Charlotte Historic District Commission	***Application for a Certificate of Appropriateness***
Staff Review	***Date: March 14, 2018***
HDC 2018-024	***PID# 12369708***

LOCAL HISTORIC DISTRICT: Dilworth

PROPERTY ADDRESS: 1508 Dilworth Road

SUMMARY OF REQUEST: Detached garage addition, tree removal and tree replacement

APPLICANT/OWNER: Audry Barber, applicant

Details of Proposed Request

Existing Context

The existing house is a 2.5 story Colonial Revival/Georgian style home with a brick side porch and crenellated roof line, constructed in 1927. The site has a pool, pond and other landscape features. The lot size is approximately .875 acres with several large mature trees on the property. The lot width is approximately 167' in the rear and 219' in the front. The house is setback approximately 102' from ROW. Adjacent setbacks are approximately 47' to 55' from ROW. The rear yard of the subject house to property line is approximately 47'.

Proposal

The proposal is a detached garage in the rear yard, removal of two trees to accommodate the garage and the planting of five new large maturing trees on site. The detached 1.5 story garage is approximately 21'-10" in height. Exterior materials are wood lap siding and trim, cedar shake roof and wood garage doors. Windows and trim will match the house. Garage footprint dimensions are 25'x39'. The applicant has submitted tree inspection reports of existing and previously removed trees on the property.

Policy & Design Guidelines for Trees, page 8.5

2. When tree removal is needed (due to disease or other reasons) or desired, a Certified Arborist must be consulted and the written recommendations must be provided to the HDC before removal is granted.
5. New construction that impacts healthy trees must be reviewed by the HDC. Mature trees that are unhealthy or causing significant structural damage to historic structures may be reviewed by HDC staff. Replacement trees may be required.
6. The HDC may require the planting of additional trees to replace a mature canopy that is removed.

Policy & Design Guidelines for Accessory Buildings, page 8.9

2. Place new outbuildings, such as garages or sheds, to the rear of lots that are large enough to accommodate them, following the applicable zoning requirements. New outbuildings cannot be located in front or side yards.
3. Design new outbuildings to be compatible with the style and character of the primary historic building on the site, especially in scale, elements and roof form. Any new outbuilding must be clearly secondary to the main structure on the site.

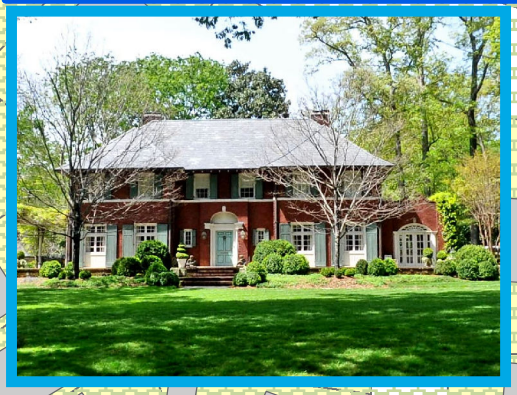
All New Construction Projects Will be Evaluated for Compatibility by the Following Criteria			Page #
	Setback	in relationship to setback of immediate surroundings	6.2
	Spacing	the side distance from adjacent buildings as it relates to other buildings	6.3
	Orientation	the direction of the front of the building as it relates to other buildings in the district	6.4
	Massing	the relationship of the buildings various parts to each other	6.5
	Height and Width	the relationship to height and width of buildings in the project surroundings	6.6
	Scale	the relationship of the building to those around it and the human form	6.7
	Directional Expression	the vertical or horizontal proportions of the building as it relates to other buildings	6.8
	Foundations	the height of foundations as it relates to other buildings in project surroundings	6.9
	Roof Form and Materials	as it relates to other buildings in project surroundings	6.10
	Cornices and Trim	as it relates to the stylistic expression of the proposed building	6.11
	Doors and Windows	the placement, style and materials of these components	6.12
	Porches	as it relates to the stylistic expression of the proposed building and other buildings in the district.	6.14
	Materials	proper historic materials or approved substitutes	6.15
	Size	the relationship of the project to its site	6.2 & 3
	Rhythm	the relationship of windows, doors, recesses and projections	6.12
	Context	the overall relationship of the project to its surroundings.	6.1-16
	Landscaping	a tool to soften and blend the project with the district	8.1-11

All projects should use this summary checklist to ensure a submittal addresses all the new construction criteria.

Staff Recommendation

1. Trees. The tree reports on the two trees in question contain the information required to permit removal by HDC staff per the guidelines for trees. The proposed number and species of replacement trees also meet City arborist standards.
2. Setting the garage in the rear yard further defines the accessory building as secondary to the primary structure.
3. Staff believes the proposal meets the guidelines for accessory buildings.
4. Minor detail changes may be reviewed by staff with HDC recommendation.

Charlotte Historic District Commission Case 2018-024
HISTORIC DISTRICT: DILWORTH
ACCESSORY BUILDING



Berkeley Av

Dilworth Rd

Linganore Pl

Romany Rd

Dilworth Rd West

worth Rd East

N

0 50 100 200 300 Feet

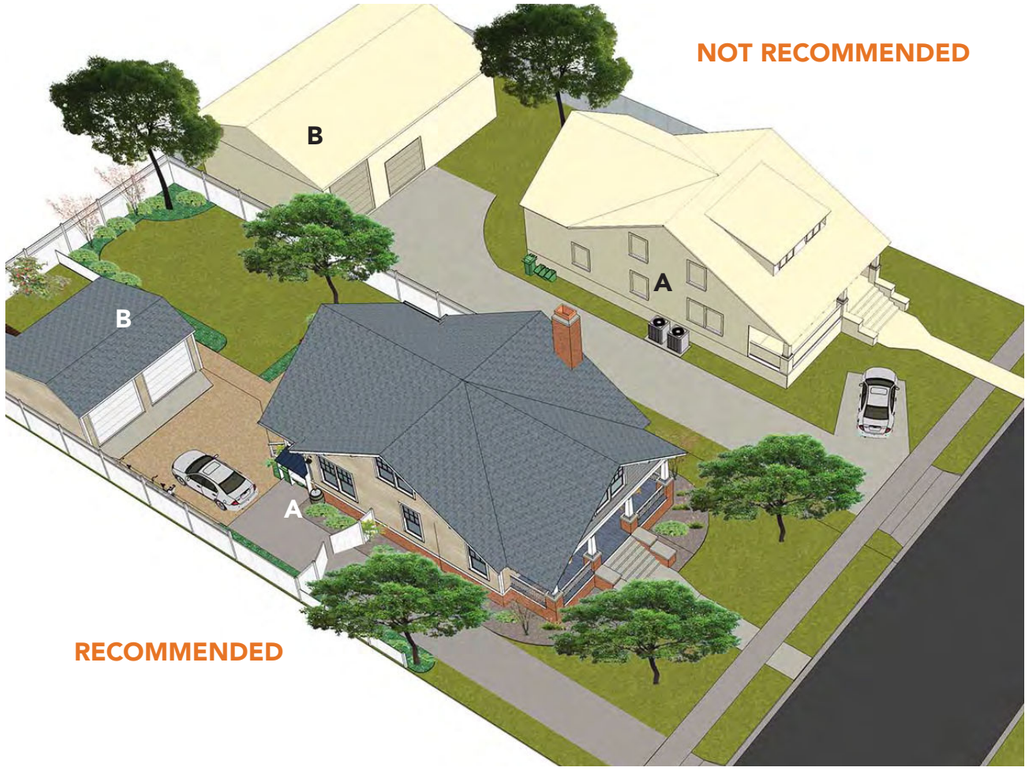
3/12/2018

1508 Dilworth Rd

Dilworth Historic District

Property Lines

Building Footprints



This illustration shows site appurtenances (A) located in areas behind fences and screened from public view in the "Recommended" view as well as the size of accessory buildings (B) in relationship to the main house.

