



# Tree Preservation and Mitigation Municipal Policy Committee

April 23, 2024

## **Planning and Development Services**

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# Topics

- Background
- Current Standards
- Previous Discussion Items
- Current Considerations
- Questions and Recommendations

# Background



# Protected and Bonus Trees



## UNIFIED DEVELOPMENT CODE INFORMATION BULLETIN

### TREE PRESERVATION AND REPLACEMENT

The following table contains the Cross Timbers Oaks List referenced in Section 5.2.3.A.5, *Determining Tree Points Earned*.

**Cross Timbers List**

Trees	
Post Oak	<i>Quercus stellata</i>
Blackjack Oak	<i>Quercus marilandica</i>
Texas Oak	<i>Quercus buckleyi/Quercus texana</i>

The following table contains the Bonus Tree List referenced in Section 5.2.3.A.5, *Determining Tree Points Earned*.

**Bonus Tree List**

Canopy Trees			
Cedar Elm	<i>Ulmus crassifolia</i>	American Elm	<i>Ulmus americana</i>
Eastern Red Cedar	<i>Juniperus virginiana</i>	Black Walnut	<i>Juglans nigra</i>
Eve's Necklace	<i>Sophora affinis</i>	Bur Oak	<i>Quercus macrocarpa</i>
Live Oak	<i>Quercus virginiana</i>	Chinquapin Oak	<i>Quercus muehlenbergii</i>
Rusty Blackhaw	<i>Viburnum rufidulum</i>	Gum Bumelia	<i>Bumelia lanuginosa</i>
Western Soapberry	<i>Sapindus drummondii</i>	Pecan	<i>Carya illinoensis</i>
Thornless Honeylocust	<i>Gleditsia triacanthos vinermis</i>	Shumard Red Oak	<i>Quercus shumardii</i>

Understory Trees			
Carolina Buckthorn	<i>Rhamnus caroliniana</i>	Common Persimmon	<i>Diospyros virginiana</i>
Deciduous Holly	<i>Ilex decidua</i>	Flame-leaf Sumac	<i>Rhus lanceolata</i>
Hercules Club	<i>Zanthoxylum davaherculis</i>	Redbud	<i>Cercis Spp.</i>
Mexican Plum	<i>Prunus mexicana</i>		

For purposes of administering UDC Section 5.2.3, Tree Preservation and Replacement, a "Protected Tree" means any tree not included in the Prohibited Species List, below.

The following table contains the list of prohibited species referenced in Section 5.2.3.A.2, *Exceptions*. Plants listed in this table are not subject to tree point requirements and may not be used to fulfill any planting requirements.

**Prohibited Species List**

Trees			
Arborvitae	<i>Thuja occidentalis</i>	Arizona Ash	<i>Fraxinum velutina "Arizona"</i>
Callery Pear	<i>Pyrus calleryana</i>	Chinese Tallow	<i>Sapium sebiferum</i>
Cottonwood	<i>Populus deltoides</i>	Lombardy Poplar	<i>Populus nigra italica</i>
Chinaberry	<i>Melia azedarach</i>	Mimosa	<i>Albizzia julibrissen</i>
Chinese Parasol	<i>Firmiana simplex</i>	Siberian Elm	<i>Ulmus pumila</i>
Mulberry	<i>Morus alba</i>	Sawtooth Oak	<i>Quercus acutissima</i>
Silver Maple	<i>Acer saccharinum</i>	Tree of Heaven	<i>Ailanthus altissima</i>
Hackberry	<i>Celtis occidentalis</i>	Honey Locust	<i>Gleditsia triacanthos</i>
Catalpa	<i>Catalpa bignonioides</i>		

Shrubs			
Euonymus	<i>Euonymus japonicus</i>	Privet Species	<i>Ligustrum sp.</i>
Pittosporum	<i>Pittosporum tobira</i>	Ligustrum	<i>Ligustrum japonicum</i>
Oleander	<i>Nerium oleander</i>	Loquat	<i>Eriobotrya japonica</i>

The City of Arlington Unified Development Code Information Bulletin series provides the public with general information on land development standards. It is not intended to be a complete statement of all applicable regulations. Individuals are encouraged to contact the Planning and Development Services Department at [planningdevelopment@arlingtontx.gov](mailto:planningdevelopment@arlingtontx.gov) or 817-459-6502 for complete requirements. | November 2020



# Previous Considerations for Tree Preservation

- Percentage-based tree preservation requirements for multi-family and non-residential sites.
- Additional point deductions for the removal of protected oak trees.
- Additional assessments for the unauthorized removal of protected trees.

