

GOVERNMENT OF THE DISTRICT OF COLUMBIA
OFFICE OF PLANNING



Memorandum

TO: Board of Zoning Adjustment
FROM: Ellen McCarthy, Director
Office of Planning
DATE: April 7, 2006
SUBJECT: BZA Application #17309 (Bender Subdivision)
Chain Bridge Road, N.W.

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Attached please find a report from the Urban Forestry Administration in the District Department Transportation regarding the above mentioned case.

ATTACHMENT

1. Memorandum from DDOT/Urban Forestry Administration

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BOARD OF ZONING ADJUSTMENT
District of Columbia

CASE NO. 17309

EXHIBIT NO. 104

Board of Zoning Adjustment
District of Columbia
CASE NO. 17309
EXHIBIT NO. 104

Government of the District of Columbia
DDOT/Urban Forestry Administration

Memorandum

To: Maxine Brown Roberts
Development Review Division

From: Earl Eutsler
Municipal Arborist

Date: April 6, 2006

Subject: BZA # 17309 – Application By Dorchester Associates, LLC.
Tree preservation Review by DDOT/UFA

Please find attached an analysis by DDOT's Urban Forestry Administration of the proposed theoretical lot subdivision by Dorchester Associates, LLC. Specifically, the following report focuses primarily on the tree protection measures as proposed in the submission documents. Please contact me immediately if there are any questions or concerns. Thank you.

Earl Eutsler
202/497-0227

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URBAN FORESTRY ADMINISTRATION**

Preface

At the request of the DC Office of Planning, I, as a representative of DDOT's Urban Forestry Administration, have been asked to review and comment on the Board of Zoning Adjustment case # 17309. This application is for the proposed theoretical lot subdivision by Dorchester Associates, LLC, and subsequent construction of thirteen (13) single-family detached homes. My review of this project has as its primary focus tree preservation. Specifically, I will discuss the extent to which the project has attempted to conform to the Chain Bridge/University Terrace Tree & Slope Overlay District regulations (11DCMR, Chapter 15). Documents that I have reviewed and which will be discussed below include the report and survey performed by Lew Bloch (7/20/02), and the *Tree Preservation Plan for the Chain Bridge Road Project* by Bonifant Tree Service, Inc. (8/16/05).

The Overlay District

The Chain Bridge/University Terrace Overlay District was "established to preserve and enhance the park-like setting of the Chain Bridge/University Terrace area by regulating alteration or disturbance of terrain, destruction of trees, and ground coverage of permitted buildings and other impervious surfaces, and by providing for widely spaced residences."¹ Of particular interest to my review is the regulation's stated purpose of preserving "the natural topography and mature trees to the maximum extent feasible in a residential neighborhood"² and prohibiting the removal, cutting down, or fatal damaging of any tree with a circumference of 75" or more.³ It should not be a matter of any dispute that the notion of tree preservation mandated in the Overlay District regulations is to be applied to the area as a strict measure of protection of and for existing trees. If any property within this district is preparing to undergo alterations, those existing specimen trees must be protected and preserved in such a way that they not only survive the immediate construction phase, but also emerge from the development with as good a chance of long-term survival as they would have had no construction activity occurred in their vicinity. This idea represents the spirit and intent of the tree preservation rules embodied in the Overlay District regulations.

¹ 11 DCMR 1565.1

² 11 DCMR 1565.1 (a)

³ 11 DCMR 1568.1 (a) states: "No tree that has a circumference of 75" or more at a height of 4 ½' above ground may be removed, cut down, or fatally damaged." Trees protected by this limitation may also be referred to as 'specimen trees' throughout this report.

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Mr. Bloch's Report

Mr. Bloch's report of 7/20/02 includes a survey that "assesses the health and structural stability of all of the trees larger than 38 inches in circumference measured at 4 ½' high." I have not personally inspected the trees on this property, and have employed the results of Mr. Bloch's survey with the assumption that it is accurate. In his report Mr. Bloch states, "A 50% rated tree is marginal AND may be retained if there is no new construction close by the tree. With a 51 to 60% rated tree, I suggest the tree needs monitoring annually for any changes in condition. Although there can be no guarantees, any tree rated 61% or higher should be viable." I agree, in general, with Mr. Bloch's above determinations.

Bonifant Tree Service's Report

The *Tree Preservation Plan for the Chain Bridge Road Project* report of 8/16/05 discusses two separate methods of assessing appropriate and necessary levels of tree protection. Both methods identify an area referred to as the 'protected root zone'. The report states, "The protected root zone can be defined as 1' radius for each inch diameter dbh⁴ of the tree... Another method for determining the protected root zone is by using the drip line of a tree." It continues, "To provide adequate protection of the trees on this site a combination of methods will be used to protect the trees." The report then proceeds to provide a written description of the proposed tree protection measures on an individual, tree-by-tree basis.

