



बिहार सरकार

पर्यावरण, वन एवं जलवायु परिवर्तन विभाग
कार्यालय, वन प्रमंडल पदाधिकारी, भागलपुर वन प्रमंडल, भागलपुर
सुन्दरवन, हनुमान घाट, बरारी रोड, भागलपुर पिन - 812003
ई-मेल - dfobhagalpur@gmail.com

पत्रांक : - 1077

भागलपुर, दिनांक : - 22/07/2022

प्रेषक,

भरत चिन्तपल्लि "भा०व०से०"
वन प्रमंडल पदाधिकारी,
भागलपुर वन प्रमंडल, भागलपुर।

सेवा में,

अपर प्रधान मुख्य वन संरक्षक (कैम्पा),
-सह - नोडल पदाधिकारी (वन संरक्षण)
बिहार, पटना।

विषय :-

भागलपुर जिलान्तर्गत NH-80 भागलपुर - कहलगाँव - मिर्जाचौकी (132.895 - 190.150 कि०मी०)
पथांश चौड़ीकरण एवं सुदृढीकरण हेतु वन (संरक्षण) अधिनियम, 1980 के तहत 41.559 हे० वन भूमि
अपयोजन प्रस्ताव पर पृच्छा के संबंध में।

प्रसंग :-

भवदीय पत्रांक - 668 दिनांक - 22/07/2022

महाशय,

उपर्युक्त विषयक प्रासंगिक पत्र द्वारा माँगी गई प्रतिवेदन में पृच्छाओं का निराकरण निम्नवत् है :-।

1	The State Forest Department may assure that modern technology would be adopted for trees translocation so that trees survival rate may be increased.	कार्यपालक अभियंता राष्ट्रीय उच्च पथ प्रमंडल पथ निर्माण विभाग, भागलपुर के पत्रांक - 721 दिनांक - 20/07/2022 द्वारा प्रति समर्पित की गई है। (छायाप्रति संलग्न)
2	The State Forest Department shall restrict the trees translocation having girth less than 60 cm. And details tree translocation plan should be submitted to this office.	प्रतिस्थापित होने वाली पेड़ों की संशोधित गणना सूची 2583 पेड़ है। इस कार्यालय के पत्रांक - 1054 दिनांक - 21/07/2022 पूर्व में भेजी गई है। (छायाप्रति संलग्न)
3	The user agency shall prepare Avenue Plantation Scheme as per the IRC norms on the basis of available blank area in RoW by using plastic wire-mesh. The Avenue Plantation Scheme shall be implemented by the State Forest Department at the cost provided by User Agency through CAMPA.	कार्यपालक अभियंता राष्ट्रीय उच्च पथ प्रमंडल पथ निर्माण विभाग, भागलपुर के पत्रांक - 750 दिनांक - 25/07/2022 द्वारा प्रति समर्पित की गई है। (छायाप्रति संलग्न)

सूचनार्थ समर्पित।

अनु०: - यथोक्त।

विश्वासभाजन

वन प्रमंडल पदाधिकारी,
भागलपुर वन प्रमंडल, भागलपुर।

कार्यपालक अभियंता का कार्यालय
राष्ट्रीय उच्च पथ प्रमंडल, पथ निर्माण विभाग, भागलपुर।

Email id: eenhbhagalpur1@gmail.com

पत्रांक:- 750 (31058)

भागलपुर

दिनांक:- 25-7-22

प्रेषक :-

कार्यपालक अभियंता,
राष्ट्रीय उच्च पथ प्रमंडल,
पथ निर्माण विभाग, भागलपुर।

वन प्रमंडल पदाधिकारी,
भागलपुर।

विषय:-

Rehabilitation & widening work for 2-Lane with Paved Shouldering of Existing NH-80 Alignment from Km. 132.895 to Km 190.150 Bhagalpur – Kahalgaon – Mirzachowki section in the State of Bihar. **Reg : Submission of Avenue Plantation Scheme and Estimate for Plantation.**

महाशय,

उपर्युक्त विषय के संबंध में कहना है कि Minutes of the 52nd meeting of Regional Empowered Committee (REC) of Integrated Regional Office (IRO), Ministry of Environment, Forest & Climate Change (MoEF&CC), Govt. of India, Ranchi held on 12.07.2022 के कंडिशन (iii) के अनुसार Avenue Plantation Scheme as per IRC ^{SP-21} norms तैयार कर Plantation का प्राक्कलन के साथ अग्रतर कार्रवाई हेतु समर्पित की जाती है।

अनु०-यथोक्त।

IRC : SP : 21-2009 Attached

विश्वासभाजन

25/07/2022

For कार्यपालक अभियंता,

रा०उ०प० प्रमंडल, प०नि०वि०, भागलपुर।

To FCA

27/7/22

ROAD CONSTRUCTION DEPARTMENT, NH DIVISION, BHAGALPUR

AVENUE PLANTATION SCHEME AS PER IRC:SP:21

BHAGALPUR TO MIRZACHOWKI, FROM KM 132.895
TO 190.150 OF NH-80

DATE: 7/23/2022

Contents

1. Introduction
2. Necessity of Plantation
3. Specifications of Plantation
4. Summary of tree plantation
5. Annexure-I
 - Kilometer wise calculation of tree plantation is as below-

1. INTRODUCTION:

The Authority has awarded the project "Rehabilitation & Widening work for 2 – Lane with paved shouldering of existing National Highway 80 Alignment from KM 132.895 to Km 190.150 Bhagalpur – Kahalgaon- Mirzachowki section in the state of Bihar" to the EPC Contractor.

2. NECESSITY OF PLANTATION:

For this purpose the total 6563 number of trees are found within proposed toe line of the project highway. Out of that 2891 no. of trees are proposed for Translocation and 3572 no. of trees are proposed for felling.

To counterbalance the loss of trees and other changes resulted into the surroundings; there is a need to follow the approach of "Corridor Development & Management", rather than "Highway Development". Apart from mitigating the environmental losses, it must plan to enhance the aesthetics of the highway corridor from all possible angles. Highways should not be looked upon merely as a means of transportation, but as a part and parcel of the environmental and socio-economic milieu.

3. SPECIFICATIONS FOR PLANTATION:

Specifications for plantation like height of plant, spacing between plants, selection of plants, pit size etc. will be followed according to Table in Cl. 11.14 of IRC: SP: 21 as below-

11.14 Specifications for Avenue Plantations

11.14.1 The technical specifications for planting along the Highways are as follows :

Ornamental Plants (Except Last Row)

Distance from embankment	1.0 m away from the toe of the embankment
Spacing between plant to plant	3 m
Spacing between rows	3 m
Size of the pits	60x60x60 cm (in alkaline soils, kankar panes to be broken by augur. In waterlogged areas, mound with height varying depending on water level)
No. of plants per km	333
Height of the saplings at the time of planting	1.5 m to 2 m
Survival percentage of plantation	90% at any time

Shade Plants (Last Row)

Distance from preceding rows	3.0 m
Spacing between plant to plant	8-12 m (6 m if high mortality expected)
Size of the pits	60x60x60 cm (in alkaline soils, kankar panes to be broken by augur. In waterlogged areas, mound with height varying depending on water level)
No. of plants per km	84 (167 at 6 m spacing)
Height of the saplings at the time of planting	More than 2 m
Survival percentage of plantation	90% after replacement of casualties in first two years. 80% afterwards

Distance of 1st row of Ornamental Plants is considered as 1m from Toe line and spacing between plant to plant is considered as 3m as mentioned in 1st table above.

Distance of 2nd row of Shade Plants is considered as 3m from 1st row (preceding row) and spacing between plant to plant is considered as 8m as mentioned in 2nd table above.

According to Clause 1.4 of Schedule-C protection will be provided of Tree Guard with MS angle Iron and steel wire.

4. Summary :

Total no. of Ornamental tree plantation LHS: 5270 Nos.

Total no. of Ornamental tree plantation RHS: 5270 Nos.

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Total no. of Ornamental tree plantation BHS: 10540 Nos.

Total no. of Shade tree plantation LHS: 691 Nos.

Total no. of Shade tree plantation RHS: 691 Nos.

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Total no. of Shade tree plantation BHS: 1382 Nos.