The "Not Recommended" view shows appurtenances (B) that are not screened and an accessory building (A) that is too large according to regulations. Also note the front lawn parking pad that would not be allowed.

ACCESSORY BUILDINGS

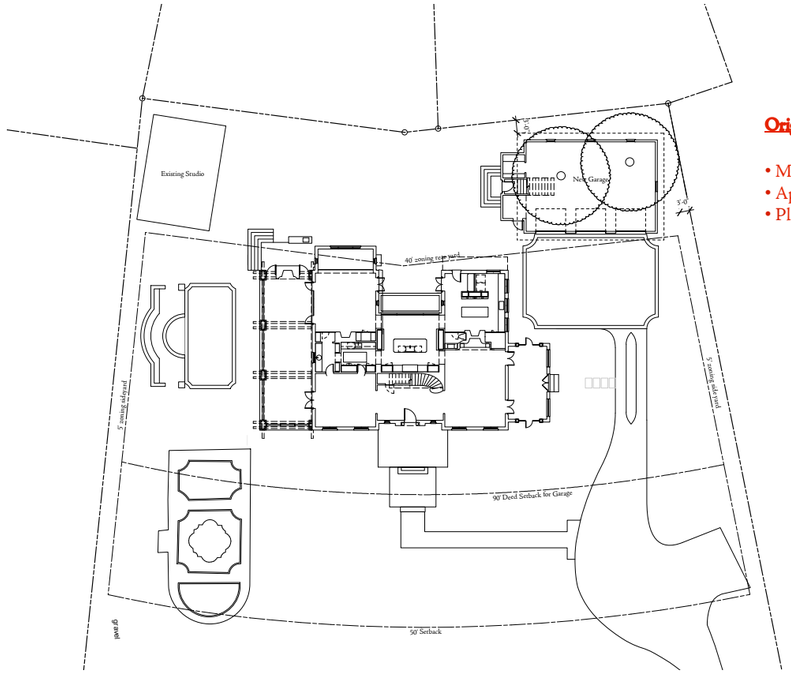
Although the main dwelling on a site makes the strongest statement about a property's contribution to the character of a Local Historic District, accessory buildings, such as garages and storage sheds can also have a significant impact on the historic character of the district. Many of the homes in the districts have garages set to the rear of the house and do not detract from the site.

GUIDELINES

For Accessory Buildings:

1. Retain and repair historic outbuildings. Applications for the demolition of dilapidated accessory structures may be eligible for administrative approval.
2. Place new outbuildings, such as garages or sheds, to the rear of lots that are large enough to accommodate them, following the applicable zoning requirements. New outbuildings cannot be located in front or side yards.
3. Design new outbuildings to be compatible with the style and character of the primary historic building on the site, especially in scale, elements, and roof form. Any new outbuilding must be clearly secondary to the main structure on the site.
4. Vinyl doors are considered to be inappropriate materials for outbuildings, and are discouraged. For more information on appropriate new construction see Chapter 6.
5. Prefabricated outbuildings that are not in keeping with the historic character of the district are not allowed where visible from the public street.
6. Garage doors shall either be authentically separate, single bay doors or designed to give the appearance of separate doors rather than one long continuous panel on traditionally designed accessory structures.

D.B. 31422–776 (2015)

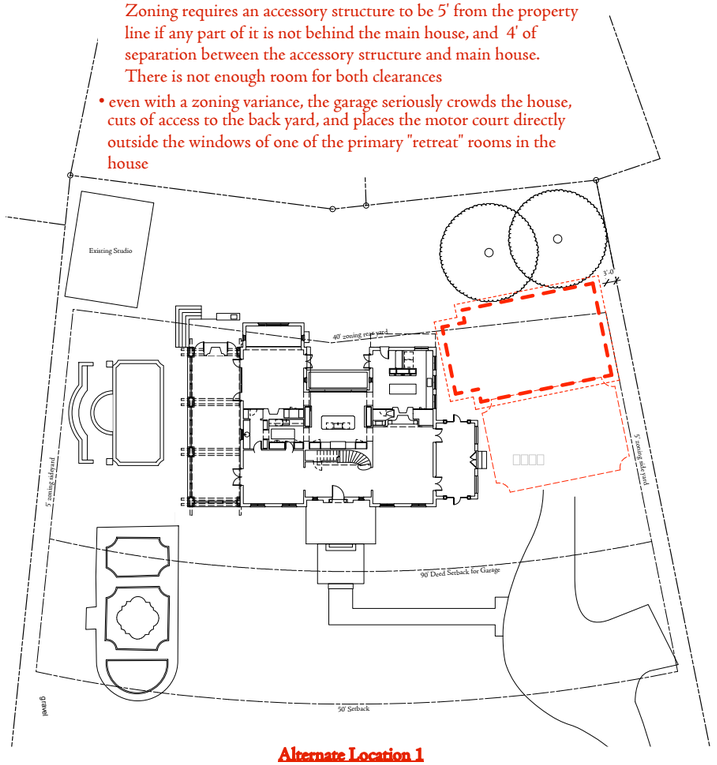


Original Proposed Garage Location

- Meets all required setback and required separation
- Appropriate distance from house to avoid crowding
- Places motor court in a less visible location