# Percentage-based tree preservation requirements for multi-family and non-residential sites

## **CURRENT RESIDENTIAL STANDARDS**

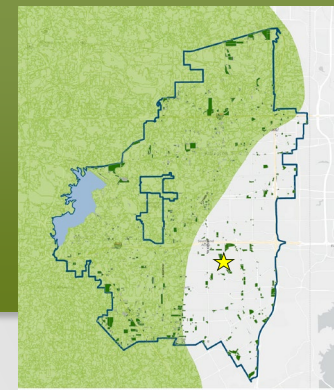
- Minimum 35% preservation of protected trees.

## **PROPOSED MULTI-FAMILY AND NON-RESIDENTIAL STANDARDS**

- Minimum 25% preservation of protected trees.

# Examples

## Arlington Business Center



REMAIN	REMOVE	Diameter	Species	Deductions (x0.5 or x0)	Preservation Bonus (x1 or x2)	Total preservation points
	X	3,557	Hackberry			0
	X		Mesquite			0
	X		Dead			0
	X	35	Pecan	-35	0	-35
	X	8	Live oak	-8	0	-8
<b>TOTAL</b>		<b>3,600</b>	<b>5</b>	<b>-43</b>	<b>0</b>	<b>-43</b>

Proposed protection requirement: **25%**

Required preservation: **151 caliper inches**

Required mitigation: **324 caliper inches**

CENTER STREET INDUSTRIAL TREE MITIGATION DATA	
SUBJECT LOT AREA	1,528,987 S.F., 35.331 ACRES
TREE SURVEY SAMPLE AREA (COMBINATION OF THREE AREAS ACROSS THE SITE)	109,301 S.F., 2.509 ACRES
NON-PROTECTED INCHES SURVEYED IN SAMPLE AREA	3,600 CALIPER INCHES
PROTECTED INCHES SURVEYED IN SAMPLE AREA	43 CALIPER INCHES
CALIPER INCHES PER ACRE WITHIN TREE SURVEY SAMPLE AREA	17.1383 CALIPER INCHES PER ACRES
SAMPLE RESULTS EXTRAPOLATED TO THE FULL SITE	17.1383 X 35.331 = 605.5 PROTECTED INCHES TOTAL OVER THE WHOLE SITE
MITIGATION REQUIREMENT BASED ON TREE SAMPLE SURVEY	475 PROTECTED INCHES REQUIRING MITIGATION OVER THE WHOLE SITE
AT THE TIME OF THIS SUBMISSION, GRADING PLANS FOR THE PROJECT HAD NOT BEEN COMPLETED. THIS PLAN ASSUMES ALL PROTECTED TREES WILL BE REMOVED AND WILL REQUIRE MITIGATION	

# Additional point deductions for the removal of protected oak trees.

## PROPOSED MULTI-FAMILY AND NON-RESIDENTIAL STANDARDS

- Tree points calculations:
  - Less the removal of protected trees, calculated at 1.5 points for every caliper inch removed.
    - Payment of 1.5 times into tree replacement fund for the removal of protected trees.

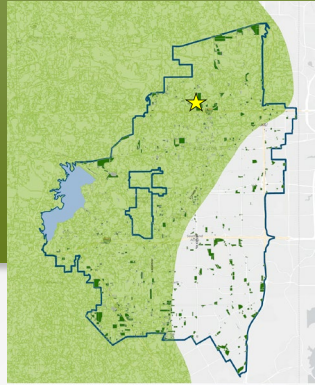
**OR**

- Reduce protected tree preservation bonus points to 1.5 times the caliper inches preserved instead of double points.