5. Annexure-I (Excel file enclosed)

Kilometer wise calculation of tree plantation is as below-

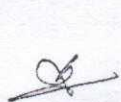



Table-1 : Calculation of Tree Plantation within available land width beyond Toe line and ROW line

Km from	KM To	Length KM	Length M	ROW	Required width for Const. (Tentative)	Remaining width Both Side	One side width	Ornamental Trees in 1st row one side 1M from Toe & spacing 3m between two plants			Shade Trees in following rows (after 1st row of ornamental row)				Nos. of Longitudinal rows of Shade Tree plants	Nos. of Transverse rows of Shade Tree plants	Nos. of Shade tree plants at one side	Remark
								No. of longitudinal row	No. of Transverse row at spacing 3 m	No. of Plants	No. of longitudinal row at 4 m from Toe	No. of longitudinal row at 12 m from Toe	No. of longitudinal row at 20 m from Toe					
					12.50 m to 14.00 m	0.00	0.00	1	3	0	4	12	20					
132.895	158.000	25.105	25105.00	18.00	14.00 m	0.00	0.00	0	8368	0	0	0	0		0	3138	0	Enough width not available
158.000	158.189	0.189	189.000	45.60	20.72	24.88	12.44	1	63	63	1	1	0		2	24	48	
158.189	158.286	0.097	97.000	26.00	20.72	5.28	2.64	1	32	32	0	0	0		0	12	0	
158.286	158.336	0.050	50.000	25.90	20.72	5.18	2.59	1	17	17	0	0	0		0	6	0	Enough width not available
158.336	158.380	0.044	44.000	24.70	20.72	3.98	1.99	1	15	15	0	0	0		0	5	0	
158.380	158.410	0.030	30.000	23.00	20.72	2.28	1.14	1	10	10	0	0	0		0	4	0	
158.410	158.447	0.037	37.000	24.20	20.72	3.48	1.74	1	12	12	0	0	0		0	5	0	
158.447	158.476	0.029	29.000	25.30	20.72	4.58	2.29	1	10	10	0	0	0		0	4	0	
158.476	158.500	0.024	24.000	21.20	20.72	0.48	0.24	0	8	0	0	0	0		0	3	0	
158.500	158.545	0.045	45.000	21.20	13.50	7.70	3.85	1	15	15	0	0	0		0	6	0	
158.545	160.234	1.689	1689.000	12.00	13.50	-1.50	-0.75	0	563	0	0	0	0		0	211	0	
160.234	160.241	0.007	7.000	20.00	13.50	6.50	3.25	1	2	2	0	0	0		0	1	0	Enough width not available
160.241	160.276	0.035	35.000	20.00	13.50	6.50	3.25	1	12	12	0	0	0		0	4	0	
160.276	160.348	0.072	72.000	23.40	13.50	9.90	4.95	1	24	24	1	0	0		1	9	9	
160.348	160.36	0.012	12.000	22.00	13.50	8.50	4.25	1	4	4	1	0	0		1	2	2	
160.360	160.379	0.019	19.000	22.00	20.72	1.28	0.64	0	6	0	0	0	0		0	2	0	
160.379	160.399	0.020	20.000	22.00	20.72	1.28	0.64	0	7	0	0	0	0		0	3	0	
160.399	160.42	0.021	21.000	22.00	20.72	1.28	0.64	0	7	0	0	0	0		0	3	0	
160.420	160.44	0.020	20.000	22.50	20.72	1.78	0.89	0	7	0	0	0	0		0	3	0	
160.440	160.458	0.018	18.000	24.00	20.72	3.28	1.64	1	6	6	0	0	0		0	2	0	Enough width not available
160.458	160.475	0.017	17.000	25.00	20.72	4.28	2.14	1	6	6	0	0	0		0	2	0	
160.475	160.492	0.017	17.000	25.00	20.72	4.28	2.14	1	6	6	0	0	0		0	2	0	
160.492	160.505	0.013	13.000	24.60	20.72	3.88	1.94	1	4	4	0	0	0		0	2	0	
160.505	160.524	0.019	19.000	24.80	20.72	4.08	2.04	1	6	6	0	0	0		0	2	0	
160.524	160.542	0.018	18.000	25.60	20.72	4.88	2.44	1	6	6	0	0	0		0	2	0	
160.542	160.562	0.020	20.000	26.80	20.72	6.08	3.04	1	7	7	0	0	0		0	3	0	
160.562	160.582	0.020	20.000	26.50	20.72	5.78	2.89	1	7	7	0	0	0		0	2	0	
160.582	160.688	0.106	106.000	26.40	20.72	5.68	2.84	1	35	35	0	0	0		0	13	0	
160.688	160.784	0.096	96.000	27.80	20.72	7.08	3.54	1	32	32	0	0	0		0	12	0	Enough width not

From	KM To	Length KM	Length M	ROW	Required Width for Const. (Tentative)	Remaining width Both Side	One side width	Ornamental Trees in 1st row one side 1M from Toe & spacing 3m between two plants				Shade Trees in following rows (after 1st row of ornamental row)				Nos. of longitudinal rows of Shade Tree plants	Nos. of Transverse rows of Shade Tree plants	Nos. of Shade tree plants at one side	Remark
								No. of longitudinal row	No. of Transverse row at spacing 3 m	No. of Plants	No. of longitudinal row at 4 m from Toe	No. of longitudinal row at 12 m from Toe	No. of longitudinal row at 20 m from Toe						
														1	3				
160.784	160.878	0.094	94.000	26.90	20.72	6.18	3.09	1	31	31	0	0	0	0	0	12	0	available	
160.878	160.92	0.042	42.000	26.00	20.72	5.28	2.64	1	14	14	0	0	0	0	0	5	0	Enough width not available	
160.878	162.164	1.244	1244.000	14.00	14.00	0.00	0.00	0	415	0	0	0	0	0	0	156	0		
160.920	162.164	0.017	17.000	14.00	13.50	0.50	0.25	0	6	0	0	0	0	0	0	2	0		
162.164	162.181	0.017	17.000	14.00	13.50	0.50	0.25	0	29	0	0	0	0	0	0	11	0		
162.181	162.269	0.088	88.000	14.00	13.50	0.50	0.25	1	12	12	1	1	0	0	1	4	4		
162.269	162.304	0.035	35.000	24.00	13.50	10.50	5.75	1	32	32	0	0	0	0	0	6	0		
162.304	162.4	0.096	96.000	25.00	13.50	11.50	1.64	1	16	16	0	0	0	0	0	4	0		
162.400	162.449	0.049	49.000	22.00	20.72	1.38	0.69	0	15	0	0	0	0	0	0	4	0		
162.449	162.495	0.046	46.000	22.10	20.72	5.28	2.64	1	10	10	0	0	0	0	0	3	0		
162.495	162.524	0.029	29.000	26.00	20.72	4.58	2.29	1	8	8	0	0	0	0	0	5	0		
162.524	162.549	0.025	25.000	25.30	20.72	5.98	2.99	1	13	13	0	0	0	0	0	3	0		
162.549	162.587	0.038	38.000	26.70	20.72	5.38	2.69	1	8	8	0	0	0	0	0	4	0		
162.587	162.611	0.024	24.000	26.10	20.72	6.38	3.19	1	9	9	0	0	0	0	0	4	0		
162.611	162.639	0.028	28.000	27.10	20.72	3.58	1.79	1	11	11	0	0	0	0	0	4	0		
162.639	162.706	0.033	33.000	24.30	20.72	3.48	1.74	1	11	11	0	0	0	0	0	4	0		
162.706	162.741	0.035	35.000	24.20	20.72	7.18	3.59	1	10	10	0	0	0	0	0	4	0		
162.741	162.77	0.029	29.000	27.90	20.72	6.18	3.09	1	10	10	0	0	0	0	0	4	0		
162.770	162.8	0.030	30.000	26.90	20.72	0.58	0.29	0	10	0	0	0	0	0	0	4	0		
162.800	162.83	0.030	30.000	21.30	20.72	3.88	1.94	1	10	10	0	0	0	0	0	5	0		
162.830	162.86	0.030	30.000	24.60	20.72	4.88	2.44	1	15	15	0	0	0	0	0	4	0		
162.860	162.904	0.044	44.000	25.60	20.72	3.28	1.64	1	10	10	0	0	0	0	0	5	0		
162.904	162.935	0.031	31.000	24.00	20.72	1.58	0.79	0	13	0	0	0	0	0	0	9	0		
162.935	162.975	0.040	40.000	22.30	20.72	2.78	1.39	1	25	25	0	0	0	0	0	6	0		
162.975	163.05	0.075	75.000	23.50	20.72	2.38	1.19	1	15	15	0	0	0	0	0	7	0		
163.050	163.095	0.045	45.000	23.10	20.72	2.28	1.14	1	18	18	0	0	0	0	0	12	0		
163.095	163.15	0.055	55.000	23.00	20.72	3.98	1.99	1	33	33	0	0	0	0	0	6	0		
163.150	163.250	0.100	100.000	24.70	20.72	4.68	2.34	1	17	17	0	0	0	0	0	6	0		
163.250	163.35	0.050	50.000	23.70	20.72	2.98	1.49	1	33	33	0	0	0	0	0	12	0		
163.350	163.45	0.100	100.000	25.50	20.72	4.78	2.39	1	17	17	0	0	0	0	0	6	0		
163.450	163.5	0.050	50.000	28.00	20.72	7.28	3.64	1	17	17	0	0	0	0	0	6	0		
163.500	163.55	0.050	50.000	24.50	20.72	3.78	1.89	1	17	17	0	0	0	0	0	6	0		
163.550	163.6	0.050	50.000	25.70	20.72	4.98	2.49	1	17	17	0	0	0	0	0	6	0		
163.600	163.65	0.050	50.000	23.30	20.72	2.58	1.29	1	17	17	0	0	0	0	0	6	0		
163.650	163.7	0.050	50.000	26.00	20.72	5.28	2.64	1	17	17	0	0	0	0	0	6	0	Enough width not available	