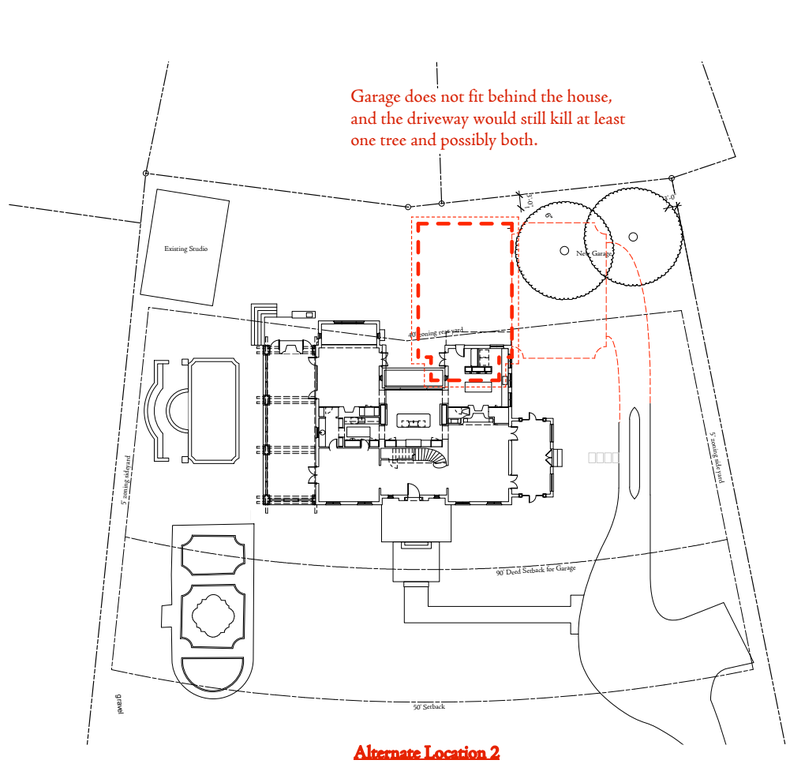
This is the only alternate location that physically fits on the site. However, it is not a feasible solution for several reasons:

- too close to house
  Zoning requires an accessory structure to be 5' from the property line if any part of it is not behind the main house, and 4' of separation between the accessory structure and main house. There is not enough room for both clearances
- even with a zoning variance, the garage seriously crowds the house, cuts of access to the back yard, and places the motor court directly outside the windows of one of the primary "retreat" rooms in the house



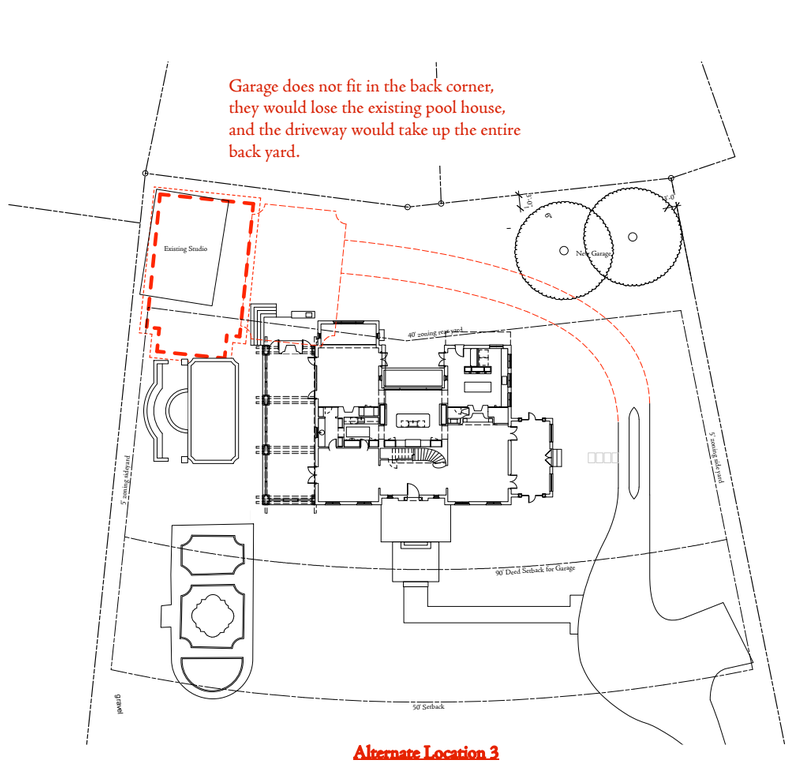
Alternate Location 1

Garage does not fit behind the house, and the driveway would still kill at least one tree and possibly both.



Alternate Location 2

Garage does not fit in the back corner, they would lose the existing pool house, and the driveway would take up the entire back yard.



Alternate Location 3

Existing Magnolia

Existing 30" Oaks

Existing 17" Post Oak

Existing Magnolias on Neighbor's Property

Existing 18" Tree on Neighbor's Property

Existing Poolhouse

Lawn

Terrace

2-Car Garage

Existing Pool

Existing House

Existing 36" Hackberry

Parking/
Turnaround Area

Approx. Location of
Neighbor's House

Existing Driveway

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March 5, 2018

Charlotte Historic District Commission
600 East Fourth Street (8th Floor)
Charlotte, NC 28202

Re: Certificate of Appropriateness Application for 1508 Dilworth Road

Ladies and Gentlemen:

My name is Charles Jacobs and I am a Dilworth homeowner, residing at 1500 Dilworth Road, which parcel is adjacent to 1508 Dilworth Road. I am writing to convey my support for the pending Certificate of Appropriateness Application regarding 1508 Dilworth Road and more specifically, the placement of the garage accessory building. In speaking with the homeowners, I am concerned that the garage may be placed in the side yard. As the next-door neighbor on the side of the lot that house the garage I support the initial proposal to locate the garage in the back corner of the yard. If the garage is located in the side of the yard, that will noticeably diminish the appearance of 1508 Dilworth road from both my yard and from the street. I am concerned that if the garage is placed in the side yard, it will negatively stick-out. I have not done an exhaustive review, but I am not familiar with any garages in Dilworth being in the side yard, but rather believe it would be much more fitting with the neighborhood for the garage to be placed in the back corner of the yard like other Dilworth properties.

I understand that locating the garage in the preferred location at the back corner of the yard would require some mature trees to be removed. One of the primary reasons that I purchased my home in the Dilworth neighborhood is because of the fantastic old trees that cover the neighborhood. That said, I have concerns about the health of the trees in question. In addition to being dead, I believe at least one of these trees poses a significant safety hazard to my property. The trees at the back of the lots have been pruned over the years by Duke Energy for the power line right-of-way. One of the dead trees only has limbs left on the tree that face in the direction of my back porch and the back-side of my house. I am concerned that if these dead trees are not safely removed that during a storm, one of them will come down creating significant damage to my home. Another of the trees looks apt to have the same issue, but fall directly onto the home at 1508 Dilworth Road.

I appreciate the opportunity to share my thoughts on these matters, as a next door neighbor to the subject property and as a Dilworth resident and stake-holder. I plan to make a best-efforts attempt to attend the public meeting later this morning in person, but given my work schedule, it is not likely that I will be able. Should you have any questions about my views and the proposed garage and concerns with the idea of placing the garage in the side yard, please feel free to contact me directly (Charles.jacobs@gmail.com and 704-779-6254).

