Enclosure to Principal Chief Conservator of Forest (HoFF), M. S. Nagpur Letter No. Desk-17/CA/Nodal Cell/CR-40/1127/2019-20, Date 04/10/2019

Model Rate Structure for Compensatory Afforestation

Model No.5.

Fencing and Irrigated Plantations

Model rate structure for plantation of mixed tree species having rainfall less than 800 mm and medium quality, medium drained soil.

Spacement - 3m x 3m

Size of Pits - 0.45 x 0.45 x 0.45m

No. of Seedlings - 1111 per ha **Wage rate** Rs **387.23 per day**

Sr.No	Particulars of works	Man days	Wages	Material supply	Total (Rs. per Ha.)	Sanction Letter Dt. / Model No. / Item No.	For 1.00 Hectors: Man days	Wages	Material supply	Total (Rs. Per Ha.)
	A. Pre Monsoon Works PPO/PYO									
1	(a) Survey and demarcation	1	387.23	91	478.23	Letter Dt. 07/03/2018 Irrigated & fencing Plantation	1.00	387.23	91.00	478.23
	(b) Preparation of treatment map (100 m x 50 m grid)	1	387.23	91	478.23	Item No. 1b	1.00	387.23	91.00	478.23
	(c) Digging trial pits of size 0.30x0.30x0.60 in corner of Grid.	0.4	154.892	0	154.892	Item No. 1c	0.40	154.89	0.00	154.89
	(d) Fixing 60cm x 0.05cm x12cm cement pillars upto 30cm deep in corner of Grid, painting with Grid No. etc complete (3 pillars, Rs.75/- for each pillrs)	0	0	225	225	Item No. 1d	0.00	0.00	225.00	225.00
	(e) Clearing of bushes and preparation of site	10	3872.3	91	3963.3	Item No. 1e	10.00	3872.30	91.00	3963.30
2	Soil and moisture conservation works including collection of rubbles from areas upto 30 m etc	31	12004.13	0	12004.13	Item No. 2	31.00	12004.13	0.00	12004.13
3	Providing and fixing chain link fencing, 102 Rmt per ha (With one gate + two wickets gates for one site) (Rs.1494/- per Rmt of basic rate + 20% for transportation of ave. leadplus 20% for tribal/remote area (by tender process.) (Rs.1494+149+149=1792/- per Rmt (1.60 Rmt height with G.I. Chain link size 50mmx50m, 8 gauge thick and fixed 75mm above ground level complete as per SSR item No.1744 for 2017-18)	0	0	182865.6	182865.6	As per SSR rates 201718 Item No. 1744	0.00	0.00	182865.60	182865.60
4	Alignment of pits at 3m x 3m spacement. 1111	2.78	1076.4994	49.77	1126.2694	Item No. 4	2.78	1076.50	49.77	1126.27
5	Digging of pits of size 0.45 x 0.45 x 0.45 m (1111 pits per ha) 6.60 M.D per 100 pits.Note :- As per local conditions provision for mechanized digging can be made.	73.33	28395.576	0	28395.5759	Item No. 5	73.33	28395.58	0.00	28395.58
6	Construction of 5.00 Rmt wide Inspection Path	1	387.23	0	387.23	Item No. 6	1.00	387.23	0.00	387.23
7	Enumeration of all valuable plant species at plantation site and grid wise counting and providing color band and recording the same in Register (0.75 M.D.) per 100 plants	0.75	290.4225	25	315.4225	Item No. 7	0.75	290.42	25.00	315.42
8	Providing and fixing (4 feet x 3 feet) information board each per site	0	0	5000	5000	Item No. 8	0.00	0.00	5000.00	5000.00
9	Part Nursery cost of raising 1333 seedlings per ha (including 20% casualty replacement) in polygons of size 12.50 x 25.00 cm (Wages Rs.11.90 and M & S Rs.3.62 per plant)	46.71	18087.513	4825.46	22912.9733	Item No. 9 20% Casualty replacement in place of 10%	46.71	18087.51	4825.46	22912.97
	Total	167.97	65043.023	193263.83	258306.853		167.97	65043.02	193263.83	258306.85
	Contingency 3%		0	7749.2056	7749.20559			0.00	7749.21	7749.21
	Labour Welfare 4%		0	10332.274	10332.2741			0.00	10332.27	10332.27
Gra		167.97	65043.023	18081.48	276388.333		167.97	65043.02	18081.48	276388.33
	B. First Year Operations									
1	Part Nursery cost for maintenance of 1333 seedling per ha Rs. 3.77 per seedling (Wages Rs.2.69, M & S Rs. 0.81)	14.8	5731.004	1079.73	6810.734	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1 casualty replacement 20%	14.80	5731.00	1079.73	6810.73
2	Refilling of pits by good quality soil including application of single super phosphate (1.66 MD per 100 pits)	18.44	7140.5212	1944.25	9084.7712	Item No. 2	18.44	7140.52	1944.25	9084.77
3	Transportation of 1333 seedlings from Nursery to plantation site including loading & unloading (0.14 M.D. per 100 seedlings & M.S. Rs.1.82 Per seedlings)	1.87	724.1201	2426	3150.1201	Item No. 3 10% Extra Plants to be transported	1.87	724.12	2426.00	3150.12
4	Planting of 1111 seedlings (1.0 M.D per 100 seedlings)	11.11	4302.1253	0	4302.1253	Item No. 4	11.11	4302.13	0.00	4302.13
5	3 seedlings (1 Rmt circular) and 2 soil workings (4.00 M.D per 100 seedlings) fertilizer application Rs.0.82 per seedling	44.44	17208.501	911.02	18119.5212	Item No. 5	44.44	17208.50	911.02	18119.52
6	Watering 1111 seedlings November and December 1 time each, January to March 2 times each per seedlings 5 litre water, purchase of 1111 plastic can of 5 litre / matka @Rs.25/- each and 100 litre capacity 11 drums @Rs.400/- each for supplying water and water supply at @Rs.0.05 per litre and wages for watering 1 M.D. for 150 seedlings.	59.25	22943.378	54395	77338.3775	Item No. 7	59.25	22943.38	54395.00	77338.38
7	Casualty replacement (20% 222 Seedlings per ha.) (2 M.D. per 100 seedlings)	4.44	1719.3012	0	1719.3012	Item No. 6 20% instead of 10%	4.44	1719.30	0.00	1719.30