Sl. No.	From	KM To	Length KM	Length M	ROW	Required width for Const. (Tentative)	Remaining width Both Side	One side width	Ornamental Trees in 1st row one side 1M from Toe & spacing 3m between two plants				Shade Trees in following rows (after 1st row of ornamental row)				Nos. of longitudinal rows of Shade Tree plants	Nos. of Transverse rows of Shade Tree plants	Nos. of Shade tree plants at one side	Remark
									No. of longitudinal row	No. of Transverse row at spacing 3 m	No. of Plants	No. of longitudinal row at 4 m from Toe	No. of longitudinal row at 12 m from Toe	No. of longitudinal row at 20 m from Toe						
101	165.600	165.72	0.120	120.000	24.30	20.72	3.58	1.79	1	40	40	0	0	0	0	0	0	15	0	
100	165.500	165.6	0.100	100.000	14.00	20.72	-6.72	-3.36	0	33	0	0	0	0	0	0	0	12	0	
99	165.150	165.5	0.350	350.000	14.00	20.72	-6.72	-3.36	0	117	0	0	0	0	0	0	0	44	0	
98	165.100	165.15	0.050	50.000	14.00	20.72	-6.72	-3.36	0	17	0	0	0	0	0	0	0	6	0	
97	165.020	165.1	0.080	80.000	14.00	20.72	-6.72	-3.36	0	27	0	0	0	0	0	0	0	10	0	
96	164.950	165.02	0.070	70.000	14.00	20.72	-6.72	-3.36	0	23	0	0	0	0	0	0	0	9	0	
95	164.900	164.95	0.050	50.000	14.00	20.72	-6.72	-3.36	0	17	0	0	0	0	0	0	0	6	0	
94	164.850	164.9	0.050	50.000	24.90	20.72	-6.72	-3.36	0	17	0	0	0	0	0	0	0	6	0	
93	164.800	164.85	0.050	50.000	25.10	20.72	-6.72	-3.36	0	17	0	0	0	0	0	0	0	6	0	
92	164.700	164.8	0.100	100.000	26.30	20.72	-6.72	-3.36	1	33	33	0	0	0	0	0	0	13	0	
91	164.660	164.7	0.040	40.000	26.00	20.72	-6.72	-3.36	1	17	17	0	0	0	0	0	0	6	0	
90	164.620	164.66	0.040	40.000	28.30	20.72	-6.72	-3.36	1	13	13	0	0	0	0	0	0	5	0	
89	164.570	164.62	0.050	50.000	29.50	20.72	-6.72	-3.36	1	17	17	0	0	0	0	0	0	6	0	
88	164.500	164.57	0.070	70.000	28.30	20.72	-6.72	-3.36	1	23	23	0	0	0	0	0	0	9	0	
87	164.450	164.5	0.050	50.000	27.40	20.72	-6.72	-3.36	1	17	17	0	0	0	0	0	0	6	0	
86	164.400	164.45	0.050	50.000	30.10	20.72	-6.72	-3.36	1	17	17	0	0	0	0	0	0	6	0	
85	164.350	164.4	0.050	50.000	30.30	20.72	-6.72	-3.36	1	7	7	0	0	0	0	0	0	2	0	
84	164.300	164.35	0.020	20.000	28.00	20.72	-6.72	-3.36	1	10	10	0	0	0	0	0	0	4	0	
83	164.250	164.3	0.050	50.000	31.00	20.72	-6.72	-3.36	1	17	17	0	0	0	0	0	0	6	0	
82	164.200	164.25	0.050	50.000	29.70	20.72	-6.72	-3.36	1	13	13	0	0	0	0	0	0	5	0	
81	164.180	164.2	0.020	20.000	31.20	20.72	-6.72	-3.36	1	7	7	0	0	0	0	0	0	2	0	
80	164.140	164.18	0.040	40.000	32.60	20.72	-6.72	-3.36	1	10	10	0	0	0	0	0	0	4	0	
79	164.100	164.12	0.020	20.000	23.40	20.72	-6.72	-3.36	1	7	7	0	0	0	0	0	0	2	0	
78	164.070	164.1	0.030	30.000	23.60	20.72	-6.72	-3.36	1	10	10	0	0	0	0	0	0	4	0	
77	164.040	164.07	0.030	30.000	23.00	20.72	-6.72	-3.36	1	10	10	0	0	0	0	0	0	4	0	
76	164.000	164.02	0.020	20.000	23.60	20.72	-6.72	-3.36	1	7	7	0	0	0	0	0	0	2	0	
75	163.950	164	0.050	50.000	30.50	20.72	-6.72	-3.36	1	17	17	0	0	0	0	0	0	6	0	
74	163.920	163.95	0.030	30.000	28.10	20.72	-6.72	-3.36	1	10	10	0	0	0	0	0	0	4	0	
73	163.890	163.92	0.030	30.000	28.30	20.72	-6.72	-3.36	1	10	10	0	0	0	0	0	0	4	0	
72	163.870	163.89	0.020	20.000	29.00	20.72	-6.72	-3.36	1	7	7	0	0	0	0	0	0	2	0	
71	163.850	163.87	0.020	20.000	28.50	20.72	-6.72	-3.36	1	7	7	0	0	0	0	0	0	3	0	
70	163.800	163.85	0.050	50.000	29.20	20.72	-6.72	-3.36	1	17	17	0	0	0	0	0	0	6	0	
69	163.700	163.8	0.100	100.000	27.00	20.72	-6.72	-3.36	1	33	33	0	0	0	0	0	0	13	0	