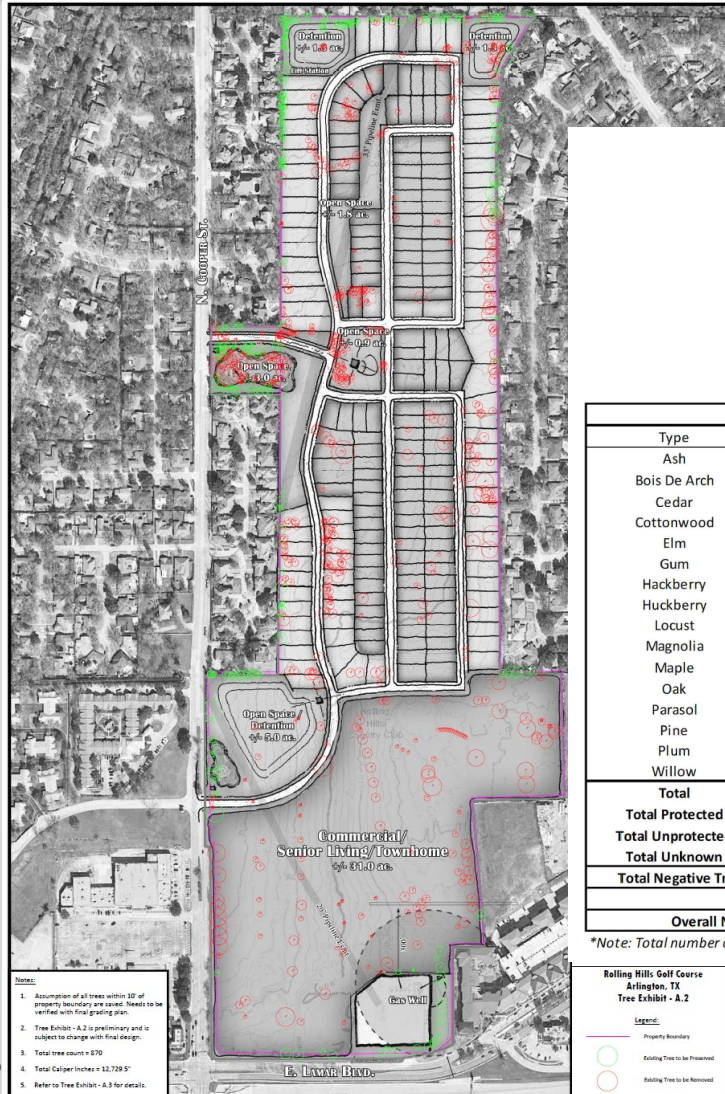
- (i) Additional tree points may be earned for the following:
- (1) Cross Timbers oaks: Post oak, blackjack oak, or Texas oak trees shall earn two additional tree points per caliper inch preserved.
  - (2) For all other trees:
    - (a) Bonus trees: Native species as identified on the Bonus Tree List in the UDC User's Guide, shall earn one-half additional tree points per caliper inch planted or preserved.
    - (b) Trees meeting the definition of "significant stand" and identified on the landscape plan as "to remain" shall earn one-half additional tree points per caliper inch preserved.



# Examples Rolling Hills



**Rolling Hills Golf Course  
Arlington, TX  
Tree Data Exhibit - A.3**



Tree List Caliper Inches			
Type	Total Caliper Inches	Preserved Caliper Inches	Protected/Unprotected
Ash	194	27	Unknown
Bois De Arch	16	None	Unknown
Cedar	1025.5	310.5	Unknown
Cottonwood	89	20	Unknown
Elm	3528.5	1007	Unknown
Gum	36	None	Unknown
Hackberry	240	84	Unknown
Huckberry	7	7	Unknown
Locust	8	8	Unknown
Magnolia	104	None	Unknown
Maple	16	None	Unknown
Oak	7371.5	2532.5	Unknown
Parasol	16	8	Unknown
Pine	38	None	Unknown
Plum	22	None	Unknown
Willow	18	None	Unknown
<b>Total</b>	<b>12730</b>	<b>4004</b>	
<b>Total Protected</b>	<b>11984</b>	<b>3850</b>	
<b>Total Unprotected</b>	<b>563</b>	<b>63</b>	
<b>Total Unknown</b>	<b>183</b>	<b>7</b>	
<b>Total Negative Tree Points (Total Caliper Inches Protected x 0.35) =</b>			<b>4194</b>
<b>Total Positive Tree Points =</b>			<b>3850</b>
<b>Overall Negative Tree Points, Mitigation Needed =</b>			<b>344</b>