Yours Truly,

Charles S. Jacobs
1500 Dilworth Road

Good Location

Poor Location

- Every home with a garage or outbuilding, the outbuilding is behind the house
- If trees were not an issue, the back right corner of the lot is the "correct" location for the garage
- The house is 100 years old and is having extensive structural repairs to make it last 100 more years
- Need to look at this lot as a "master plan" for the next 50-100 years
- The trees do not have a lifespan of 50+ years. When they eventually die or fall in a storm, a garage that sits up next to the house will have been a costly mistake

Existing Magnolia

Proposed New Magnolias

Existing Oaks to be Removed

7'-10"

Existing 17" Post Oak

Existing Magnolias on Neighbor's Property

Existing 18" Tree on Neighbor's Property

Existing Poolhouse

3-Car Garage

Lawn

Terrace

Parking/ Turnaround Area

Proposed New White Oak

Proposed New White Oak

Existing Pool

Existing 36" Hackberry

Proposed New White Oak

Existing House

Approx. Location of Neighbor's House

Existing Driveway

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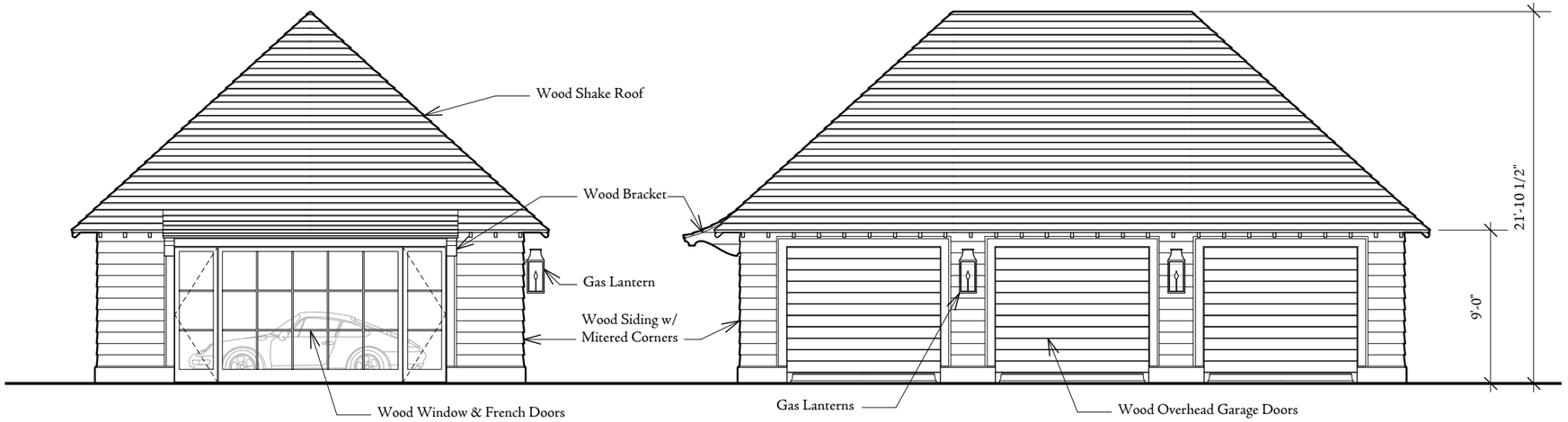
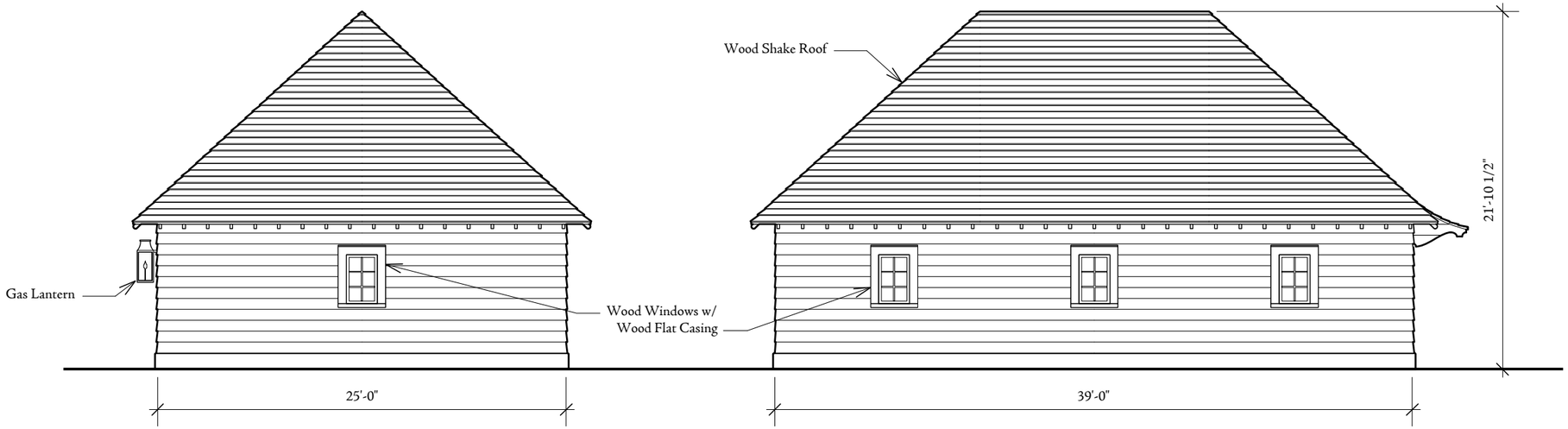


Left Elevation

Front Elevation



Right Elevation

Rear Elevation

Streetscape

TREES

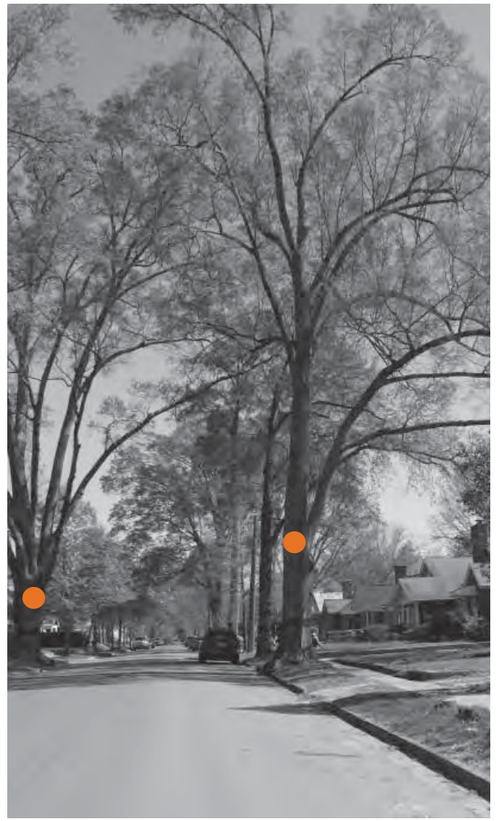
Large canopy trees are a major character-defining feature in most of the streets in Charlotte's historic districts. For this reason, review of the care and treatment of this feature is an important component of these guidelines. The Charlotte Land Development Standards Manual (CLDSM) contains a table of Approved Plant Species which should be referenced when undertaking any project that may require tree removal and replanting.