S. No.	KM To	Length KM	Length M	ROW	Required width for Const. (Tentative)	Remaining width Both Side	One side width	Ornamental Trees in 1st row one side 1M from Toe & spacing 3m between two plants				Shade Trees in following rows (after 1st row of ornamental row)				Nos. of Longitudinal rows of Shade Tree plants	Nos. of Transverse rows of Shade Tree plants	Nos. of Shade tree plants at one side	Remark
								No. of longitudinal row	No. of Transverse row at spacing 3 m	No. of Plants	No. of longitudinal row at 4 m from Toe	No. of longitudinal row at 12 m from Toe	No. of longitudinal row at 20 m from Toe						
														1	3				
120	165.85	0.130	130.000	25.00	20.72	4.28	2.14	1	43	43	0	0	0	0	0	16	0		
121	165.92	0.070	70.000	26.50	20.72	5.78	2.89	1	23	23	0	0	0	0	0	9	0		
122	165.95	0.030	30.000	28.50	20.72	7.78	3.89	1	10	10	0	0	0	0	0	4	0		
123	165.920	0.350	350.000	24.30	20.72	3.58	1.79	1	117	117	0	0	0	0	0	44	0		
124	166.35	0.050	50.000	20.00	20.72	-0.72	-0.36	0	17	0	0	0	0	0	0	6	0		
125	166.300	0.050	50.000	25.30	20.72	4.58	2.29	1	17	17	0	0	0	0	0	2	0		
126	166.350	0.050	50.000	25.30	20.72	3.78	1.89	1	7	7	0	0	0	0	0	10	0		
127	166.400	0.020	20.000	24.50	20.72	2.78	1.39	1	27	27	0	0	0	0	0	6	0		
128	166.420	0.080	80.000	23.50	20.72	1.58	0.79	0	17	0	0	0	0	0	0	2	0		
129	166.500	0.050	50.000	22.30	20.72	1.78	0.89	0	7	0	0	0	0	0	0	4	0		
130	166.550	0.020	20.000	22.50	20.72	2.28	1.14	1	10	10	0	0	0	0	0	4	0		
131	166.570	0.030	30.000	23.00	20.72	2.58	1.29	1	17	17	0	0	0	0	0	6	0		
132	166.500	0.020	20.000	22.50	20.72	2.28	1.14	1	10	10	0	0	0	0	0	4	0		
133	166.550	0.030	30.000	23.00	20.72	2.58	1.29	1	17	17	0	0	0	0	0	6	0		
134	166.570	0.050	50.000	23.30	20.72	4.48	2.24	1	17	17	0	0	0	0	0	4	0		
135	166.600	0.050	50.000	25.20	20.72	4.48	2.24	1	10	10	0	0	0	0	0	9	0		
136	166.650	0.030	30.000	25.50	20.72	4.78	2.39	1	23	23	0	0	0	0	0	12	0		
137	166.700	0.070	70.000	24.80	20.72	4.08	2.04	1	33	33	0	0	0	0	0	6	0		
138	166.730	0.100	100.000	24.80	20.72	4.08	2.04	1	17	17	0	0	0	0	0	6	0		
139	166.800	0.050	50.000	24.80	20.72	3.48	1.74	1	17	17	0	0	0	0	0	3	0		
140	166.900	0.050	50.000	24.20	20.72	3.48	1.74	1	7	7	0	0	0	0	0	4	0		
141	167.000	0.020	20.000	24.20	20.72	2.98	1.49	1	10	10	0	0	0	0	0	4	0		
142	167.020	0.030	30.000	23.70	20.72	2.98	1.49	1	10	10	0	0	0	0	0	2	0		
143	167.050	0.030	30.000	23.20	20.72	2.48	1.24	1	7	7	0	0	0	0	0	10	0		
144	167.080	0.020	20.000	22.60	20.72	1.88	0.94	0	27	27	0	0	0	0	0	4	0		
145	167.100	0.080	80.000	22.80	20.72	2.08	1.04	1	10	10	0	0	0	0	0	5	0		
146	167.180	0.030	30.000	24.50	20.72	3.78	1.89	1	10	10	0	0	0	0	0	6	0		
147	167.210	0.040	40.000	22.50	20.72	1.78	0.89	0	13	0	0	0	0	0	0	12	0		
148	167.250	0.050	50.000	25.00	20.72	4.28	2.14	1	17	17	0	0	0	0	0	6	0		
149	167.300	0.100	100.000	24.90	20.72	4.18	2.09	1	33	33	0	0	0	0	0	12	0		
150	167.400	0.100	100.000	24.00	20.72	3.28	1.64	1	33	33	0	0	0	0	0	6	0		
151	167.500	0.050	50.000	24.70	20.72	3.98	1.99	1	17	17	0	0	0	0	0	4	0		
152	167.550	0.050	50.000	28.00	20.72	7.28	3.64	1	17	17	0	0	0	0	0	4	0		
153	167.600	0.030	30.000	22.80	20.72	2.08	1.04	1	10	10	0	0	0	0	0	4	0		
154	167.630	0.030	30.000	24.60	20.72	3.88	1.94	1	10	10	0	0	0	0	0	4	0		
155	167.660	0.030	30.000	24.60	20.72	3.88	1.94	1	7	7	0	0	0	0	0	3	0		
156	167.690	0.020	20.000	25.00	20.72	4.28	2.14	1	13	13	0	0	0	0	0	5	0		
157	167.710	0.040	40.000	23.50	20.72	2.78	1.39	1	13	13	0	0	0	0	0	4	0		
158	167.750	0.030	30.000	23.70	20.72	2.98	1.49	1	10	10	0	0	0	0	0	4	0		
																			Enough width not available

Enough
width not
available

S/N	KM To	Length KM	Length M	ROW	Required Width for Const. (Tentative)	Remaining width Both Side	One side width	Ornamental Trees in 1st row one side 1M from Toe & spacing 3m between two plants				Shade Trees in following rows (after 1st row of ornamental row)				Nos. of Longitudinal rows of Shade Tree plants	Nos. of Transverse rows of Shade Tree plants	Nos. of Shade tree plants at one side	Remark
								No. of longitudinal row	No. of Transverse row at spacing 3 m	No. of Plants	No. of longitudinal row at 4 m from Toe	No. of longitudinal row at 12 m from Toe	No. of longitudinal row at 20 m from Toe						
														1	3				
167	167.82	0.040	40,000	24.60	20.72	3.88	1.94	1	13	13	0	0	0	0	5	0	Enough width not available		
167	167.85	0.030	30,000	23.30	20.72	2.58	1.29	1	10	10	0	0	0	0	4	0			
167	167.9	0.050	50,000	24.10	20.72	3.38	1.69	1	17	17	0	0	0	0	6	0			
167	167.95	0.050	50,000	24.30	20.72	3.58	1.79	1	17	17	0	0	0	0	6	0			
167	167.99	0.040	40,000	25.00	20.72	4.28	2.14	1	13	13	0	0	0	0	5	0			
167	168.03	0.040	40,000	24.70	20.72	3.98	1.99	1	13	13	0	0	0	0	5	0			
168	168.1	0.070	70,000	25.20	20.72	4.48	2.24	1	23	23	0	0	0	0	9	0			
168	168.15	0.050	50,000	25.50	20.72	4.78	2.39	1	17	17	0	0	0	0	6	0			
168	168.2	0.050	50,000	24.00	20.72	3.28	1.64	1	17	17	0	0	0	0	6	0			
168	168.25	0.050	50,000	24.00	20.72	3.28	1.64	1	17	17	0	0	0	0	6	0			
168	168.3	0.050	50,000	25.40	20.72	4.68	2.34	1	17	17	0	0	0	0	6	0			
168	168.300	0.020	20,000	25.80	20.72	5.08	2.54	1	7	7	0	0	0	0	2	0			
168	168.320	0.020	20,000	25.20	20.72	4.48	2.24	1	7	7	0	0	0	0	3	0			
168	168.340	0.020	20,000	24.70	20.72	3.98	1.99	1	7	7	0	0	0	0	3	0			
168	168.360	0.020	20,000	21.00	20.72	0.28	0.14	0	7	0	0	0	0	0	2	0			
168	168.380	0.120	120,000	23.40	13.50	9.90	4.95	1	40	40	1	0	0	1	15	15			
168	168.500	0.050	50,000	20.00	13.50	6.50	3.25	1	17	17	0	0	0	0	6	0			
168	168.550	0.025	25,000	23.00	13.50	9.50	4.75	1	8	8	1	0	0	0	3	3			
168	168.575	0.025	25,000	23.00	20.72	2.28	1.14	1	8	8	0	0	0	0	3	0			
168	168.600	0.050	50,000	23.00	20.72	2.28	1.14	1	17	17	0	0	0	0	6	0			
168	168.650	0.050	50,000	22.70	20.72	1.98	0.99	0	17	0	0	0	0	0	6	0			
168	168.700	0.050	50,000	22.90	20.72	2.18	1.09	1	17	17	0	0	0	0	6	0			
168	168.750	0.100	100,000	24.40	20.72	3.68	1.84	1	33	33	0	0	0	0	12	0			
168	168.850	0.080	80,000	26.50	20.72	5.78	2.89	1	27	27	0	0	0	0	10	0			
168	168.930	0.070	70,000	25.70	20.72	4.98	2.49	1	23	23	0	0	0	0	9	0			
168	169.000	0.030	30,000	25.00	20.72	4.28	2.14	1	10	10	0	0	0	0	4	0			
168	169.030	0.070	70,000	24.70	20.72	3.98	1.99	1	23	23	0	0	0	0	9	0			
168	169.100	0.050	50,000	23.90	20.72	9.18	4.59	1	17	17	0	0	0	1	6	6			
168	169.150	0.050	50,000	23.80	20.72	3.08	1.54	1	17	17	0	0	0	0	6	0			
168	169.200	0.070	70,000	23.40	20.72	2.68	1.34	1	23	23	0	0	0	0	9	0			
168	169.270	0.060	60,000	24.60	20.72	3.88	1.94	1	20	20	0	0	0	0	8	0			
169	169.330	0.050	50,000	24.20	20.72	3.48	1.74	1	17	17	0	0	0	0	6	0			
169	169.380	0.020	20,000	25.00	20.72	4.28	2.14	1	7	7	0	0	0	0	3	0			
171	169.400	0.050	50,000	25.30	20.72	4.58	2.29	1	17	17	0	0	0	0	6	0			
172	169.450	0.220	220,000	25.20	20.72	4.48	2.24	1	73	73	0	0	0	0	27	0			
173	169.670	-1.970	-1970,000	17.10	20.72	-3.62	-1.81	0	-657	0	0	0	0	0	-246	0			