	Part Nursery cost for causality replacement in SYO (222 seedlings per ha.) (wages Rs. 11.90 and material supply Rs.3.62 total Rs.12.55 per seedling.)	7.77	3008.7771	803.64	3812.4171	Item No. 8 20% instead of 10%	7.77	3008.78	803.64	3812.42
9	Watch and ward (10 months – 1 watcher per 10 ha)	27.38	10602.357	0	10602.3574	Item No. 9	27.38	10602.36	0.00	10602.36
10	Soil working for naturally grower plants and	1.15	445.3145	10	455.3145	Item No. 10	1.15	445.31	10.00	455.31
11	Fire tracing	2	774.46	0	774.46	Item No. 12	2.00	774.46	0.00	774.46
	Total	192.65	74599.86	61569.64	136169.5		192.65	74599.86	61569.64	136169.50
	Contingency 3%		0	4085.085	4085.08499			0.00	4085.08	4085.08
	Labour Welfare 4%		0	5446.78	5446.77998			0.00	5446.78	5446.78
	Grand Total	192.65	74599.86	9531.865	145701.364		192.65	74599.86	9531.86	145701.36
	C. Second Year Operations									
1	Part nursery cost for seedlings for causality replacement (222 seedlings per ha) labour rate @ Rs.3.77 and M.S. Rs.1.82 per seedlings.	2.46	952.5858	404	1356.5858	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1 casualty replacement 20%	2.46	952.59	404.00	1356.59
2	Transportation of 222 seedlings for causality	0.31	120.0413	404.04	524.0813	Item No. 2, 20% instead of	0.31	120.04	404.04	524.08
3	Planting for casualty replacement 222	4.44	1719.3012	0	1719.3012	Item No. 3, 20% instade of	4.44	1719.30	0.00	1719.30
4	2 weedings and 1 soil working, with fertilizer application 2.5 M.D. per 100 seedlings at M.S.	27.77	10753.377	911.02	11664.3971	Item No. 4	27.77	10753.38	911.02	11664.40
5	Watering 1111 seedlings in November, December, January and June 1 time each and in February to May 2 times each total 12 times 5 litre per seedlings, replacing 10% plastic can / matka @Rs.25/- each replacing 111 cans / matka, supplying water @Rs.0.50/- per litre and watering 150 seedlings per M.D.	88.88	34417.002	36105	70522.0024	Item No. 5	88.88	34417.00	36105.00	70522.00
6	Watch and ward 12 months -1 watcher per 10.00 ha	36.5	14133.895	0	14133.895	Item No. 6	36.50	14133.90	0.00	14133.90
	Fire tracing	2	774.46	0	774.46	Item No. 8	2.00	774.46	0.00	774.46
	Total	162.36	62870.663	37824.06	100694.723		162.36	62870.66	37824.06	100694.72
	Contingency 3%		0	3020.84	3020.84			0.00	3020.84	3020.84
	Labour Welfare 4%		0	4027.79	4027.79			0.00	4027.79	4027.79
	Grand Total	162.36	62870.663	7048.63	107743.353		162.36	62870.66	7048.63	107743.35
	D. Third Year Operations									
1	1 weeding and 1 soil working (1.50 M.D per 100 seedlings) applying fertilizer @ Rs.0.82 per plant.	16.67	6455.1241	911.02	7366.1441	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	16.67	6455.12	911.02	7366.14
2	Watering 556 seedlings in November, December, January and June 1 time each and February to May 2 times each total 12 times per seedlings 5 litre, water supply @Rs.0.50/- litre and watering 150 seedlings per M.D.	44.48	17223.99	16680	33903.9904	Item No. 2	44.48	17223.99	16680.00	33903.99
3	Watch and ward 12 months 1 watcher per	36.5	14133.895	0	14133.895	Item No. 3	36.50	14133.90	0.00	14133.90
4	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	774.46	25	799.46	Item No. 5	2.00	774.46	25.00	799.46
5	Fire tracing	2	774.46	0	774.46	Item No. 6	2.00	774.46	0.00	774.46
	Total	101.65	39361.93	17616.02	56977.95		101.65	39361.93	17616.02	56977.95
	Contingency 3%		0	1709.33849	1709.34			0	1709.34	1709.34
	Labour Welfare 4%		0	2279.11798	2279.12			0	2279.12	2279.12
	Grand Total	101.65	39361.93	3988.46	60966.41		101.65	39361.93	3988.46	60966.41
	E. Fourth Year Operations									
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	14133.895	0	14133.895	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	36.50	14133.90	0.00	14133.90
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	774.46	25	799.46	Item No. 2	2.00	774.46	25.00	799.46
3	Fire tracing	2	774.46	0	774.46	Item No. 3	2.00	774.46	0.00	774.46
	Total	40.5	15682.82	25.00	15707.82		40.5	15682.82	25.00	15707.82
	Contingency 3%		0	471.23	471.23			0	471.23	471.23
	Labour Welfare 4%		0	628.31	628.31			0	628.31	628.31
	Grand Total	40.5	15682.815	1099.55	16807.36		40.5	15682.815	1099.55	16807.36
	F. Fifth Year Operations									
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	14133.895	0	14133.895	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	36.50	14133.90	0.00	14133.90
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	774.46	25	799.46	Item No. 2	2.00	774.46	25.00	799.46
3	Fire tracing	2	774.46	0	774.46	Item No. 3	2.00	774.46	0.00	774.46
	Total	40.5	15682.82	25.00	15707.82		40.5	15682.82	25.00	15707.82
	Contingency 3%		0	471.23	471.23			0	471.23	471.23
	Labour Welfare 4%		0	628.31	628.31			0	628.31	628.31
	Grand Total	40.5	15682.815	1099.55	16807.36		40.5	15682.815	1099.55	16807.36
	G. Sixth Year Operations									
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	14133.895	0	14133.895	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	36.50	14133.90	0.00	14133.90
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	774.46	25	799.46	Item No. 2	2.00	774.46	25.00	799.46
3	Fire tracing	2	774.46	0	774.46	Item No. 3	2.00	774.46	0.00	774.46
	Total	40.5	15682.82	25.00	15707.82		40.5	15682.82	25.00	15707.82
	Contingency 3%		0	471.23	471.23			0	471.23	471.23
	Labour Welfare 4%		0	628.31	628.31			0	628.31	628.31

