



भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(सड़क परिवहन और राजमार्ग मंत्रालय, भारत सरकार)

National Highways Authority of India

(Ministry of Road Transport and Highways, Government of India)

जी-5 एवं 6, सेक्टर-10, द्वारका, नई दिल्ली - 110 075 • G-5 & 6, Sector-10, Dwarka, New Delhi-110075

दूरभाष/Phone : 91-11-25074100 / 25074200



NHAI/Policy Guidelines/ Environment/ 2023

Policy Circular No.7.4.11/ 2023 dated 03rd July, 2023

{Decision taken on E-Office File No. NHAI/GHD/02/04/24/2016/197 (Comp. No. 196097)}

Sub: Regarding Densification of Plantations including Planting of Bamboo, Initiating the Plantations in ROW from the Appointed date, Conservation of Existing Trees in ROW at the time of Initiating the Construction of Highway-reg.

1. Densification of Plantations including Planting of Bamboo

The plantation activities are being carried out on National Highways as per the SOP of NHAI and technical specifications of Indian Road Congress (IRC) guidelines. Presently, the specifications of spacing between plant to plant and row to row in the road side avenue plantations prescribed in IRC:SP:21:2009 are being followed. The spacing between row to row is 3 m and plant to plant in various rows are as follows:

- i. 1st Row: 3 m
- ii. 2nd Row: 6 m
- iii. 3rd Row: 8 to 12 m

These avenue plantation spacing were reviewed and discussed in VC meeting on 17.03.2023 and after thorough discussion, it was decided that spacing between plant to plant in all the rows should be reduced to 3 m for densification of the plantations which will help in faster greening of Highways. The spacing between row to row will remain to be 3 m but the spacing between plant to plant in various rows will be kept as follows:

- i. 1st row: 3 m
- ii. 2nd row: 3 m
- iii. 3rd row and subsequent rows: 3 m

The post planting operations like watering, weeding, casualty replacement and protection of plants etc. as prescribed in the IRC: SP: 21-2009 guidelines shall be followed without fail. The densification of plantations will be applicable to existing as well as future plantations.

It has also been decided that the bamboo plantations should be taken up during 2023-24 and subsequent years, wherever possible at the edge of the ROW of National Highways particularly in the Controlled-Access Highways at a spacing of 3 to 4 m between plant to plant where more than 2 rows of avenue plantations are possible in the ROW. Post planting operations like watering, weeding, casualty replacement and protection of plants etc. for the bamboo plants shall also be followed as prescribed in the IRC:SP:21-2009.

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2. Initiating the Plantations in ROW from the Appointed date

Normally, the plantation activity particularly in the avenue plantation starts after completion of a stretch of the National Highway which sometimes takes 3 to 4 years. It is felt that we may advance the process of plantations with little care and meticulous planning so that by the time the construction of the Highway is completed, some tree growth will get established in the avenue plantations on both the sides of National Highways as per the availability of ROW lands. After the Appointed Date is given to Concessionaire/Contractor, he starts moving the men, machinery and material required for the construction of the Highway. During this time, there is lot of movement of vehicles and other machinery in the ROW land. It is advised that after about six months to one year from the Appointed Date, we may plan for taking up the plantations at least in the last row during the monsoon season in the avenue wherever possible as per the availability of ROW lands on both the sides of proposed Highway. For this purpose, the carriageways must be demarcated on the ROW and from the middle of the last carriageway towards the outer edge of ROW lands, the required space as per the prescribed norms should be marked from where the first row of plantation will start in future. In such land i.e. from the location of the first row of future plantations to the outer edge of ROW if the land is available, at least one row of avenue plantation can be taken up on the Highway wherever possible on the onset of monsoon with the trees which have bigger crown as per the suitability of soil and agro-climatic conditions as prescribed in IRC: SP: 21-2009. At certain places, certain structures would come up in future or the ROW land may be required at some places for some other purpose, so at such places we need not take up the plantation in the beginning as mentioned above. Such areas shall be planted in due course of time as per the availability of ROW after the completion of the particular stretch of the National Highway.

There are many traditional and indigenous tree species which were available in plenty in the past but slowly they are disappearing like Mahua (*Madhuca longifolia*), Bael (*Aegle marmelos*), Wood Apple (*Feronia elephantum*), Gular (*Ficus racemosa*) and many other such species in various agro-climatic zones. Some plants of such tree species should also be planted in ROW lands to conserve them for future as well as for a better bio-diversity.

3. Conservation of Existing Trees in ROW at the time of Initiating the Construction of Highway

IRC: SP: 21-2009 "Guidelines of Landscaping and Tree Plantation" emphasizes on conservation of existing features including landscapes and trees. It also emphasizes that while constructing the roads in forest areas, felling of trees should be kept to minimum. Of late many instances have come to the notice that while constructing new Highway or expanding the existing National Highway, the trees available in the ROW lands are mechanically felled without giving any due consideration to protect as many trees as possible from felling. It has been found that in some Regions, the Regional Officers have realised it, took proactive action and protected many trees in ROW lands from felling. Keeping in view the above, the following guidelines are issued in this regard:



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- i. DPR must contain clear design and measurements of ROW and Carriageways as per the prescribed norms.
 - ii. The ROW space should be clearly demarcated on the ground.
 - iii. All the trees in the ROW should be enumerated in a book.
 - iv. The permission for felling of the trees available in the project area as per the enumeration should be obtained from the Competent Authority as per the existing rules and procedure in force.
 - v. From the middle of the proposed last carriageway, the required space as per the prescribed norms should be marked towards the outer edge of ROW from where the first row of plantation will start in due course of time. So in the space between the proposed first row of plantation to the outer edge of ROW on both sides whatever the number of trees are available, their inventory shall be prepared and they will be marked with the paint for their easy identification for retaining them without felling. However, due to some reasons, if any tree or trees are required to be felled in future for construction of the highway, such tree or trees may be felled as per the need according to the felling permission already obtained from the Competent Authority. This way, we would be able to save at least some trees in ROWs.
 - vi. If such plants/trees require any maintenance in future, it may be included in the Concession Agreement.
4. This issues with the approval of Competent Authority.



03/07/23

(Sanjay Kumar Patel)
General Manager (Coord.)

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