\*Note: Total number of trees = 870

Rolling Hills Golf Course  
Arlington, TX  
Tree Exhibit - A.2

Legend:

- Property Boundary
- Existing Tree to be Preserved
- Existing Tree to be Removed

Unknown if all Oaks are Protected Oaks

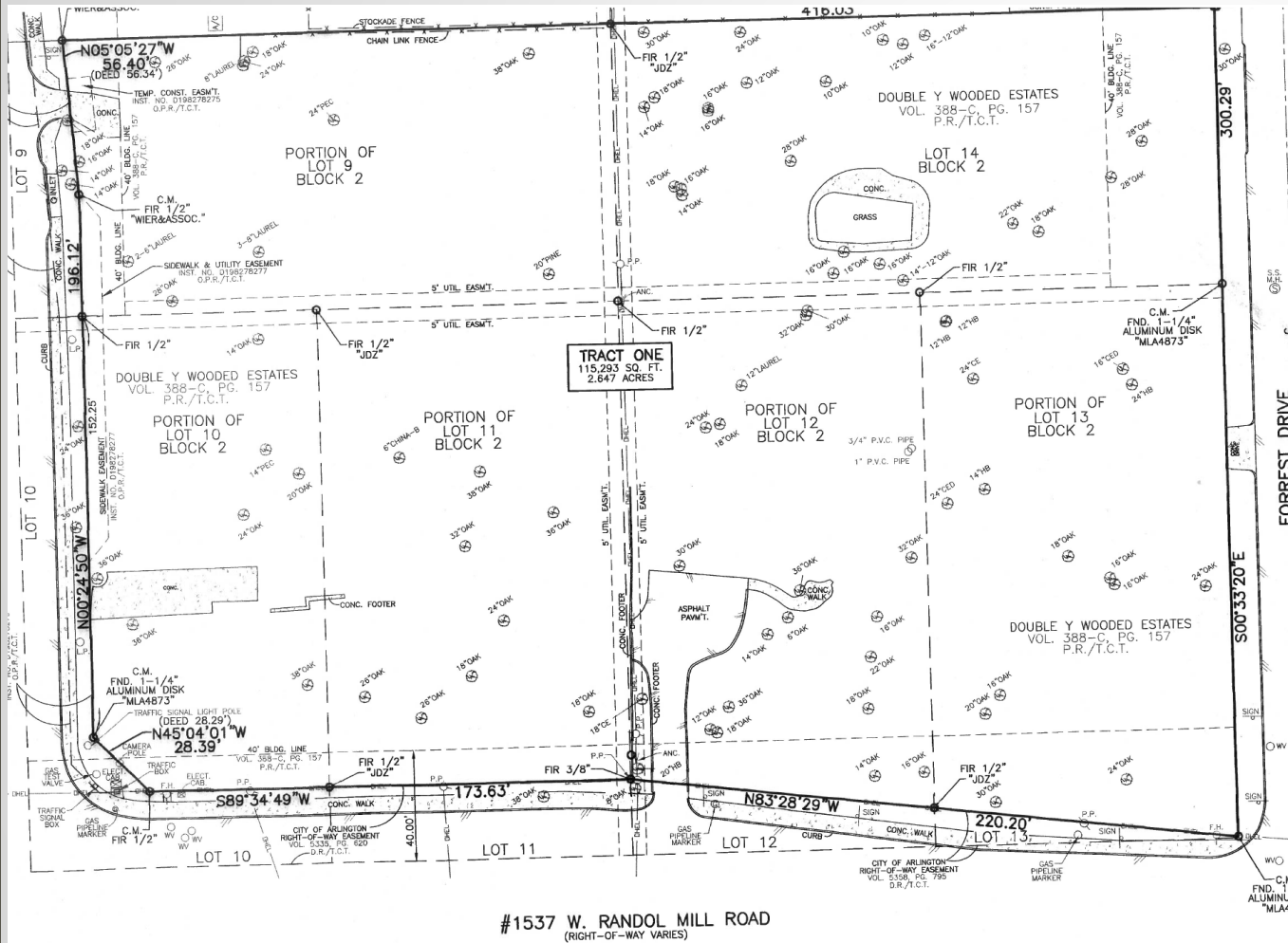
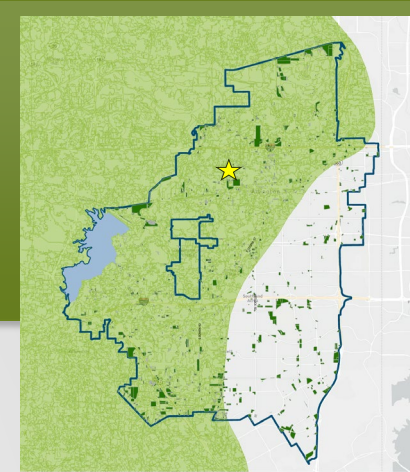
REMAIN	REMOVE	Diameter (dbh)	Species	Deductions (x0.5 or x0)	Preservation Bonus (x1 or x2)	Total preservation points
X		27	ASH	0	27	27
	X	167	ASH	-167	0	-167
X		311	CEDAR	0	311	311
	X	715	CEDAR	-715	0	-715
X		1,007	ELM	0	1,007	1,007
	X	2,522	ELM	-2,522	0	-2,522
X		0	GUM	0	0	0
	X	36	GUM	-36	0	-36
X		0	MAGNOLIA	0	0	0
	X	104	MAGNOLIA	-104	0	-104
X		0	MAPLE	0	0	0
	X	16	MAPLE	-16	0	-16
X		2,533	OAK	0	5,065	5,065
	X	4,839	OAK	-7,259	0	-7,259
X		0	PINE	0	0	0
	X	38	PINE	-38	0	-38
X		0	PLUM	0	0	0
	X	22	PLUM	-22	0	-22
<b>TOTALS</b>		<b>12,334</b>	<b>9</b>	<b>-10,878</b>	<b>6,410</b>	<b>-4,469</b>

