Methodology of Trees Translocation

Translocation is the term used to describe the digging and replanting of trees from one location to a new location. Due to the wide extent and morphology of tree root system, translocation of trees usually involves substantial removal of roots.

Design and Documentation

It is ensured that the requirements such as timing of root pruning, size of root ball, translocate and lifting requirement, monitoring and post translocation maintenance, etc. shall be properly planned.

Safety precautions- Tree translocation, like other tree management works, would be conducted in a controlled and safe manner. Workers who shall involve in translocate trees will be given adequate instruction and supervision to ensure that tasks are completed in a safe manner.

Translocation operations

Tools and equipment -All tools and equipment shall be appropriate to the operations and prepared in advance. Digging and root pruning tools shall be sharp and clean in order to cut without breaking, crushing or tearing roots. Mechanical digging and root pruning equipment shall be operated according to manufacturers' recommendations to minimize root damage.

Lifting cables, chains, straps, and/or slings shall be inspected and used according to manufacturers' instructions and specifications.

Preparation of root ball- Root pruning is sometimes required before translocation a tree. Sufficient time shall be allowed between preparation and final lifting for development of new roots capable of sustaining and continuing the growth of the translocated tree.

The root system of a woodland or open-grown tree will normally be widespread. Lifting such trees without initial preparation of a root ball will result in much of the root system being left in the soil. After translocation, the tree crown may then die back, or the tree may not be able to recover and will die eventually.

The root ball size shall varies depending on species, habit, location and specific attributes which shall be as large as practicable to maximise the potential of survival during and after translocation while balancing other logistical and cost concerns.

The root ball sizes would be of a diameter and depth to encompass enough of the root system as necessary for establishment. Normally the diameter of a root ball is larger than its depth which seldom exceeds 1 metre.

Pre-lifting operations -Tree lifting operations shall be carefully timed so as to enable direct delivery to the receptor site. No translocation operations would commence until either the receptor

site or the holding nursery is fully prepared. Tree uplifted must be translocated and watered the same day. Watering before lifting is recommended.
Before uplifting, the outer edge of the previously dug trenches shall be loosened from the surrounding soil, and the root ball can be shaped with taper on the sides, slanting inward toward thebase. The first cut around the perimeter of the root ball should be made with a sharp tool. Cuts should be clean to avoid tearing or breaking the roots. The shaping and final cuts should be done by hand.

Temporary support of trees before lifting- A tree after root pruning shall not be having extensive root support during the interim of the translocate process. It may be vulnerable to inclement weather, such as typhoon or heavy rainfall.
Removal of the root system may sometimes aggravate the natural form and balance of a tree and is prone to tree failure. When the stability of a tree is likely to be jeopardized, a temporary support, such as guying or simple prop is essential.

Lifting and handling of root-balled trees - The root ball would be properly wrapped before lifting. Lifting shall be done by direct lift, with padded protection for the tree, using a machine of appropriate capacity connected to the support around the root ball, not to any other part of the trees. Trees shall not be lifted by the trunk as this can cause serious trunk injury but by its root ball which shall be properly prepared and wrapped. Root balls that are not properly protected would easily collapse during transplanting due to its own weight.

Post-planting Care- In case of translocation of trees within the project site amidst the construction activities, they will be well protected with robust fencing.
All newly translocated trees shall receive proper maintenance care in order to facilitate recovery of tree from the translocation shock. It would be ensure the tree shall be stable before its root systemis fully recovered to give support.
The stress of a tree shall be observed immediately after translocation or gradually after a period of time. Proper care after transplanting will help to assure survival and minimise stress and ensure a higher successful rate. Maintenance of translocate trees will be in continuation till one year.

Annexure:- 1. Summary of Plants which needs to be Translocate
2. Linear Plan of Identified Land to translocate the Plants (2542Nos.)

Detailed Summary of Trees/Plants for Upgradation & Widening to Two lane with Paved Shoulder of NH 122 B of Jadhua-Bachhwara section (From km 0.000 to km 72.951)

District – Vaishali)

Sl.No	Site Name	Particulars	L.H.S	R.H.S.	Total	Remarks
1	2	3	4	5	6	7
1	Jadhua Bachhwara Section OF NH- 122 B	Translocate	332	401	733	Upto 60 cm girth size plants/ trees may be proposed for translocation. These trees/ plants may be translocated as per availability of land in proposed ROW.
		Cut	1392	1628	3020	Above 60 cm girth size Trees/ Plants, Dry trees and multi-trunk trees having multi girth are proposed for cutting
Total			1724	2029	3753	

Abstract:-

Total Nos. of affected Trees	3753
Nos. of affected Trees proposed for Translocation	733
Nos. of affected Trees proposed for Felling	3020

R.P. 11/03/2023

Executive Engineer
NH Division Gulzarbagh
Patna

11/3/23

Detailed Summary of Trees/Plants for Upgradation & Widening to Two lane with Paved Shoulder of NH 122 B of Jadhua-Bachhwara section (From km 0.000 to km 72.951)

District – Samastipur

Sl.No	Site Name	Particulars	L.H.S	R.H.S.	Total	Remarks
1	2	3	4	5	6	7
1	Jadhua Bachhwara Section OF NH- 122 B	Translocate	979	752	1731	Upto 60 cm girth size plants/ trees may be proposed for translocation. These trees/ plants may be translocated as per availability of land in proposed ROW.
		Cut	2365	1967	4332	Above 60 cm girth size Trees/ Plants, Dry trees and multi-trunk trees having multi girth are proposed for cutting
Total			3344	2719	6063	

Abstract:-

Total Nos. of affected Trees (Nos.)	6063
Nos. of affected Trees proposed for Translocation	1731
Nos. of affected Trees proposed for Felling	4332

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Detailed Summary of Trees/Plants for Upgradation & Widening to Two lane with Paved Shoulder of NH 122 B of Jadhua-Bachhwara section (From km 0.000 to km 72.951)

District – Begusarai

Sl.No	Site Name	Particulars	L.H.S	R.H.S.	Total	Remarks
1	2	3	4	5	6	7
1	Jadhua Bachhwara Section OF NH- 122 B	Translocate	40	38	78	Upto 60 cm girth size plants/ trees may be proposed for translocation. These trees/ plants may be translocated as per availability of land in proposed ROW.
		Cut	193	134	327	Above 60 cm girth size Trees/ Plants, Dry trees and multi-trunk trees having multi girth are proposed for cutting
Total			233	172	405	

Abstract:-

Total Nos. of affected Trees	405
Nos. of affected Trees proposed for Translocation	78
Nos. of affected Trees proposed for Felling	327

11/03/2023

Executive Engineer
NH Division Gulzarbagh
Patna

11/3/23