	Grand Total	40.5	15682.815	1099.55	16807.36		40.5	15682.815	1099.55	16807.36
	H. Seventh Year Operations									
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	14133.90	0	14133.90	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	36.50	14133.90	0.00	14133.90
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	774.46	25	799.46	Item No. 2	2.00	774.46	25.00	799.46
3	Fire tracing	2	774.46	0	774.46	Item No. 3	2.00	774.46	0.00	774.46
	Total	40.5	15682.82	25.00	15707.82		40.5	15682.82	25.00	15707.82
	Contingency 3%		0	471.23	471.23			0	471.23	471.23
	Labour Welfare 4%		0	628.31	628.31			0	628.31	628.31
	Grand Total	40.5	15682.815	1099.55	16807.36		40.5	15682.815	1099.55	16807.36
	I. Eighth Year Operations									
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	14133.90	0	14133.90	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	36.50	14133.90	0.00	14133.90
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	774.46	25	799.46	Item No. 2	2.00	774.46	25.00	799.46
3	Fire tracing	2	774.46	0	774.46	Item No. 3	2.00	774.46	0.00	774.46
	Total	40.5	15682.82	25.00	15707.82		40.5	15682.82	25.00	15707.82
	Contingency 3%		0	471.23	471.23			0	471.23	471.23
	Labour Welfare 4%		0	628.31	628.31			0	628.31	628.31
	Grand Total	40.5	15682.815	1099.55	16807.36		40.5	15682.815	1099.55	16807.36
	J. Ninth Year Operations									
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	14133.90	0	14133.90	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	36.50	14133.90	0.00	14133.90
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	774.46	25	799.46	Item No. 2	2.00	774.46	25.00	799.46
3	Fire tracing	2	774.46	0	774.46	Item No. 3	2.00	774.46	0.00	774.46
	Total	40.5	15682.82	25.00	15707.82		40.5	15682.82	25.00	15707.82
	Contingency 3%		0	471.23	471.23			0	471.23	471.23
	Labour Welfare 4%		0	628.31	628.31			0	628.31	628.31
	Grand Total	40.5	15682.815	1099.55	16807.36		40.5	15682.815	1099.55	16807.36
	K. Tenth Year Operations									
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.5	14133.90	0	14133.90	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1	36.50	14133.90	0.00	14133.90
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2	774.46	25	799.46	Item No. 2	2.00	774.46	25.00	799.46
3	Fire tracing	2	774.46	0	774.46	Item No. 3	2.00	774.46	0.00	774.46
	Total	40.5	15682.82	25.00	15707.82		40.5	15682.82	25.00	15707.82
	Contingency 3%		0	471.23	471.23			0	471.23	471.23
	Labour Welfare 4%		0	628.31	628.31			0	628.31	628.31
	Grand Total	40.5	15682.815	1099.55	16807.36		40.5	15682.815	1099.55	16807.36