GUIDELINES

For Trees:

1. Retain existing trees that define the district's character.
2. When tree removal is needed (due to disease or other reasons) or desired, a Certified Arborist must be consulted and the written recommendation must be provided to the HDC before removal is granted. This guideline includes trees in front, side, and rear yards.
3. Trees less than ten (10) inches in diameter may be removed in front, side, and rear yards with Administrative approval.
4. Identify and take care to protect significant existing trees and other plantings when constructing new buildings, additions, or site structures such as garages.
5. New construction that impacts healthy trees must be reviewed by the HDC. Mature trees that are unhealthy or causing significant structural damage to historic structures may reviewed by HDC staff. Replacement trees may be required.
6. The HDC may require the planting of additional trees to replace a mature canopy that is removed.

Several streets in the historic districts have landscaped medians and verges between sidewalks and streets that are important areas for creating canopies of street trees.



Many of the historic districts' streets are characterized by large, mature street trees that are essential in defining the public streetscape areas.

Setback: The distance between the right-of-way line and the front building line of a principal building or structure, as constructed, projected to the side lines of the lot.

Significant: Having particularly important associations within the contexts of architecture, history, and culture.

Site: The location of a building, significant event, prehistoric or historic occupation, or activity

Significant Feature: An exterior architectural component of a building that contributes to its special historic, cultural, and/or aesthetic character, or in the case of an historic district, that reinforces the special characteristics for which the historic district was designated.

Streetscape: The distinguishing character of a particular street as created by its width, tree canopy, landscape, design of the street furniture,

Many Street Trees are 40"-50"+ with full,
well balanced crowns and straight trunks

30" Oaks in Question are leaning dangerously, with unbalanced crowns due to repeated trimming for utility clearance, as well as the loss of a 3rd tree between them


Tree Has Been Removed
Tree to be Removed
Trees to Remain
Tree Has Been Removed
Trees to Remain
Berkeley Ave
Lexington Ave
Dilworth Rd
Belgrave Pl
Linganore Pl
Romany Rd
Dilworth Rd W
Dilworth Rd E

Bryan & Maureen Stockton
1508 Dilworth W
Charlotte, NC 28203

Certification & Licensing - SC # C0014104 NC # 026-26240

Ornamental Gardens LLC
3164 India Hook Rd
Rock Hill, SC 29732
(803) 287 6919
ornamentalgard@gmail.com
Agent – Brock Rigby 803-448-1461

Site Analysis Report : Overview of large shade trees, which have been removed from the property over the last ten years and related information about restoration of the shade tree canopy.

- **Pin Oak – approx. 40”+ DBH declined and was removed in 2008. The tree was located at the front right corner of the property, approx. 15ft from street and walk. Lesions were present, as well as butt and root rot fungi.**

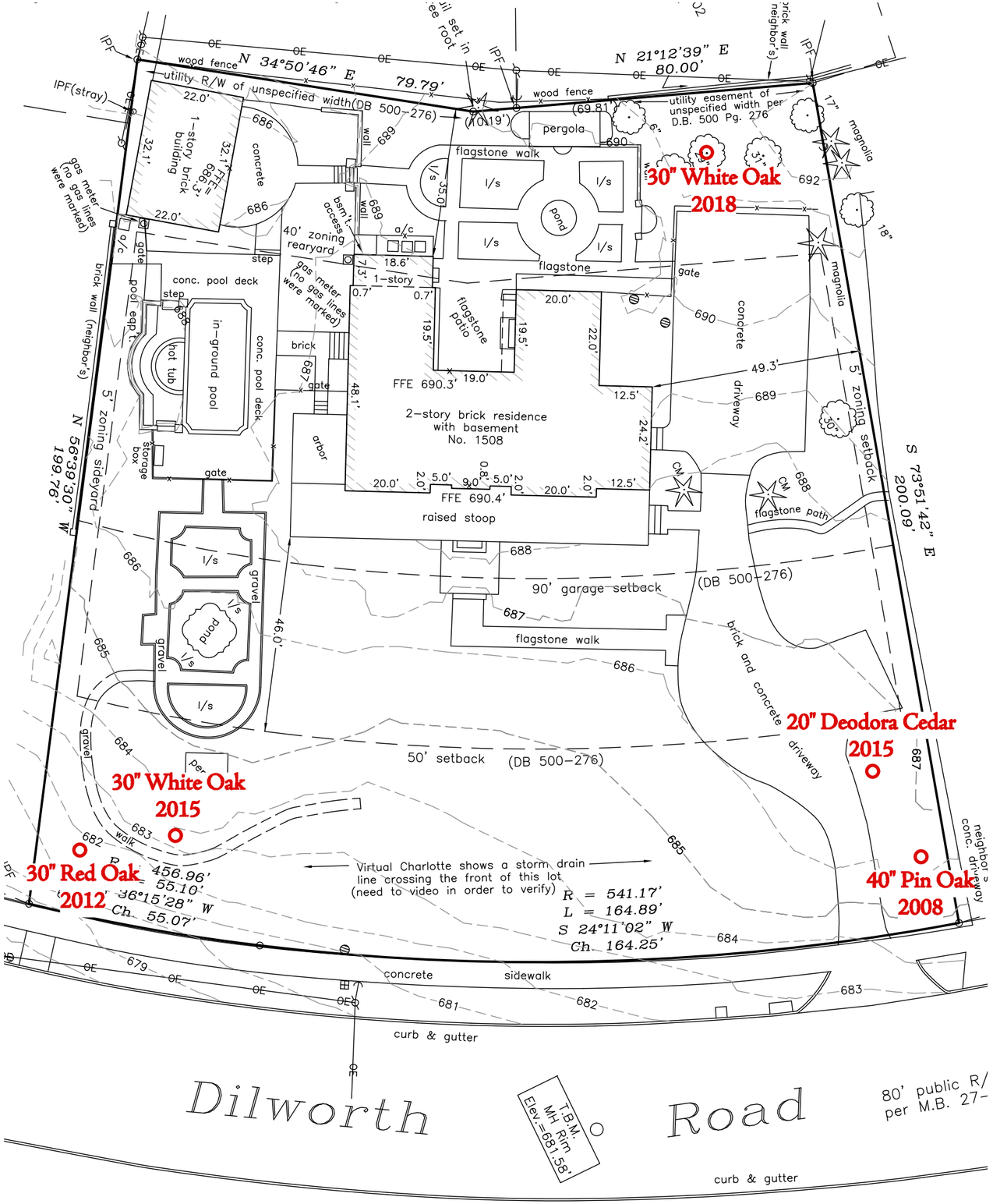
- **Red Oak – approx. 30”+ DBH declined and was removed in 2012. The tree was located at the front left corner of property, approx. 12ft from street and walk. Lesions were present, as well as butt and root rot fungi.**

