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Rupp Property Arboricultural Consultation Report

On Monday, November 5, 2012, I was contacted by Mr. Chuck Davis of Chuck Davis Construction, Inc. and asked to provide arboricultural consultation at a construction site at 105 Deer Run Rd. in Charmeldee Acres in Black Mountain, NC. Specifically, Mr. Davis asked me to contact his job superintendent on this project, Mr. Tommy Nash, and meet with him as soon as possible and evaluate the impact construction activities (ongoing and proposed) were having on existing trees within the construction zone.

I met with Mr. Nash at the site on Tuesday, November 6, 2012 at 9:30 am. Also at this meeting were Mr. Patrick Close, the property owners' (Gary and Kay Rupp) representative, and Mr. Steve Crowe, the excavation contractor currently working on the project.

Mr. Nash gave me a copy of the Grading Plan for the project prepared by Site Design Studio, Weaverville, NC. This plan did not have the existing trees located and identified; it was of limited use for the purpose of my visit.

Our meeting began with Mr. Nash orienting me to the site, explaining the project, and pointing out the trees and vegetation he was most concerned about. He told me what had been done so far to save, protect, and move certain trees.

I gave the meeting participants some basic guidelines regarding protecting trees on construction sites, and said I would send them additional, technical information about this matter for future use on this and other projects. I feel it is important that site workers have a good, basic understanding of the negative impact construction activities have on trees, and how to protect trees during construction projects; this is the best way to ensure trees are properly protected before any irreparable damage is done.

Our meeting focused mainly on three things: the health and preservation of the two large yellow poplars (Liriodendron tulipifera) on the south and west sides of the house; the health and preservation of the two Canadian hemlocks (Tsuga canadensis) that were transplanted and the three remaining ones above the proposed retaining wall; and the impact the proposed road on the west side of the house would have on existing trees and vegetation in its track.

The yellow poplar on the south side of the house measures 43" dbh (diameter of trunk 4.5' above the ground). Based on visual observation, the above ground portion of tree appears to be in good condition. There is some deadwood in the crown that should be removed by a competent, certified arborist. Some soil has been pushed over the tree's root system on the house side, and some grading equipment has been operating in this area. Based on a tree of this size, the critical root radius (i.e., distance to keep any construction activity away from the tree) is approximately 54 feet from the trunk. There did not appear to be any disturbance to the majority of this tree's root system. My recommendation was to remove the soil recently deposited on the root system back to the original grade, being very careful not to disturb surface

roots in the process. Equipment and construction activities should be kept off of the critical root area (i.e., the area enclosed by the 54' critical root radius) for the duration of the project. The prognosis for this tree is good if it is properly protected for the remainder of the project. If necessary, install a fence around the critical root area to protect it.

The yellow poplar on the west side of the house measures 31" dbh. Based on visual observation, the above ground portion of tree appears to be in good condition. There is a slight lean of the trunk towards the house. There is some deadwood in the crown that should be removed by a competent, certified arborist. Based on a tree of this size, the critical root radius is approximately 39 feet from the trunk. This tree has suffered root damage on the house side during recent construction activities. I explained to those present how to protect the tree's remaining root system for the rest of the project using biaxial geogrid and mulch; essentially creating a snowshoe effect to alleviate damage and compaction. The proposed road to be built above this tree may further negatively impact this tree as well as the 18" dbh yellow poplar growing directly up hill from it. If the tree ends up with damage to or loss of 50% or more of its critical root area, then removal should be considered, especially due to its proximity and lean towards the house. The location and construction methodology of the proposed road will have a significant impact on the tree. I suggested use of biaxial geogrid to construct the road as one possible means to reduce construction damage. The prognosis for this tree is guarded. If no further damage is done to its root system, it should recover and persist in an acceptable condition. If further damage is done to its root system, the tree should be reevaluated to determine whether it should remain or be removed.

Further thought should be given to the location and construction methodology of the proposed road above the 31" yellow poplar if the continued good health, survival, and safety of this tree are important. There appear to be other important trees that this road would also impact.

The existing hemlocks above the proposed retaining wall should not be adversely affected by construction activities and their prognosis is good. The recently transplanted hemlocks should be irrigated on a regular basis and kept mulched; their roots should be kept moist, not waterlogged – hemlocks do not tolerate poor drainage. All of the hemlocks should be treated regularly for control of the hemlock woolly adelgid and spider mites; this should be done by a competent, licensed professional - prior treatment history needs to be considered before further treatments are made.

The transplanted hemlocks have lost considerable critical root mass. They need to be maintained carefully for the next several years. Do not over fertilize. Sometimes an antidesicant is applied to evergreens following transplantation to reduce water loss through transpiration. Application of an antidesicant at this time might help these trees during the critical establishment period of the next several months.

At the end of our meeting, Mr. Nash and Mr. Close both requested copies of my report. I told them I would provide the report to Mr. Davis and let him distribute it accordingly.

Submitted by,

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