Sl. No.	KM To	Length KM	Length M	ROW	Required Width for Const. (Tentative)	Remaining width Both Side	One side width	Ornamental Trees in 1st row one side 1M from Toe & spacing 3m between two plants				Shade Trees in following rows (after 1st row of ornamental row)				Nos. of longitudinal rows of Shade Tree plants	Nos. of Transverse rows of Shade Tree plants	Nos. of Shade tree plants at one side	Remark
								No. of longitudinal row	No. of Transverse row at spacing 3 m	No. of plants	No. of longitudinal row at 4 m from Toe	No. of longitudinal row at 12 m from Toe	No. of longitudinal row at 20 m from Toe						
														1	3				
171.400	169.75	2.050	2050.000	17.80	20.72	-2.92	-1.46	0	683	0	0	0	0	0	0	256	0		
171.400	169.8	0.050	50.000	16.80	20.72	-3.92	-1.96	0	17	0	0	0	0	0	0	6	0		
169.750	169.825	0.025	25.000	16.80	20.72	-3.92	-1.96	0	8	0	0	0	0	0	0	3	0		
169.800	169.825	0.045	45.000	16.80	13.50	3.30	1.65	1	15	15	27	0	0	0	0	10	0		
169.825	169.87	0.045	80.000	19.40	13.50	5.90	2.95	1	27	17	27	0	0	0	0	6	0		
169.870	169.95	0.080	50.000	19.90	13.50	6.40	3.20	1	27	27	27	0	0	0	0	10	0		
169.950	170	0.050	80.000	19.90	13.50	6.40	3.20	1	13	13	27	0	0	0	0	5	0		
170.000	170.08	0.080	80.000	20.00	13.50	6.50	3.25	1	10	10	10	0	0	0	0	4	4		
170.080	170.12	0.040	40.000	21.50	13.50	8.00	4.00	1	10	10	10	0	0	0	0	2	2		
170.120	170.15	0.030	30.000	22.20	13.50	8.70	4.35	1	7	7	7	0	0	0	0	4	4		
170.150	170.18	0.020	20.000	23.30	13.50	9.80	4.90	1	10	10	10	0	0	0	0	3	3		
170.180	170.23	0.030	30.000	23.70	13.50	10.20	5.10	1	7	7	7	0	0	0	0	4	4		
170.200	170.25	0.020	20.000	23.20	13.50	9.70	4.85	1	10	10	10	0	0	0	0	5	5		
170.230	170.28	0.030	30.000	22.30	13.50	8.80	4.40	1	13	13	13	0	0	0	0	4	4		
170.250	170.32	0.040	40.000	25.60	13.50	12.10	6.05	1	10	10	10	0	0	0	0	3	3		
170.280	170.37	0.020	20.000	23.60	13.50	11.10	5.55	1	7	7	7	0	0	0	0	8	8		
170.300	170.37	0.060	60.000	23.80	13.50	10.30	5.15	1	23	23	23	0	0	0	0	9	9		
170.350	170.43	0.070	70.000	24.40	13.50	10.90	5.45	1	23	23	23	0	0	0	0	9	9		
170.370	170.57	0.070	70.000	24.40	13.50	10.90	5.45	1	17	17	17	0	0	0	0	6	6		
170.430	170.62	0.050	50.000	24.40	13.50	10.90	5.45	1	43	43	43	0	0	0	0	16	16		
170.500	170.75	0.130	130.000	24.40	13.50	10.90	5.15	1	33	33	33	0	0	0	0	12	12		
170.570	170.85	0.100	100.000	23.80	13.50	10.30	5.15	1	17	17	17	0	0	0	0	8	8		
170.620	170.95	0.050	50.000	23.80	13.50	10.30	5.15	1	20	20	20	0	0	0	0	5	5		
170.750	170.96	0.060	60.000	24.30	13.50	10.80	5.40	1	13	13	13	0	0	0	0	19	19		
170.900	171	0.040	40.000	27.30	13.50	13.80	6.90	1	50	50	50	0	0	0	0	6	6		
171.000	171.15	0.150	150.000	30.40	13.50	16.90	8.45	1	17	17	17	0	0	0	0	6	6		
171.000	171.2	0.050	50.000	31.20	13.50	17.70	8.85	1	17	17	17	0	0	0	0	3	3		
171.150	171.25	0.050	50.000	32.80	13.50	19.30	9.65	1	7	7	7	0	0	0	0	4	4		
171.200	171.27	0.020	20.000	38.30	20.72	17.58	8.79	1	10	10	10	0	0	0	0				
171.250	171.3	0.030	30.000	30.10	20.72	9.38	4.69	1				0	0	0	0	10	0	Enough width not available	
171.270																			
171.300	171.38	0.080	80.000	25.30	20.72	4.58	2.29	1	27	27	27	0	0	0	0	3	3		
171.380	171.4	0.020	20.000	35.50	20.72	14.78	7.39	1	7	7	7	0	0	0	0	4	4		
171.400	171.43	0.030	30.000	34.40	20.72	13.68	6.84	1	10	10	10	0	0	0	0	2	2		
171.430	171.45	0.020	20.000	30.80	20.72	10.08	5.04	1	7	7	7	0	0	0	0				

Sl. No.	KM To	Length KM	Length M	ROW	Required width for Const. (Tentative)	Remaining width Both Side	One side width	Ornamental Trees in 1st row one side 1M from Toe & spacing 3m between two plants				Shade Trees in following rows (after 1st row of ornamental row)				Nos. of longitudinal rows of Shade Tree plants	Nos. of Transverse rows of Shade Tree plants	Nos. of Shade tree plants at one side	Remark
								No. of longitudinal row	No. of Transverse row at spacing 3 m	No. of plants	No. of longitudinal row at 4 m from Toe	No. of longitudinal row at 12 m from Toe	No. of longitudinal row at 20 m from Toe						
														1	3				
140	171.5	0.050	50,000	27.40	20.72	6.68	3.34	1	17	17		0	0	0	6	0			
141	171.58	0.080	80,000	27.90	20.72	7.18	3.59	1	27	27		0	0	0	10	0			
142	171.6	0.020	20,000	24.50	20.72	3.78	1.89	1	7	7		0	0	0	2	0			
143	171.63	0.030	30,000	23.50	20.72	2.78	1.39	1	10	10		0	0	0	4	0			
144	171.65	0.020	20,000	24.30	20.72	3.58	1.79	1	7	7		0	0	0	3	0			
145	171.68	0.030	30,000	25.00	20.72	4.28	2.14	1	10	10		0	0	0	4	0			
146	171.7	0.020	20,000	25.50	20.72	4.78	2.39	1	7	7		0	0	0	2	0			
147	171.72	0.020	20,000	26.20	20.72	5.48	2.74	1	7	7		0	0	0	3	0			
148	171.75	0.030	30,000	25.50	20.72	4.78	2.39	1	10	10		0	0	0	4	0			
149	171.78	0.030	30,000	27.20	20.72	6.48	3.24	1	10	10		0	0	0	4	0			
150	171.81	0.030	30,000	27.80	20.72	7.08	3.54	1	10	10		0	0	0	4	0			
151	171.83	0.020	20,000	26.40	20.72	5.68	2.84	1	7	7		0	0	0	3	0			
152	171.85	0.020	20,000	27.10	20.72	6.38	3.19	1	7	7		0	0	0	2	0			
153	171.9	0.050	50,000	25.90	20.72	5.18	2.59	1	17	17		0	0	0	6	0			
154	171.95	0.050	50,000	24.20	20.72	3.48	1.74	1	17	17		0	0	0	6	0			
155	171.950	0.050	50,000	24.40	20.72	3.68	1.84	1	17	17		0	0	0	6	0			
156	172.000	0.050	50,000	24.50	20.72	3.78	1.89	1	17	17		0	0	0	6	0			
157	172.050	0.050	50,000	24.30	20.72	3.58	1.79	1	17	17		0	0	0	6	0			
158	172.100	0.050	50,000	24.70	20.72	3.98	1.99	1	17	17		0	0	0	6	0			
159	172.150	0.050	50,000	25.20	20.72	4.48	2.24	1	17	17		0	0	0	6	0			
160	172.200	0.050	50,000	25.30	20.72	4.58	2.29	1	17	17		0	0	0	6	0			
161	172.250	0.050	50,000	25.50	20.72	4.78	2.39	1	10	10		0	0	0	4	0			
162	172.300	0.030	30,000	25.30	20.72	4.58	2.29	1	13	13		0	0	0	5	0			
163	172.330	0.040	40,000	25.30	20.72	4.58	2.29	1	13	13		0	0	0	4	0			
164	172.370	0.030	30,000	26.40	20.72	5.68	2.84	1	10	10		0	0	0	2	0			
165	172.400	0.020	20,000	24.20	20.72	3.48	1.74	1	7	7		0	0	0	3	0			
166	172.420	0.020	20,000	25.70	20.72	4.98	2.49	1	7	7		0	0	0	3	0			
167	172.440	0.020	20,000	25.60	20.72	4.88	2.44	1	7	7		0	0	0	2	0			
168	172.460	0.020	20,000	26.60	20.72	5.88	2.94	1	7	7		0	0	0	3	0			
169	172.480	0.020	20,000	24.80	20.72	4.08	2.04	1	7	7		0	0	0	2	0			
170	172.500	0.013	13,000	26.50	20.72	5.78	2.89	1	4	4		0	0	0	606	0			
171	172.513	4.847	4847,000	21.00	20.72	0.28	0.14	0	1616	0		0	0	0	2	0			
172	177.360	0.020	20,000	24.10	20.72	3.38	1.69	1	7	7		0	0	0	0	0			
173	177.380	0.040	40,000	27.60	20.72	6.88	3.44	1	13	13		0	0	0	5	0			
174	177.420	0.030	30,000	28.90	20.72	8.18	4.09	1	10	10		1	0	0	4	4			
175	177.450	0.030	30,000	25.90	20.72	5.18	2.59	1	10	10		0	0	0	4	0			

