

# Ganga Expressway Project Plantation Scheme (Presented by UPEIDA)

**Introduction:-** Ganga Expressway Project is approved vide Government of U.P. G.O. No. 2598/77-3-20-21A, dated 26.11.2020. It starts from Meerut-Bulandshahar Road ( NH-334) near village Bijoli (Dist. Meerut) (Ch: 7+900) and terminates at Prayagraj Bypass on NH-19 near village Judapur Dando ( Dist. Prayagraj) (Ch: 601+847) Total length- 593.947 Km. UPEIDA has been nominated as nodal agency vide G.O. No. 1212/77-3-2019-67AM/18 dated 17.07.2019, for the development of Ganga Expressway Project.


Ganga Expressway will be constructed through PPP model based on DFBOT. The contractors will raise the Plantation and maintain it from their own fund.

## Objective of Plantation:-

- For aesthetic enhancement of the project corridor.
- To reduce the impacts of air pollution and dust as trees and shrubs are known to be natural sink for air pollutants.
- To provide much needed shade on glaring hot roads during summer.
- To reduce the impact of ever increasing noise pollution caused due to increase in number of vehicles.
- To arrest soil erosion at the embankment slopes.
- Prevention of glare from the headlight of incoming vehicles.
- Moderating the effect of wind and incoming radiation.

## Plantation Methodology:-

- The Plantation will be done as per the guidelines of Indian Road Congress No. IRC: SP:21-2099 which provide the detailed specifications with respect to roadside plantations and the prescriptions provided in the working plans of the respective Forest Divisions.
- The first row along the Highways will be of small to medium sized ornamental trees.
- Subsequent rows depending on the availability of width will comprise of ornamental, shade bearing species, of more height than those in the first row. In rural sections the last row will always be of shade bearing tall trees.

  
(अरुण कुमार राय)  
डिप्टी कलेक्टर/अधिकृत अधिकारी  
गंगा एक्सप्रेसवे परियोजना  
यूपीडा, लखनऊ

## Species Recommended for Avenue Plantations

**Table 1: For 1<sup>st</sup> Row**


S.No	SOIL	BOTANICAL NAME	LOCAL NAME
1.	Loamy	Delonix regia	Gulmohar
2.		Cassia fistula	Amaltas
3.		Bauhinia sps.	Kachnar
4.		Cassia nodosa	Cassia
5.		Jacaranda mimosaefolia	Jacrandra
6.		Peltophorum ferrugineum	Peltophorum
7.	Water logged Area	Terminalia arjuna	Arjun
8.		Syzygium cuminii	Jamun
9.		Cordia dicotma	Lasoda
10.	Alkaline soil [Usar]	Terminalia arjuna	Arjun
11.		Pongamia pinnata	Kanji

**Table 2: Species Recommended for subsequent row, except the last row**

1.	Loamy	Melia azadiracta	Bakain
2.		Pongamia pinnata	Kanji
3.		Albizzia lebbek	Kala siris
4.		Dalbergia sissoo	Shisham
5.		Terminalia arjuna	Arjun
6.		Ailanthus excelsa	Arru
7.		Alstonia scholaris	Chhitwan
8.		Neolamarckia cadamba	Kadamb
10.		Pterospermum acerifolium	Kanakchampa
11.		Tectona grandis	Sagaun
12.		Terminalia bellirica	Bahera
13.		Saraca asoca	Ashok
14.		Azadirachta indica	Neem
15.		Water logged Area	Terminalia arjuna
16.	Syzygium cuminii		Jamun
17.	Trewia nudiflora		Gutel
18.	Alkaline soil [Usar]	Terminalia arjuna	Arjun
19.		Pongamia pinnata	Kanji

**Table 3: Shade bearing trees recommended for last row**

SOIL	SPECIES	
	BOTANICAL NAME	Local name
LOAMY	Ficus religiosa	Peepal
	Ficus benghalensis	Bargad
	Ficus infectoria	Paker
	Madhuca indica	Mahua
	Tamarindus induca	Imli
	ALKALINE [USAR]	Azadirachta indica [at ph upto 8.5]
Acacia auriculiformis		Akashmoni
Pongamia pinnata [ upto 9.0 ph]		Kanji
WATER LOGGED AREA	Syzygiumcuminii	Jamun

  
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## Specifications for Avenue Plantation