(Jayaramegowda R.)
Deputy Conservator of Forests,
Junnar Forest Division, Junnar

Abstract for Model No.5

S. N.	Year of operation	Man days	Wages	Material supply	Total	Other expenses	Total amount
1	Pre Monsoon works	167.97	65043.02	193263.83	258306.85	18081.48	**276388.33**
2	First Year Operations	192.65	74599.86	61569.64	136169.50	9531.86	**145701.36**
3	Second Year Operations	162.36	62870.6628	37824.06	100694.7228	7048.63	**107743.35**
4	Third Year Operations	101.65	39361.9295	17616.02	56977.9495	3988.46	**60966.41**
5	Fourth Year Operations	40.5	15682.815	25	15707.815	1099.55	**16807.36**
6	Fifth Year Operations	40.5	15682.815	25	15707.815	1099.55	**16807.36**
7	Sixth Year Operations	40.5	15682.815	25	15707.815	1099.55	**16807.36**
8	Seventh Year Operations	40.5	15682.815	25	15707.815	1099.55	**16807.36**
9	Eighth Year Operations	40.5	15682.815	25	15707.815	1099.55	**16807.36**
10	Nineth Year Operations	40.5	15682.815	25	15707.815	1099.55	**16807.36**
11	Tenth Year Operations	40.5	15682.815	25	15707.815	1099.55	**16807.36**
Total		**908.13**	**351655.18**	**310448.55**	**662103.73**	**46347.26**	**708450.99**

Cost per plant Rs. 637.67

Note:-

1. Rates of chain linked fencing derived from SSR-2017-18 with addition for area difference and transportation lead.
2. Plantation M.D. and M.S. component derived from rate structure as approved by PCCF (HoFF) M.S. vide letter No.Desk-I/EGS/CR-10/2282/2017-18/Nagpur, Dated 07/03/2018.

(Jayaramegowda R.)
Deputy Conservator of Forests,
Junnar Forest Division, Junnar