S.No	KM To	Length KM	Length M	ROW	Required Width for Const. (Tentative)	Remaining width Both Side	One side width	Ornamental Trees in 1st row one side 1M from Toe & spacing 3m between two plants				Shade Trees in following rows (after 1st row of ornamental row)				Nos. of longitudinal rows of Shade Tree plants	Nos. of Transverse rows of Shade Tree plants	Nos. of Shade tree plants at one side	Remark
								No. of longitudinal row	No. of Transverse row at spacing 3 m	No. of Plants	No. of longitudinal row at 4 m from Toe	No. of longitudinal row at 12 m from Toe	No. of longitudinal row at 20 m from Toe	No. of longitudinal row at 4 m from Toe	No. of longitudinal row at 12 m from Toe				
177.480	177.51	0.030	30.000	26.40	20.72	5.68	2.84	1	10	10	0	0	0	0	0	4	0	Enough width not available	
177.510	177.55	0.040	40.000	26.30	20.72	5.58	2.79	1	13	13	0	0	0	0	0	5	0		
177.550	177.58	0.030	30.000	28.00	20.72	7.28	3.64	1	10	10	0	0	0	0	0	4	0		
177.580	177.6	0.020	20.000	29.50	20.72	8.78	4.39	1	7	7	1	0	0	0	1	2	2		
177.600	177.63	0.030	30.000	26.60	20.72	5.88	2.94	1	10	10	0	0	0	0	0	4	0	Enough width not available	
177.630	177.68	0.050	50.000	27.80	20.72	7.08	3.54	1	17	17	0	0	0	0	0	6	0		
177.680	177.7	0.020	20.000	25.60	20.72	4.88	2.44	1	7	7	0	0	0	0	0	2	0		
177.700	177.73	0.030	30.000	21.00	20.72	0.28	0.14	0	10	0	0	0	0	0	0	4	0		
177.730	177.76	0.030	30.000	23.00	20.72	2.28	1.14	1	10	10	0	0	0	0	0	5	0		
177.760	177.8	0.040	40.000	25.00	20.72	4.28	2.14	1	13	13	0	0	0	0	0	4	0		
177.800	177.83	0.030	30.000	25.60	20.72	4.88	2.44	1	10	10	0	0	0	0	0	4	0		
177.830	177.86	0.030	30.000	25.30	20.72	4.58	2.29	1	10	10	0	0	0	0	0	4	0		
177.860	177.9	0.040	40.000	25.70	20.72	4.98	2.49	1	13	13	0	0	0	0	0	5	0		
177.900	177.93	0.030	30.000	26.20	20.72	5.48	2.74	1	10	10	0	0	0	0	0	4	0		
177.930	177.98	0.050	50.000	25.00	20.72	4.28	2.14	1	17	17	0	0	0	0	0	6	0		
177.980	178.02	0.040	40.000	25.20	20.72	4.48	2.24	1	13	13	0	0	0	0	0	5	0		
178.020	178.05	0.030	30.000	25.40	20.72	4.68	2.34	1	10	10	0	0	0	0	0	4	0		
178.050	178.08	0.030	30.000	28.70	20.72	7.98	3.99	1	10	10	0	0	0	0	0	4	0		
178.080	178.11	0.030	30.000	26.90	20.72	6.18	3.09	1	10	10	0	0	0	0	0	4	0		
178.110	178.13	0.020	20.000	28.10	20.72	7.38	3.69	1	7	7	0	0	0	0	0	2	0		
178.130	178.16	0.030	30.000	28.20	20.72	7.48	3.74	1	10	10	0	0	0	0	0	4	0		
178.160	178.2	0.040	40.000	29.00	20.72	8.28	4.14	1	13	13	1	0	0	0	1	5	5		
178.200	178.23	0.030	30.000	28.90	20.72	8.18	4.09	1	10	10	0	0	0	0	0	4	4		
178.230	178.26	0.030	30.000	28.60	20.72	7.88	3.94	1	10	10	0	0	0	0	0	4	0		
178.260	178.29	0.030	30.000	28.50	20.72	7.78	3.89	1	10	10	0	0	0	0	0	4	0		
178.290	178.32	0.030	30.000	28.40	20.72	7.68	3.84	1	10	10	0	0	0	0	0	4	0		
178.320	178.35	0.030	30.000	28.00	20.72	7.28	3.64	1	10	10	0	0	0	0	0	4	0		
178.350	178.4	0.050	50.000	28.00	20.72	7.28	3.64	1	17	17	0	0	0	0	0	6	0		
178.400	178.43	0.030	30.000	27.70	20.72	6.98	3.49	1	10	10	0	0	0	0	0	4	0		
178.430	178.46	0.030	30.000	27.30	20.72	6.58	3.29	1	10	10	0	0	0	0	0	4	0		
178.460	178.5	0.040	40.000	25.20	20.72	4.48	2.24	1	13	13	0	0	0	0	0	5	0	Enough width not available	
178.500	178.53	0.030	30.000	26.50	20.72	5.78	2.89	1	10	10	0	0	0	0	0	4	0		
178.530	178.56	0.030	30.000	27.40	13.50	13.90	6.95	1	10	10	1	0	0	0	1	4	4		
178.560	178.6	0.040	40.000	28.30	13.50	14.80	7.40	1	13	13	1	0	0	0	1	5	5		

