlement for the works contracts of Building works, may be considered for ongoing housing works of GHMC taken up with SSR prior to 2017-18 (i.e., rates including taxes). The above proposals have been also submitted to Commissioner of State Taxes for finalization of GST for the works contracts of Building works.

In this regard, the CE(H&A)/GHMC has requested the Chairman, BOCEs to include the above item in the agenda to be placed before the members of BoCE for discussion and taking a decision on the above for finalization of GST for works contracts of Building works.

The above issue is placed before the Board of Chief Engineers meeting for its discussion and necessary recommendation in the matter.

The Board of Chief Engineers has discussed the issue in detail and opined that allowing of 5% or any other fixed percentage as Embedded Tax component as final settlement for the ongoing Works Contracts of Building works is adhoc and not justifiable as the same will vary from work to work depending on nature & item of works in the Contract and advised to work out the same as per embedded tax rates finalized by the concerned Depts., accordingly. This will be one time exercise for each Agreement by the sanctioning authority and works can be carried out and finalized accordingly. Otherwise there would be possibility of Audit objections for the same as causing financial loss to Government and undue benefit to the agencies.

Action: Chief Engineer (H&A) GHMC, Hyd

Agenda Item No 3 :

R&B Dept., – **Implementation of GST–Request for not to deduct embedded taxes from the Hire charges /Depreciation of machinery** - Representation of BAI Telangana dated 28.02.2019 – Forwarded by the Engineer-in-Chief (SR & CRN), R&B Dept., for placing before the Board of Chief Engineers - For its discussion and necessary recommendations - Regarding

Proposed by Engineer-in-Chief (SR & CRN), R & B Dept.

The Engineer-in-Chief (SR & CRN), R&B Dept., vide letter dated 18.03.2019 has furnished the following as submitted by the BAI, Telangana vide their letter dated 28.02.2019 in the subject matter.

1) No input is allowed for the machinery in the VAT era in Composition Scheme. The element of "Hire Charges of the machinery" was arrived at by dividing the Capital Cost of the Machinery by the life-time working period of the machinery and adding the salaries/wages of the crew and cost of Diesel. Hence, it is clear that though the words "hire charges of the machinery" are used in the SoRs, in fact, "depreciation of the machinery" is' taken into account for the calculation, and the "hire charges" are nowhere taken into consideration. The correct position is that there would be no embedded taxes in the value or depreciation of the machinery OWNED by the contractor, and hence there should not be any deduction on account of embedded taxes.

2) No changes have been made either in the ruling position pertaining to taxes like VAT or in the procedure of preparation of SoRs existing in the combined state of AP after bifurcation of the State. After introduction of GST w.e.f. 01-7-2017, the issue of deduction towards embedded taxes in the machinery is being examined alike in both the States. The Government of AP have issued orders vide GO Ms No.118, Dt:09.11.2018 to keep the same hire charges of machinery adopted in the pre-GST regime even in the GST regime from 01-7-2017, for all the ongoing works as on 01-7-2017 (for which agreements have been concluded before 01-7-2017) Suitable instructions have also been issued by the Government of A.P. vide letter No Rev SoRs/ ENC(R&B)/DCE®/ EE(TEC) / DEE7 /AEE2 /2019, Dt:21.02.2019 to adopt the SoRs and revised estimates as per the GO Ms No.118 Dt:09.11.2018 and the datas with zero lead has been communicated.

3) Further, the BAI has requested to take similar action and issue necessary orders as those of Government of AP so that no deduction towards embedded taxes is made from the hire charges of the machinery, as the element of hire charges is actually depreciation in the value of the machinery and as the machinery items are owned by the contractors.

4) In this regard, the Engineer-in-Chief (SR & CRN), R&B Dept has requested to put forth the above subject matter before Committee of Board of Chief Engineers for its discussion and necessary recommendations.

In view of the above, the subject issue along with copies of Engineer-in-Chief (SR & CRN) letter dated 20.03.2019 and BAI Telangana letter dated 28.02.2019 is placed before Board of Chief Engineers (BOCEs) for its discussion and necessary recommendations in the matter.

While submitting their plea on this issue before BOCEs, the BAI has also requested Board of Chief Engineers to examine the embedded taxes of common materials like Fine & Coarse aggregate and Bricks.

The Board of Chief Engineers has deliberated the issue in detail and after comprehensive discussions in the matter, the BOCEs has recommended to keep the same hire charges of machinery as adopted in pre-GST regime in the post-GST regime also for all the ongoing works as on 01.07.2017. In this regard, BOCEs observed that by keeping the same machinery hire charges in post-GST regime, the machinery lead/conveyance charges will not be affected and hence recommended to keep the same machinery lead/conveyance charges in post-GST regime for all the ongoing works as on 01.07.2017.

Further, BOCEs also examined the embedded tax rates of common materials like Fine & Coarse aggregate and Bricks etc., in pre-GST regime and after detailed deliberations BOCEs has recommended for exemption of bricks (except factory made aerated bricks like Aerocon etc.,) and Coarse aggregate (crusher by product) from the purview of embedded taxes and to retain the same rates in post-GST regime as that of pre-GST regime for all the ongoing works as on 01.07.2017. This is because most of the dealers/suppliers come under exempted category.