- **White Oak – approx. 30”+ DBH declined and was removed in 2015. The tree was located at the front left of property, approx. 20ft from street and walk.**

- **Deodora Cedar – approx. 20”+ DBH declined and was removed in 2015. The tree was located at the right side of driveway at the front of property.**

- **White Oak – approx. 30”+ DBH declined and was removed in 2017. The tree was located at the end of the driveway at rear of property. Mechanical wounds and lesions were present, as well as butt and root rot fungi.**

Comments – The previous homeowners of 1508 Dilworth, Dr. James & Elizabeth Foster are quite passionate historical enthusiasts and were referred to Cadieu Tree Experts approx.1990, by local Dilworth neighbors. Cadieu Tree Experts was commissioned for all shade tree pruning and removal services, which were required on the property. Cadieu Tree Experts is also the company that performed the 2017 removal of the White Oak for you and Maureen, which is listed above. Please be advised that Cadieu Tree Experts is the most accurate source for information regarding the removal of trees listed above. All tree failures listed above were directly related to over mature canopies, without sufficient space for healthy root system structures, as well as other urban environmental stress factors, which caused significant vulnerability to naturally occurring pathogens, which further lead to vascular system failure and ultimately the loss of these highly valued shade trees. Your interest in appropriate reforestation is noble and must be carefully planned by a qualified landscape architect and implemented with regard to citywide canopy restoration efforts, guidelines, perspective street views and existing urban challenges. Implementing a plan for canopy recovery would encourage other homeowners to also help in this very important effort and would truly pay great reverence to the grand historical and cultural value being preserved by the current structural restoration and fortification project you and Maureen are currently so courageously and lovingly pursuing for your new home. These diligent and numerous efforts to preserve and protect this wonderful property is a marvelous asset for the future of the Historical Dilworth Neighborhood and the City of Charlotte as a whole, especially seeing forward to the next 50 years and beyond.



BARTLETT TREE EXPERTS
14627 Youngblood Road, Charlotte, North Carolina 28278 · (704)588-3713 · www.bartlett.com

February 18, 2018

Bryan & Maureen Stockton
1508 Dilworth Road
Charlotte, NC 28203

Re: Tree Inspection 2/15/18

On Thursday February 15, 2018, I inspected a number of trees throughout the property of 1508 Dilworth Road, Charlotte NC 28203, at the request of the property owner to evaluate current tree health condition. All locations are identified as facing from the street. Below are notes from my limited visual inspection.

45" DBH (diameter at breast height) tulip poplar at front yard, directly left of drive:
-Small / medium canopy with unbalanced canopy towards front yard
-Heavily compacted root zone under ½ tree due to driveway within 12" of root flare
-Reduce life expectancy due to long term root zone competition
-Increased potential for windrow / uprooting due to unbalanced crown
-No mitigation measures to significantly improve current conditions given age and size of tree

52" tulip poplar at center of front yard:
-Large canopy and wind sail force
-Several 2" diameter dead and broken / hanging limbs
-Windthrow is possible given large canopy size; pruning following arboricultural standards will likely not reduce failure potential significantly

41.5" white oak at front yard:
-Phytophthora stem canker on house side on lower stem / roof flare
-Two south side buttress roots have previous damage / decay that are callusing over
-Numerous old stem wounds with callus tissue in mid canopy that may hide internal stem cavity
-Several previous limb failures identified by current stub limbs in canopy

39.5" white oak at front left:
-Phytophthora cankers on lower stem and buttress roots
-Indications of root rot and missing bark on North side buttress roots
-Tall thin canopy that grew competing for sunlight as it situated between two larger canopied white oaks
-Upper canopy has a large previous stem failure wound, likely remaining cavity with high potential for stem failure
-Mitigation to reduce stem failure potential will result in loss of ~75% of canopy; entire tree removal may be required

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32" white oak at front left natural area:
-Significant Phytophthora canker residue on lower stem and buttress roots
-Numerous gall-like responsive growths on lower 20' of stem indicating likelihood of internal defects/cavity/strength loss
-North side lower stem (2-5') has loose, rotting and missing bark with active decay
-Given significance of Phytophthora, lower stem decay and lower stem galls, recommend entire tree removal to prevent unexpected tree failure

22.5 pine at front left side property border:
-Root flare / collar is buried and or non-existent which leads to increased potential for stem decay, rot, failure
-Entire upper canopy is severely unbalanced and growing towards South (neighboring property) and does not have any limbs growing over-center or on client's side of tree
-Given buried / non-existent root collar and severely unbalance crown, entire tree removal is recommended to prevent upper stem / canopy or entire tree failure

20" white oak at center of front natural area:
-Phytophthora cankers surrounding lower root flares and lower stem
-Large West side lower stem wound (2' tall, 1' wide) decaying at ground level with likely internal cavity
-Heavily arching off balanced canopy growing towards house due to shade from adjacent mature oaks
-Existing risk is somewhat low given overall size of tree, though continuing to increase as tree grows; Recommend entire tree removal given lower decay & cavity, and heavily off-balanced canopy

10" & 12" red maple at front center of house:
-Significant gloomy scale insect infection
-Previous yellow bellied sap sucker bird damage on stem, though no current damage noted

36" hackberry at right side house and driveway:
-Large canopy that is slightly off-balanced towards neighboring property
-Large low scaffold limb on North side with significant branch and tip weight; Recommend pruning to reduce weight and limb failure potential

17" post oak at far back right corner of property:
-Heavily unbalanced arching canopy due to shade from two adjacent mature oaks and continuous pruning by utility company to maintain utility line clearance
-Given heavily unbalanced crown and lack of corrective pruning options, recommend entire tree removal to prevent unexpected failure of upper canopy, stem or entire tree

THE F.A. BARTLETT TREE EXPERT COMPANY
SCIENTIFIC TREE CARE SINCE 1907
Corporate Office: P.O. Box 3067, Stamford, Connecticut 06905-0067 · (203) 323-1131 Fax (203) 323-1129

BARTLETT TREE EXPERTS
14627 Youngblood Road, Charlotte, North Carolina 28278 · (704)588-3713 · www.bartlett.com

32.5" white oak and 34" red oak at back right of house, end of driveway:
-See notes previous provided on report dated February 2, 2018

31" magnolia at back center:
-Multi-stem tree straddling property line as indicated by property nail in lower stem on South side
-South side mid-level canopy has sustained repeated pruning by utility company to maintain utility line clearance
-Tree has existing hand spliced cable between at least 2 of the stem; recommend future climbing inspection to verify functionality and repair, replace, add or raise supplemental support cables in tree as needed

These notes represent a limited inspection of the trees and indications that were observed and visual at the time of inspection. Tree defects can be and are numerous in nature and not always able to be seen outwardly. Any concern in tree health or risk should be evaluated independently and include appropriate mitigation actions.