The Bonifant report stipulates that the protected root zones be safeguarded against construction-related incursions by installing fenced perimeters, and that grade changes will, as a result, be precluded. However, the report describes the proposed measures only in writing. It is largely unclear exactly where the actual fencing will be installed. Furthermore, this lack of charted detail makes it impossible to determine which method of determining the tree's protected root zone is being employed in each instance; is it the drip line method, or the 1' radius for every 1" of DBH method? Without knowledge of these specifics, any conclusion that the 'protected trees', so called, will survive the proposed site activity cannot be assured. In addition, the Bonifant report does not anywhere mention the measures that would be taken to protect the trees to be 'saved' from the installation of the proposed stormwater management system. This is particularly striking as several trees of marginal condition appear to stand in relative conflict with sections of the proposed stormwater management plan. Trees with apparent significant conflicts of this

⁴ 'DBH' stands for diameter at breast height, with breast height interpreted as an elevation of 4 1/2 '.

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type include #15-17, 48-53 & 33, 34, 36, 37. That Bonifant's report does not address this concern whatsoever leads me to believe that perhaps it was not shared with him. In other words, it would appear as though he either does not consider the installation of this system directly under and/or adjacent to several trees a conflict worth protecting against, or he was not made aware of the locations and specifics of this proposed stormwater management system.

Continuing the root zone discussion, it appears several 'protected' trees will be forced to sustain major incursions upon their root zones as a result of their proximity to permanent structures and/or driveway areas. For instance, tree #9, a 77" circumference Oak⁵ with a condition rating of 70%, stands to suffer construction related impacts of approximately 25% of its root zone. This despite the tree protection, as the tree originates less than 10' from the foundation of the proposed dwelling on Lot 2. Furthermore, this estimate of 25% assumes that there will be no overdig during the excavation of the foundation for this home, which is highly unlikely. Bonifant sets at 25-30% the general threshold for root system damage due to construction activity. It is abundantly clear that tree #9 stands to suffer, as a conservative estimate, damage to its root system of at least 25%. Bonifant's report states the fencing will extend to "the house edge...", yet the home's foundation is targeted for an area less than 10' from the trunk of this tree. Therefore it is not at all unreasonable to be concerned that the uncharted tree protection measures describes in this report are not sufficient to protect all of the trees to be 'saved'.

Another area of great concern is the stately allée of American Beeches standing adjacent to the existing entrance. To the surrounding community, as well as visitors to the area, these trees stand out as exceptional examples of the species and contribute mightily to the park-like character of the neighborhood. Preservation of these trees should be held as a non-negotiable element of any proposed development. The American Beech is a climax species, which possesses a slow rate of growth; *replacement should not be thought of as a suitable mitigation for poor construction plans or improper protection measures*. As Dirr writes, "in a sense, a Beech tree is planted for posterity and my children and yours will enjoy its grandeur."⁶ At present, 16 such trees exist along the existing entrance. Of these, Bonifant's report recommends the removal of #14 (44" circumference) to allow for the installation of a proposed driveway. As such this tree will not be included in the following discussion. Of the remaining 15 Beech trees to be 'saved', 6 are rated at 50% or lower condition. Further, 10 were rated at 60% or below. This means that 40% of these Beech trees do not stand any substantial chance of survival unless "there is no new construction close by the" trees.⁷ Of these marginal trees, not a

⁵ It is not clear which species of Oak this is: Bloch lists it as a White Oak, while Bonifant refers to it as a Red Oak. For the purpose of this report knowing that it is an Oak is sufficient.

⁶ Dirr, M.A. 1975. *Manual of Woody Landscape Plants*. [p.370] Stipes Publishing, Champaign, Ill 61824

⁷ Bloch Report

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single specimen appears to escape without some root zone assault, whether it be from dwelling foundations, driveways, or stormwater management devices. Of the entire group, Bloch rates only 33% of these trees as "viable", and even their survival is contingent "on the construction contractor properly protecting and maintaining them."

Conclusion

The Chain Bridge/University Terrace Overlay District was established not to prevent all development, but rather to control and regulate it in such a way that the natural topography and existing vegetation were not unnecessarily degraded or destroyed. As opposed to most land development throughout the region wherein the land is reworked and reconfigured to conform to the wishes of the developer, the developer in this district is expected to conform to and accommodate the existing environment. To the extent that the submitted plans are accurate, I do not feel as though the requirements described in 11DCMR 1565 have been credibly satisfied. The extent of construction that is proposed will almost assuredly not allow for the preservation of the trees called for by the applicable regulations. To allow an exception for this plan as it is currently proposed would seriously undermine the regulatory authority of the Tree and Slope Overlay District of the Chain Bridge Road and University Terrace area. As such, it is the recommendation of the Urban Forestry Administration that the Board of Zoning Adjustment not grant a special exception to this proposal in its current state.

Report Prepared by:

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