Sl. No.	KM To	Length KM	Length M	ROW	Required Width for Const. (Tentative)	Remaining width Both Side	One side width	Ornamental Trees in 1st row one side 1M from Toe & spacing 3m between two plants					Shade Trees in following rows (after 1st row of ornamental row)				Nos. of Longitudinal rows of Shade Tree plants	Nos. of Transverse rows of Shade Tree plants	Nos. of Shade tree plants at one side	Remark
								No. of longitudinal row	No. of Transverse row at spacing 3 m	No. of Plants	No. of longitudinal row at 4 m from Toe	No. of longitudinal row at 12 m from Toe	No. of longitudinal row at 20 m from Toe							
														M	m	M				
1	178.63	0.030	30.000	28.20	13.50	14.70	7.35	1	10	10	1	0	0	0	1	4	4			
2	178.67	0.040	40.000	29.30	13.50	15.80	7.90	1	13	13	1	0	0	0	1	5	5			
3	178.7	0.030	30.000	27.40	13.50	13.90	6.95	1	10	10	1	0	0	0	1	4	4			
4	178.73	0.030	30.000	26.90	13.50	13.40	6.70	1	10	10	1	0	0	0	1	4	4			
5	178.77	0.040	40.000	25.30	13.50	11.80	5.90	1	13	13	1	0	0	0	1	5	5			
6	178.7	0.030	30.000	25.80	13.50	12.30	6.15	1	10	10	1	0	0	0	1	4	4			
7	178.8	0.030	30.000	26.40	13.50	12.90	6.45	1	17	17	1	0	0	0	1	6	6			
8	178.85	0.050	50.000	26.40	13.50	12.90	7.65	1	10	10	1	0	0	0	1	4	4			
9	178.88	0.030	30.000	28.80	13.50	15.30	7.65	1	7	7	1	0	0	0	1	3	3			
10	178.9	0.020	20.000	27.50	13.50	14.00	7.00	1	3	3	1	0	0	0	1	1	1			
11	178.91	0.010	10.000	26.80	13.50	13.30	6.65	1	3	3	1	0	0	0	1	1	1			
12	178.92	0.010	10.000	23.50	13.50	10.00	5.00	1	3	3	1	0	0	0	1	1	1			
13	178.93	0.010	10.000	23.30	13.50	9.80	4.90	1	3	3	1	0	0	0	1	1	1			
14	178.94	0.010	10.000	26.00	13.50	12.50	6.25	1	10	10	1	0	0	0	1	4	4			
15	178.97	0.030	30.000	26.40	13.50	12.90	6.45	1	10	10	1	0	0	0	1	4	4			
16	179	0.030	30.000	26.30	13.50	12.80	6.40	1	7	7	1	0	0	0	1	3	3			
17	179.02	0.020	20.000	24.50	13.50	11.00	5.50	1	10	10	1	0	0	0	1	4	4			
18	179.05	0.030	30.000	22.40	13.50	8.90	4.45	1	7	7	1	0	0	0	1	2	2			
19	179.07	0.020	20.000	24.00	13.50	10.50	5.25	1	10	10	1	0	0	0	1	4	4			
20	179.1	0.030	30.000	23.90	13.50	10.40	5.20	1	10	10	1	0	0	0	1	4	4			
21	179.13	0.030	30.000	25.30	13.50	11.80	5.90	1	7	7	1	0	0	0	1	3	3			
22	179.15	0.020	20.000	25.80	13.50	12.30	6.15	1	10	10	1	0	0	0	1	4	4			
23	179.18	0.030	30.000	25.80	13.50	12.30	6.15	1	7	7	1	0	0	0	1	2	2			
24	179.2	0.020	20.000	25.20	13.50	11.70	5.85	1	7	7	1	0	0	0	1	3	3			
25	179.22	0.020	20.000	23.30	13.50	9.80	4.90	1	10	10					1	4	4			
26	179.25	0.030	30.000	24.60	13.50	11.10	5.55	1	10	10	1	0	0	0	1	4	4			
27	179.28	0.030	30.000	23.50	13.50	10.00	5.00	1	10	10	1	0	0	0	1	4	4			
28	179.250	0.030	30.000	23.50	13.50	11.90	5.95	1	7	7	1	0	0	0	1	3	3			
29	179.280	0.020	20.000	25.40	13.50	13.90	6.95	1	10	10	1	0	0	0	1	4	4			
30	179.300	0.030	30.000	27.40	13.50	12.00	6.00	1	13	13	1	0	0	0	1	5	5			
31	179.330	0.040	40.000	25.50	13.50	13.20	6.60	1	10	10	1	0	0	0	1	4	4			
32	179.370	0.030	30.000	26.70	13.50	11.50	5.75	1	17	17	1	0	0	0	1	6	6			
33	179.400	0.050	50.000	25.00	13.50	4.00	2.00	1	10	10	1	0	0	0	1	4	4			
34	179.450	0.030	30.000	17.50	13.50	4.70	2.35	1	7	7	1	0	0	0	1	3	3			
35	179.480	0.020	20.000	18.20	13.50	4.70	2.35	1	7	7	1	0	0	0	1	4	4			
36	179.500	0.030	30.000	18.20	13.50	4.70	2.35	1	10	10	1	0	0	0	1	6	6			
37	179.530	0.030	30.000	18.20	13.50	4.60	2.30	1	17	17	1	0	0	0	1	6	6			
38	179.580	0.050	50.000	18.10	13.50	4.60	2.30	1	10	10	1	0	0	0	1	5	5			
39	179.62	0.040	40.000	14.00	13.50	0.50	0.25	0	13	0					0	5	0			

Sl. No.	KfM To	Length KM	Length M	ROW	Required width for Const. (Tentative)	Remaining width Both Side	One side width	Ornamental Trees in 1st row one side 1M from Toe & spacing 3m between two plants				Shade Trees in following rows (after 1st row of ornamental row)				Nos. of Longitudinal rows of Shade Tree plants	Nos. of Transverse rows of Shade Tree plants	Nos. of Shade tree plants at one side	Remark
								No. of longitudinal row	No. of Transverse row at spacing 3 m	No. of plants	No. of longitudinal row at 4 m from Toe	No. of longitudinal row at 12 m from Toe	No. of longitudinal row at 20 m from Toe						
														1	3				
345	179.65	0.030	30.000	14.00	13.50	0.50	0.25	0	10	0	0	0	0	0	4	0	0	Enough width not available	
346	179.68	0.030	30.000	14.00	13.50	0.50	0.25	0	10	0	0	0	0	0	4	0	0		
347	179.7	0.020	20.000	14.00	13.50	0.50	0.25	0	7	0	0	0	0	0	2	0	0		
348	179.73	0.030	30.000	14.00	13.50	0.50	0.25	0	10	0	0	0	0	0	4	0	0		
349	179.73	0.030	30.000	14.00	13.50	2.50	1.25	1	23	23	0	0	0	0	9	0	0	Enough width not available	
350	179.8	0.070	70.000	16.00	13.50	0.50	0.25	0	10	0	0	0	0	0	2	0	0		
351	179.83	0.030	30.000	14.00	13.50	0.50	0.25	0	7	0	0	0	0	0	1	0	0		
352	179.85	0.020	20.000	12.80	13.50	-0.70	-0.35	0	3	0	0	0	0	0	57	0	0		
353	179.86	0.010	10.000	12.80	13.50	-0.70	-0.35	0	0	0	0	0	0	0	4	0	0	Enough width not available	
354	179.86	0.040	40.000	14.00	13.50	0.50	0.25	0	153	0	0	0	0	0	4	4	4		
355	180.32	0.030	30.000	25.80	13.50	12.30	6.15	1	10	10	1	1	0	0	6	6	6		
356	180.35	0.030	30.000	24.00	13.50	10.50	5.25	1	17	17	1	1	0	0	6	6	6		
357	180.45	0.050	50.000	24.90	13.50	11.40	5.70	1	17	17	1	1	0	0	6	6	6	Enough width not available	
358	180.45	0.050	50.000	25.50	13.50	12.00	6.00	1	10	10	0	1	0	0	4	4	4		
359	180.53	0.030	30.000	25.00	20.72	4.28	2.14	1	7	7	0	0	0	0	2	0	0		
360	180.55	0.020	20.000	24.30	20.72	3.58	1.79	1	7	7	0	0	0	0	3	0	0		
361	180.57	0.020	20.000	23.40	20.72	2.68	1.34	1	7	7	0	0	0	0	3	0	0	Enough width not available	
362	180.59	0.020	20.000	26.00	20.72	5.28	2.64	1	7	7	0	0	0	0	5	0	0		
363	180.61	0.020	20.000	23.50	20.72	2.78	1.39	1	13	13	0	0	0	0	2	0	0		
364	180.65	0.040	40.000	25.70	20.72	4.98	2.49	1	7	7	0	0	0	0	4	0	0		
365	180.67	0.020	20.000	26.50	20.72	5.78	2.89	1	10	10	0	0	0	0	4	0	0	Enough width not available	
366	180.7	0.030	30.000	27.00	20.72	6.28	3.14	1	10	10	0	0	0	0	9	0	0		
367	180.73	0.030	30.000	22.40	20.72	1.68	0.84	0	23	0	0	0	0	0	4	0	0		
368	180.730	0.070	70.000	24.40	20.72	3.68	1.84	1	10	10	0	0	0	0	2	0	0		
369	180.8	0.030	30.000	25.10	20.72	4.38	2.19	1	7	7	0	0	0	0	3	0	0	Enough width not available	
370	180.83	0.030	30.000	24.00	20.72	6.28	3.14	1	10	10	0	0	0	0	4	0	0		
371	180.85	0.020	20.000	25.30	20.72	4.58	2.29	1	7	7	0	0	0	0	4	0	0		
372	180.87	0.020	20.000	26.10	20.72	5.38	2.69	1	10	10	0	0	0	0	4	0	0		
373	180.875	0.030	30.000	27.00	20.72	6.28	3.14	1	10	10	0	0	0	0	4	0	0	Enough width not available	
374	180.9	0.030	30.000	26.20	20.72	5.48	2.74	1	7	7	0	0	0	0	2	0	0		
375	180.93	0.030	30.000	24.90	20.72	4.18	2.09	1	7	7	0	0	0	0	3	0	0		
376	180.96	0.020	20.000	25.00	20.72	4.28	2.14	1	7	7	0	0	0	0	4	0	0		
377	180.980	0.020	20.000	25.00	20.72	4.28	2.14	1	10	10	0	0	0	0	4	0	0	Enough width not available	
378	181.000	0.030	30.000	24.50	20.72	3.78	1.89	1	10	10	0	0	0	0	4	0	0		
379	181.030	0.030	30.000	24.50	20.72	3.78	1.89	1	13	13	0	0	0	0	5	0	0		
380	181.06	0.030	30.000	26.20	20.72	5.48	2.74	1	13	13	0	0	0	0	5	0	0		
381	181.060	0.040	40.000	25.60	20.72	4.88	2.44	1	13	13	0	0	0	0	8	0	0	Enough width not available	
382	181.1	0.040	40.000	25.60	20.72	4.88	2.44	1	20	20	0	0	0	0	8	0	0		
383	181.14	0.040	40.000	25.60	20.72	4.88	2.44	1	20	20	0	0	0	0	8	0	0		
384	181.100	0.040	40.000	25.60	20.72	4.88	2.44	1	20	20	0	0	0	0	8	0	0		
385	181.140	0.060	60.000	24.80	20.72	4.08	2.04	1	20	20	0	0	0	0	8	0	0		