All trees inherently pose a certain degree of hazard and risk from breakage, failure or other causes and conditions. Recommendations that are made are intended to minimize or reduce such hazardous conditions. However, there can be no guarantee that efforts to discover or correct unsafe conditions will prevent future breakage or failure, nor can there be any guarantee that all hazardous conditions have been detected. The client should not infer that a tree is safe either because work has been done to reduce risk, or because no work has been recommended on a specific tree.

If this level of risk is not acceptable, mitigation actions, up to and including complete tree removal, should be taken as soon as practical to reduce the risk to an acceptable level.

Respectfully,

Austin K. Proctor

Austin K. Proctor
ISA Certified Arborist SO-2392a
Certified Tree Risk Assessor #1637
Certified Tree Care Safety Professional #778

THE F.A. BARTLETT TREE EXPERT COMPANY
SCIENTIFIC TREE CARE SINCE 1907
Corporate Office: P.O. Box 3067, Stamford, Connecticut 06905-0067 · (203) 323-1131 Fax (203) 323-1129

BARTLETT TREE EXPERTS
14627 Youngblood Road, Charlotte, North Carolina 28278 · (704)588-3713 · www.bartlett.com

February 2, 2018

Bryan & Maureen Stockton
1508 Dilworth Road
Charlotte, NC 28203

Re: Tree Inspection 2/1/18

On Thursday February 1, 2018, I inspected two oak trees at the back right (NW) of the property (as facing from the street) located at 1508 Dilworth Rd, Charlotte, NC 28203. The two trees inspected were a 32.5" DBH (diameter at breast height) white oak and a 34" DBH red oak.

The white oak is a tall, approximately 75'+ tree, with an unbalance crown, with the majority of the canopy and branching occurring towards the back right of the house and backyard, most likely due to the overhead above ground utility lines and associated pruning that has occurred over the trees life to maintain utility clearance. The lower stem / buttress root area has 1 notable undermining buttress root with decay present on the ground side, and was measured to be decayed 10", on the SW side of the tree. On the NE side of the root flare was a pronounced fungal conk (mushroom) that appears to be Armillaria spp.

The red oak is also approximately 75'+ tall, and has an unbalance crown, with the majority of the canopy and branching occurring towards the driveway, most likely due to the overhead above ground utility lines and associated pruning that has occurred over the trees life to maintain utility clearance. This tree has evidence on the lower buttress roots of previous fungal conks (mushrooms) evident from residue on the bark, on the SW and Western sides, though no visible conks were present at the time of inspection.

Given the unbalanced crown of both trees along with existing and previous signs of root and butt rot fungi, unexpected failure of either or both of these trees is greater than healthy trees without predisposing risk factors. Unfortunately given the age and size of the trees, mitigation options are limited to maintaining current health condition and will not rectify or improve the existing conditions. If this level of risk is not acceptable, mitigation actions, up to and including complete tree removal, should be taken as soon as practical to reduce the risk to an acceptable level.

Respectfully,

Austin K. Proctor

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Agent – Brock Rigby 803-448-1461

Certification & Licensing - SC # C0014104 NC # 026-26240

Site Analysis Report : Overview of trees located at end of driveway, rear north corner of property.

Request/Inquiry - Please review all trees located at end of driveway. There was a trio of larger Oaks, which were all close in proximity with each other and it is these trees that we are most concerned about. The middle Oak was in very poor condition with large dead limbs and was removed last year, by request of a neighbor due to safety concerns. You referred us to Cadieu Tree Experts and the tree was removed. Please examine closely the two Oaks remaining from the former trio. My wife and I are very concerned with safety and how they are leaning precariously. The one Oak is leaning straight towards our house and it appears it may fall, which would destroy a large portion of our home. The other Oak is leaning towards our neighbor's, their home and garage, are in direct line of this tree, which would also damage other trees in this area. We would very much like to avoid any personal injury or damage to property and also prevent other valued and healthy trees from being damaged. Please advise us on these matters.

Items to be Observed - (12) trees located in the 20'x 45'area. Examine safety concerns with tree lean and provide a brief review of field observations for all trees located in the specified area. Existing woody ornamental shrubs will not be included.

Field Observation(s) – Excluding the magnolias and one of the listed post oaks, most tree canopies in this area have been affected by power line pruning, which certainly has not benefited these trees.
1 - 30" + White Oak – heavy lean, old wounds, lesions, unbalanced canopy **and reproductive bodies of root & butt rot fungi**
1 - 30" + Red Oak – noticeable lean, old wounds, lesions, unbalanced canopy **and reproductive bodies of root & butt rot fungi**
2 - 18" + Post Oak – trees appear healthy with no physical concerns observed at trunk or root flares
1 - 15" + Greenback Magnolia – no physical concerns observed at trunk or root flares
1 - 12" + Greenback Magnolia – no physical concerns observed at trunk or root flares
1 - 10" + Greenback Magnolia – no physical concerns observed at trunk or root flares
1 - 6" + Cherry – no physical concerns observed at trunk or root flares
1 - 4" + Cherry – no physical concerns observed at trunk or root flares
2 - 6" + Holly – no physical concerns observed at trunk or root flares
1 - 4" + Holly – no physical concerns observed at trunk or root flares

Comments – The lean of these two trees is certainly concerning and the loss of the center tree canopy has left the remaining (2) affected Oaks unbalanced and more susceptible to wind damages and blow-down. Lesions and old wounds are present on both the White Oak and Red Oak, which are concerns, but not all that uncharacteristic with geriatric trees and their existence in the urban landscape. What is more specifically problematic is that these two of the twelve trees are hosts to the reproductive bodies of root and butt rot fungi, which is currently present and identified. These trees are located in a confined 20'x 45'area that is directly related to several family residences, other structures and frequently traveled locations by persons, which are all additional concerns**. Please be advised. Ornamental Gardens llc. recommends immediate consultation with a qualified professional arborist, for further absolute and positive identification of these Armillaria spp. reproductive bodies, which are present. Referencing NC State University Plant Pathology Extension Services data, this is a very serious matter and it is recommended that the trees should be removed, as soon as possible. NC State University is our regulation authority and the most knowledgeable resource to be obtained, on all agricultural, horticultural and arboricultural information and practices. It is strongly advised that any and all concerned persons or parties involved with matters regarding the safety of these trees, please refer to attached documents for detail description and be informed of critical information provided by NC State Plant Pathology Extension Services.**

My knowledge of the recent history of the trees begins years ago when damages were first discovered by the previous home owners, summer of 2001. The area was overcrowded and it was discovered that overhead rotor type irrigation had been installed in the area. The trees had physical evidence of mechanical damage on the trunks and multiple root flares. These wounds developed bacterial wet wood and small lesions were forming. These issues were being exacerbated by improper overhead irrigation and additionally the trees in this area are spatially challenged and overcrowded. At the time there were (3) large Oaks and several smaller trees with physical damage. Bacterial wet wood and lesion sites were thoroughly cleaned and sterilized. Irrigation was promptly modified to drip type without any further disturbance of root systems. Several smaller affected trees and woody ornamental shrubs were removed to improve air flow and reduce root zone competition with desirable trees. Most of the lesions began to dry by fall 2002 and recovery was hopeful for most of the affected trees. Healing and wound wood were celebrated in the coming years, especially with regard to the trunks of the larger Oaks. The previous homeowners, as well as yourselves, have been very compassionate with regard to tree species preservation and have regularly consulted with and commissioned only highly recommended and qualified professional arborists to provide shade tree services on the property. Summer of 2016 the center tree of the Oak trio declined and the tree was removed spring of 2017.