(except last row)

Sr.No.	Discriptions	Specifications
1.	Distance from embankment	1.5 mt. away from the toe of the embankment
2.	Spacing between plant to plant	3 mts.
3.	Spacing between rows	3 mts.
4.	Size of the pits	60x60x60x cms (in alkaline soils, kankar panes to be broken by augur. In water logged areas, mound with height varying depending on water level)
5.	No. of plants per km	333x2
6.	Height of the saplings at the time of planting	1.5m to 2m

## Specification for Shade bearing plants in last row


(Fillers in between will be tall & small crown species)

Sr. No.	Discriptions	Specifications
1..	Distance from preceding rows	3.0 mt.
2.	Spacing between shade bearing plant	12 m
3.	Size of the pits	60x60x60 cms (in alkaline soils, kankar panes to be broken by augur. In water logged areas, mound with height varying depending on water level)
4.	No. of shade bearing plants per Km.	84
5.	Height of the shade bearing saplings at the time of planting	More than 2m


  
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### Soil Amenders for Alkaline [Usar] Soil

S.N.	pH Value	Gypsum quantity (in Kg.)	Farm yard Manure	Sand
1.	8	2.0	5.0	50% of soil
2.	Upto 9.5	2.5	5.0	50% of soil
3.	Upto 10.5	3.0	5.0	50% of soil
4.	Above 10.5	4.0	5.0	50% of soil

  
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Ganga Expressway Project					
Forest Division/ Districts wise plantation target in ROW					
Sr. No.	Name of the District/Division	Available Length for Plantation (in Km)	Available Avg. width for Plantation (in Mtr.)	Area (in Ha)	No. of Plants (spacing 3m x 3m)
1	Meerut	14	28.70	40.18	44198
2	Hapur	32	30.89	98.85	108735
3	Bulanshahar	10	23.40	23.40	25740
4	Amroha	24	30.93	74.23	81653
5	Sambhal	38	25.63	97.39	107129
6	Budau	88	29.47	259.34	285274
7	Shahjahanpur	40	24.63	98.52	108372
8	Hardoi	96	30.92	296.83	326513
9	Unnao	102	27.53	280.81	308891
10	Raebareilly	74	29.22	216.23	237853
11	Pratapgarh	39	31.00	120.90	132990
12	Prayagraj	15	31.35	47.03	51733
		<b>572</b>	<b>28.64</b>	<b>1653.70</b>	<b>1819081</b>

  
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## Time line of Plantation Maintenance Activities

(as per the IRC:SP:21-2009)


Sr. No.	Year	Fin. Year	Month	Activities to be done
1.	0 yr.		Oct-March	Raising nurseries/procuring plants. Advance soil work.
2.	1 <sup>st</sup> yr.		May-June	Maintenance of nurseries. Procurement of Gypsum, Manure, Sand and Pits filling work as per the soil testing report.
3.	2 <sup>nd</sup> yr.		July-September	Plantation work.
4.	2 <sup>nd</sup> yr.		Oct-March	Watering the plantation 4 times a month, applying fertilizer and pesticide/insecticide. Advance Soil Work for gap filling plantation. Raising and maintaining nurseries/procuring plants for next year gap filling plantation.
5.	2 <sup>nd</sup> yr.		April-June	Watering the plantation 6 times and hoeing/weeding of all the plants in a month. Maintenance of nurseries/procurement of plants, pits filling work will be done. Procuring FYM and fertilizers, application of fertilizer and pesticide/insecticide.
6.	2 <sup>nd</sup> yr.		July-September	Gap Filling Plantation Work and protection work.
7.	2 <sup>nd</sup> yr.		Oct-March	Watering 4 times a month and hoeing/weeding all the plants in every month applying fertilizer and pesticide/insecticide, Raising and maintaining nurseries/procuring plants for next year gap filling plantation. Advance soil work for next year's plantation

*Note:-The above month wise activities will be followed for consecutive 10 years to get at least 90% successful plantation.*

### Security Plan

1. 1.5 Meter long pre cast concrete wall will be constructed all along the boundary of the ROW on both side. It will help in controlling the grazing and enhance the level of security of carriageway and the ROW area too.
2. On every 5 Km. a plantation watcher will be employed.
3. At the bridges, culverts or underpasses the side way will be protected by fencing.

**Thank you**

  
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