Coastal Plant Care

Tree Preservation During Construction

The past several years have seen dramatic increases in new home construction. It seems like overnight, new communities are being developed and new full-time residents are moving into their homes. In addition to new home development, many homeowners are adding additions or usable outdoor space to their property. When planning a new home or addition, there are many things that should be considered when attempting to preserve an existing tree or landscape.

Planning:

During the planning phase of any project, start with identifying which trees or shrubs you wish to retain after construction. Once these plants are identified, an overall health assessment should be performed by a Certified Arborist and Qualified Tree Risk Assessor. Factors such as size, age, location, existing risk rating, and overall health score will be considered. Health scores will take into account previous limb failures, insect pests or disease, soil compaction, root health, and the general health of branches, trunks, and foliage.

Once you have identified trees viable to preserve, they should be included in the architectural drawings or as a supplement to the site plan. Tree preservation zones should be established, protecting the soil from disturbance during construction. In most cases, tree death that occurs following construction is caused by root loss, soil compaction, or other damage to the critical root zone of plant. Ideally, a zone equal to the dripline of the tree canopy will remain undisturbed during construction. In cases where this is not plausible, a radius equal to 5 times the diameter of the trunk should be applied. For instance, if you have a 12" diameter tree, a radius of 5' around the trunk should remain undisturbed.

Other planning factors should include establishing a construction entrance and storage area that will limit the amount of foot and vehicle traffic near protected plants. On sites where entry and exit are limited, planning should include measures to limit soil compaction during construction and implemented prior to breaking ground.

Pre-Construction:

Temporary fencing should be installed around the critical root zone of the tree. Suitable fencing includes welded wire attached to metal T-posts, chain link, or orange snow fencing. Tree protection fencing needs to be visible and labeled in English and Spanish as a "tree preservation zone".

If the construction entrance is within the dripline of the tree, a 12" layer of wood chips or other suitable soil covering should be applied to these areas to reduce compaction. Other soil coverings can include plywood, root aeration matting, fresh woodchips, stone or a combination of all appropriate measures. The goal of any soil covering is to disperse the weight of construction equipment thus reducing soil compaction.

Any pest infestation or disease issue should be treated pre-construction. It is advisable to have these trees professionally fertilized and 2-4" layers of mulch installed to the extent allowable as well. Any pruning of lower limbs or dead branches

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jhager@coastalplantcare.com 302-542-0921
32621 Bella Via Court, Ocean View, DE 19970

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that may pose a risk to construction vehicles, workers, or structures should be addressed well in advance of breaking ground.

During Construction:

Depending on the site, trees should be inspected weekly or monthly. The frequency of inspections and reporting should be determined during the pre-construction phase and agreed upon by the homeowner, arborist, and general contractor. Fencing should remain in place throughout the duration of the project and repaired as necessary.

Due to the inherent stress placed on trees during construction, regular inspection and treatment of opportunistic insect pests and foliar diseases is recommended. Should construction occur during the growing season, regular watering of protected trees should be implemented during periods of drought. Some species may require weekly watering.

In select cases, a growth regulator may be applied to larger trees if the construction process is to be longer than a year. Growth regulators reduce the tree's need for water and nutrients thus reducing the growth rate and negative effects the construction poses. The residual effects of a growth regulator application often persist for 2-3 years and should only be applied if deemed necessary by a professional.

Post-Construction:

Regular health inspections along with treatment of any residual pest or disease should remain place 1-2 years following construction. If soil has become compacted on or near the critical root zone of the trees, efforts should be made to de-compact. This often includes tilling the soil with an air tool and incorporating organic matter to a depth of 12-24". Fencing and excess mulch should be removed. Regular watering should remain in place for at least a year following construction. Keep in mind, all trees wish for a good soak once a week. This is particularly true for trees experiencing signs of stress.

In years 1-3 years following construction, remove live branches of the tree only as needed. The healthy foliage of the tree will assist in repairing any root damage or loss during the construction phase. As a general rule, you never want to remove more than 25% of a tree's foliage in a single year. Following construction, this recommendation is reduced to 10-15%.

The negative impacts of construction are often not apparent until many years following the disturbance. Unprotected areas such as wooded areas along a property line often decline or die long after the project has been completed. Should you avoid protecting the trees during the planning, pre-construction, and active construction phases, there may still be hope. Post-construction measures can be taken to mitigate any damage that often prove effective. A Board Certified Master Arborist will be able to determine the efficacy of any potential remediation.

As stated, proper planning and implementation is the best possible path to ensure your old trees and landscape survive the new additions. Happy gardening!

Jeremy Hager, ISA Board Certified Master Arborist

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