Date - _____ Agent - _____

College of Agriculture and Life Sciences
Plant Pathology Extension
North Carolina State University

Root and Butt Rot of Oaks

L. F. Grand, Research Plant Pathologist
R. K. Jones, Extension Plant Pathologist

[Cause] [Hosts] [Symptoms] [Signs] [Control] [Other Links]

Within the past decade there has been an increase in root and butt rot of old oak trees in North Carolina, especially in urban landscapes, parks and along streets. Although several species of oak have been involved, willow oak and water oak are the most frequently affected. These two oak species were commonly planted along streets and in the landscape in the early to mid 1900s, and normally live 65-80 years. These trees are succumbing to a variety of problems as they reach their life-expectancy.

Cause

Several species of wood decay fungi cause root and butt rot of oaks. In the southeastern United States, the following fungi have been reported on different oak species: *Armillaria* spp., *Bondazewia berkeleyi* (*Polyporus berkeleyi*), *Ganoderma lucidum* (*curtisii*), *Grifola frondosa* (*Polyporus frondosa*), *Inonotus dryadeus* (*Polyporus dryadeus*), *I. dryophilis*, *Laetiporus sulphureus*(*Polyporus sulphureus*), and *Meripilus sumstinei* (*Polyporus giganteus*). *Inonotus dryadeus* is one of the most common of these wood decay species.

Hosts

Most oak species are susceptible to root and butt rot by the various species of fungi listed above. The following oak species have been reported as hosts for the most commonly encountered fungus, *Inonotus dryadeus*: *Quercus alba* (white), *Q. coccinea* (scarlet), *Q. nigra* (water), *Q. phellos* (willow), *Q. prinus* (chestnut), *Q. rubra* (red), *Q. shumardii* (Shumard), *Q. stellata* (post), and *Q. velutina* (black). Older long-lived oak species (white and red oaks) and short-lived species (willow and water oaks) are most frequently affected.

Symptoms

Blow-down during rainstorms or windy periods is often the first and only indication of root rot. Sparse foliage with limb dieback also may be symptomatic of root rot but are not consistently associated with the disease prior to blow-down. Advanced decay of the larger roots, especially the tap or anchor roots, is evident after blow-down. Decay may extend from a few inches to several feet into the butt portion of the tree, depending on the species of fungus involved. Decay may be of the white rot type, characterized by whitish to straw-colored, wet, stringy wood; or of the brown rot type, characterized by brown, dry, crumbly wood often with horizontal and vertical fissures. See Table 1 for the types of rots produced by the various fungi associated with root and butt rot of oaks.

Signs

One of the most important indicators of the presence of root rot prior to blow-down is the presence of basidiocarps (reproductive bodies) of the fungi. These may be of two general types. One type, usually referred to as conks, or shelf or bracket fungi, is more or less woody in texture, shelf-like, with or without a stem, and with tiny pores on the underside. The basidiocarps of the second type are mushrooms, with stems and caps with gills on the underside. The basidiocarps are usually formed at or near the base of the tree, but also may be formed 3 to 6 feet or more from the base, coming from decaying roots. General descriptions of the more common species of fungi associated with root and butt rot of oaks are given in Table 1.

Studies have indicated that severity of decay can be estimated by: 1. Presence of basidiocarps; 2. Number of basidiocarps-the greater the number, the more decay; 3. Size of basidiocarps-the larger the basidiocarp of a given species, the more decay; and 4. Distribution of basidiocarps around the tree-the larger the percentage of the circumference found, the more decay.

In addition to the presence of basidiocarps, root rot caused by *Armillaria* spp. can be identified by the presence of white, fan-shaped mats of fungal tissue (mycelium) beneath the bark at the base of the tree or on larger roots, and by black, shoestring-like structures (rhizomorphs) that can be found beneath and on the surface of the bark and in the soil.

Control

Prevention is difficult due to the longevity of the oaks and the locations where the disease is frequently found. The fungus enters the tree through wounds so any precaution that would reduce injuries to the roots or base of the tree is advisable. However, prevention of injuries over several decades in landscape situations is difficult or even impossible.

Prompt action upon diagnosis of the disease is paramount. Since positive diagnosis is dependent on presence of the basidiocarps, decay is usually well advanced at this time. Removal of the affected tree to avoid damage to surrounding property is recommended as soon as possible. Blown-down trees can cause considerable damage to property.

Table 1. Description of basidiocarps and type of decay produced by the more common species of fungi causing root and butt rot of oaks.

Fungus	Type of rot	Description	
Armillaria spp.	White, yellow brown, stringy	Brown mushroom, in clusters, with a ring on stem	
Bondarzewia berkeleyi	White, stringy	Large, multibranched, cream top	
Ganoderma lucidum	White	Orange-maroon, "varnished" top, hard, with or without stem	
Grifola frondosa	White	Large, multibranched, gray top, fibrous	
Inonotus dryadeus	White	Very large, cream top becoming brown	
Inonotus dryophilus	White	Brown to reddish brown, 3-6 feet up the trunk	
Laetiporus sulphureus	Brown cubical	Large, bright yellow to yellow orange	
Meripilus sumstinei	White	Large, multibranched, gray to brown top	


Tree Has Been Removed
Trees to be Removed
New Trees to be Planted
(2) Magnolias - Utility Friendly
Tree to Remain
Tree To Be Removed
New Trees to be Planted
(3) White Oaks
Trees to Remain
Berkeley Ave
Lexington Ave
Dilworth Rd
Linganore Pl
Belgrave Pl
Romany Rd
Dilworth Rd W
Dilworth Rd E


Existing Trees
Tree to be Removed
New White Oak
New Magnolias
(Utility Friendly)
Existing Hackberry
New 3-Car
Garage
Tree to be Removed
Parking/
Turnaround
Area
Existing
Magnolia
Lawn
Existing Driveway
Terrace
Existing House
Existing
Poolhouse
Lawn
Existing
Pool
Lawn
New White Oak
New White Oak
Dilworth Rd
Dilworth Rd
Dilworth Rd
Dilworth Rd