Action: Engineer-in-Chief (SR & CRN), R & B Dept

Agenda item No. 4

I& CAD Dept **- SC/ST Contractors Development Policy**- Public works- Concessions to SC / ST Con tractors - Implementation of the GO

Ms.No.59 - Concessions/Relaxations in respect of reservation of works to SC / ST contractors in public works - **Detail Methodology for implementation - Requested by CE/Civil, TSTRANSCO -** Placed before the Board of Chief Engineers - For discussion and necessary recommendations– Regarding

Proposed by Chief Engineer/Civil, TS TRANSCO

The Chief Engineer/Civil, TS TRANSCO vide their letter dated 15.12.2018 has requested for Methodology on Implementation GO Ms No 59, I&CAD(Reforms) Dept., dated 21.05.2018 i.e., entrustment of works to SC/ST/Waddera(Sagara) communities as per the earmarked reservation in the said GO.

In GO Ms No 59, I&CAD(Reforms) Dept., dated 21.05.2018, the following is stipulated regarding reservation of works costing (ECV) up to Rs 1.00 crore as below.

i) 15% to SCs

ii) 6% to STs

iii) 3% to Waddera/Sagara Communities.

The presenting officer on this agenda i.e., Chief Engineer/Civil, TS TRANSCO was absent in the meeting. However, members have discussed the issue and opined that the matter may be examined after obtaining feedback from Division/Circle level on current implementation of GO Ms 59. In this regard, the HODs of all Engineering Depts are requested to obtain feedback from the concerned and furnish the same to BOCEs for its examination and discussion in subsequent BOCEs meeting. Mean while all efforts should be made by all tender inviting authorities to implement the orders of GO Ms No 59 in a fair and transparent manner.

<u>Agenda item No. 5</u>

I&CAD Department –**Settlement of Disputes by way of Arbitration in Government Contracts with Claim amount up to Rs.40,00,000/- by the International Centre for Alternative Disputes Resolution(ICADR), Hyderabad** in

Telangana State- Certain Instruction issued by Govt to place the matter before the Board of Chief Engineers Meeting - Regarding

Proposed by Engineer-in-Chief (AW), I&CAD Dept

The International Centre for Alternative Dispute Resolution (ICADR) stated that their organization is autonomous working under the aegis of the Supreme Court of India with its Regional Centre at Hyderabad and fully funded and supported by the Government of Telangana.

As per the request of the ICADR, the Government of Telangana have issued the G.O.Rt.No. 597 Law (B) Department dated 31-10-2018 (copy enclosed) by raising the ceiling of claim amount to Rs.10,00,000 to Rs.40,00,000/- for the purpose of the arbitration disputes arising in the Government contracts and with a direction to get the disputes arbitrated through the ICADR, Regional Centre, Hyderabad.

According to ICADR, the above direction by the Government will help to settle disputes of all kinds arising out of Government contracts expeditiously, economically and without the hassles involved in traditional court litigation within one-year period as per the Arbitration and Conciliation (Amendment) Act, 2015.

In this regard, this office has requested the Government to issue necessary orders for implementation of G.O.Rt.No. 597 Law (B) Department dated 31-10-2018 of Govt. of Telangana by all unit officers of I & CAD Department at their level to settle disputes arbitrated through the ICADR, Regional Centre, Hyderabad.

In view of above, the Government has informed that at present in almost all agreements in I&CAD Department, there is no provision for arbitration beyond Rs.50,000/-. As per the existing instructions, the concerned CE or SE they can arbitrate up to Rs.50,000/- claims only.

Further, the Government has informed that the Law Department has suggested to incorporate alternative dispute resolutions and they have issued G.O.Rt.No. 597 Law (B) Department dated 31-10-2018 duly enhancing the limitation to

Rs.40,00,000/- and such cases may be referred to ICADR , Hyderabad. This may perhaps require amendment to the existing agreements.

Now, the Government has requested the Engineer-in-Chief (AW), I&CAD Dept to examine the matter in the Board of Chief Engineers and recommendations may be communicated to Government for issuing necessary instructions to all the Engineering Departments.

In view of above, the subject issue along with copies of Govt.Memo.No.10321/ARD/2018 dt:08.03.2018 and G.O.Rt.No. 597 Law (B) Department dated 31-10-2018 are placed before BOCEs for its discussion and necessary recommendation in the matter.

The Board of Chief Engineers has discussed the issue in detail and opined that for implementation of GO Rt No 597 Law(B), Department dated 31.10.2018 for enhancement of ceiling of claim amount up to Rs.40,00,000/- for the ongoing concluded agreements of all Engineering depts. may be considered duly getting Government permission with Government instructions for all ongoing and future works.

And in respect of future works, necessary clause may be included in Tender document as per GO Rt No 597 Law (B), Department dated 31.10.2018

Action: Engineer-in-Chief (AW), I&CAD Dept

Engineer-in-Chief (Irrigation) 28/3/19
Irrigation &CAD Department

B. Nagendra 29/3/19
Engineer-in-Chief (AW)
Irrigation &CAD Department and
Chairman, Board of Chief Engineers