Sl. No.	Length M	ROW	Required Width for Const. (Tentative)	Remaining width Both Side	One side width	Ornamental Trees in 1st row one side 1M from Toe & spacing 3m between two plants				Shade Trees in following rows (after 1st row of ornamental row)				Nos. of rows of Shade Tree plants	Nos. of rows of Shade Tree plants	Nos. of Shade tree plants at one side	Remark
						No. of longitudinal row	No. of Transverse row at spacing 3 m	No. of Plants	No. of longitudinal row at 4 m from Toe	No. of longitudinal row at 12 m from Toe	No. of longitudinal row at 20 m from Toe						
												1	3				
181	187.50	25.00	20.72	0.28	0.14	0	1424	0	0	0	0	0	0	534	0	Enough width not available	
182	187.75	252.000	20.72	4.28	2.14	1	84	84	0	0	0	0	0	31	0		
183	186.046	321.000	13.50	11.50	5.75	1	107	107	1	0	0	0	0	40	40		
184	186.096	371.000	13.50	10.00	5.00	1	124	124	1	0	0	0	0	46	46		
185	186.13	34.000	13.50	11.00	5.50	1	11	11	1	0	0	0	0	4	4		
186	186.17	40.000	13.50	10.80	5.40	1	13	13	1	0	0	0	0	5	5		
187	186.2	30.000	13.50	11.70	5.85	1	10	10	1	0	0	0	0	4	4		
188	186.24	40.000	13.50	11.80	5.90	1	13	13	1	0	0	0	0	5	5		
189	186.27	30.000	20.72	4.48	2.24	1	10	10	0	0	0	0	0	4	0		
190	186.3	40.000	20.72	2.98	1.49	1	10	10	0	0	0	0	0	4	0		
191	186.34	40.000	20.72	3.28	1.64	1	13	13	0	0	0	0	0	5	0		
192	186.38	40.000	20.72	3.88	1.94	1	13	13	0	0	0	0	0	5	0		
193	186.45	100.000	20.72	3.68	1.84	1	33	33	0	0	0	0	0	12	0		
194	186.52	50.000	20.72	5.28	2.64	1	17	17	0	0	0	0	0	6	0	Enough width not available	
195	186.57	40.000	20.72	3.48	1.74	1	13	13	0	0	0	0	0	5	0		
196	186.62	50.000	20.72	3.88	1.94	1	17	17	0	0	0	0	0	6	0		
197	186.67	50.000	20.72	2.28	1.14	1	17	17	0	0	0	0	0	6	0		
198	186.70	30.000	20.72	2.08	1.04	1	10	10	0	0	0	0	0	4	0		
199	186.75	22.80	20.72	3.38	1.69	1	17	17	0	0	0	0	0	6	0		
200	186.775	50.000	20.72	3.38	1.69	1	17	17	0	0	0	0	0	3	3		
201	186.775	25.000	20.72	8.08	4.04	1	8	8	1	0	0	0	0	3	3		
202	186.82	45.000	13.50	15.30	7.65	1	15	15	1	0	0	0	0	6	6		
203	186.87	95.000	13.50	12.30	6.15	1	32	32	1	0	0	0	0	12	12		
204	186.96	90.000	13.50	12.80	6.40	1	30	30	1	0	0	0	0	11	11		
205	187	40.000	13.50	13.90	6.95	1	13	13	1	0	0	0	0	5	5		
206	187.17	170.000	13.50	11.40	5.70	1	57	57	1	0	0	0	0	21	21		
207	187.33	160.000	13.50	11.00	5.50	1	53	53	1	0	0	0	0	20	20		
208	187.405	75.000	13.50	11.30	5.65	1	25	25	1	0	0	0	0	9	9		
209	187.605	200.000	13.50	9.70	4.85	1	67	67	1	0	0	0	0	25	25		
210	187.62	15.000	13.50	11.80	5.90	1	5	5	1	0	0	0	0	2	2		
211	187.65	30.000	13.50	11.50	5.75	1	10	10	1	0	0	0	0	4	4		
212	190.15	2500.000	20.72	-5.72	-2.86	0	833	0	0	0	0	0	0	313	0		
Total for Ornamental plants one side =								5270						Total for Shade Tree Plants one side =		691	
Total for Ornamental plants one side =								10540						Total for Shade Tree Plants one side =		1382	

25.4.22

A

BHAGALPUR TO MIRZACHOWKI, FROM KM 132.895 TO 190.150 OF NH-80

Estimate of Tree Plantation within available land width between Toe Line and ROW line					Unit	Quantity	Rate	Amount in (Rs)
S. N.	SOR Item No.	Morth Ref Number	Description					
			Planting of trees by the road side (Avenue trees) in 0.60 m dia holes, 1 m deep dug in the ground, mixing the soil with decayed farm yard/sludge manure, planting the saplings, backfilling the trench, watering, fixing the tree guard and maintaining the plants for one year					
				No.	10540	976.4	1,02,91,256	
				No.	1382	976.4	13,49,385	
1	11.09	307	Ornamental plants				1,16,40,641	
2	11.09	307	Shade Tree Plants				13,96,876.90	
			Total				1,16,406.41	
			GST @12%				1,31,53,924	
			Labour Cess 1%					
			Grand Total Amount Rs					

25.7.22
SE

Arbil
25/07/2022
A.E.

Analysis of Rate
HORTICULTURE

Sr. No.	Ref. to MoRTH Spec.	Description	Unit	Quantity as per project category			Rate (%)	Amount			Input ref.
				Large	Medium	Small		Large	Medium	Small	
							Say	229069.70	234126.60	238383.40	
11.09	307	Planting of Trees and their Maintenance for one Year									
		Planting of trees by the road side (Avenue trees) in 0.60 m dia holes, 1 m deep dug in the ground, mixing the soil with decayed farm yard/sludge manure, planting the saplings, backfilling the trench, watering, fixing the tree guard and maintaining the plants for one year									
		Unit = Each									
		Taking output = 10 trees									
		a) Labour									
		Mate	day	0.680	0.680	0.680	325.00	221.00	221.00	221.00	L-12
		Mazdoor for planting	day	2.000	2.000	2.000	306.00	612.00	612.00	612.00	L-13
		Mazdoor for maintenance for one year	day	15.000	15.000	15.000	306.00	4590.00	4590.00	4590.00	L-13
		b) Machinery									
		Water tanker 6 KL capacity	hour	2.000	2.000	2.000	707.00	1414.00	1414.00	1414.00	PM11003
		c) Material									
		Saplings 2 m high 25 mm dia	each	10.000	10.000	10.000	25.55	255.50	255.50	255.50	M-161
		Farm yard manure	cum	0.940	0.940	0.940	278.90	262.17	262.17	262.17	M-168
		Pesticide	kg	0.500	0.500	0.500	80.97	40.49	40.49	40.49	M-135
		Cost of water	KL	12.000	12.000	12.000	56.20	674.40	674.40	674.40	M-101
		d) Overhead charges @ on (a+b+c)			(@ 8%)	(@ 10%)	(@ 12%)	645.56	806.96	968.36	
		e) Contractor's profit @ on (a+b+c+d)			(@ 10%)	(@ 10%)	(@ 10%)	871.51	857.65	903.79	
		Cost for 10 trees = a+b+c+d+e						9586.63	9764.16	9941.69	
		Rate per trees = (a+b+c+d+e)/10						958.66	976.42	994.17	
							Say	958.70	976.40	994.20	

504

25.7.22
SE

Ashil
25/07/2022
P.E.