Percent required: **35%**  
Percent preserved: **32%**

Percent obtained (-0.5/2.0 protected tree rule): **-37%**  
Percent obtained using 1.5 protected tree bonus: **5%**

# Examples

## 1537 W Randoll Mill (non-residential)



Diameter	Species
1,594	OAKS
78	BONUS
100	PROHIBITED/OTHER
<b>1,792</b>	<b>TOTAL</b>
1,672	Quality Trees
<b>418</b>	<b>25% Protection</b>
<b>1,254</b>	<b>Mitigation Caliper Inches</b>

**-0.5/+2 point**  
 proposed rule for protected trees requires saving **800 +/- caliper inches** to reach 25% protection.



Reducing Protected tree bonus points to **1.5** with no removal deduction, would require saving **279 caliper inches**.

#1537 W. RANDOL MILL ROAD  
 (RIGHT-OF-WAY VARIES)

# Additional Assessments for Unauthorized Removal

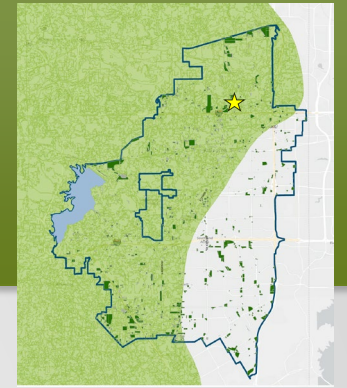
Assess a penalty of **triple** the mitigation fee for unauthorized removal.

- Current mitigation fee is \$200 per caliper inch.
- Proposed triple the fee for **unauthorized** removal to **\$600** per caliper inch for ALL TREES.

In 2009, Arlington Lodging, LLC removed 2,622 tree caliper inches without a permit.

- Then mitigation fee was \$100 per caliper inch.
- They mitigated for 1,898 caliper inches.
- Payment made into the Tree Fund: \$189,800
- Proposed \$600 per caliper inch **unauthorized** removal fee: **\$1,138,800**

# 2009 Unauthorized Removal



2007

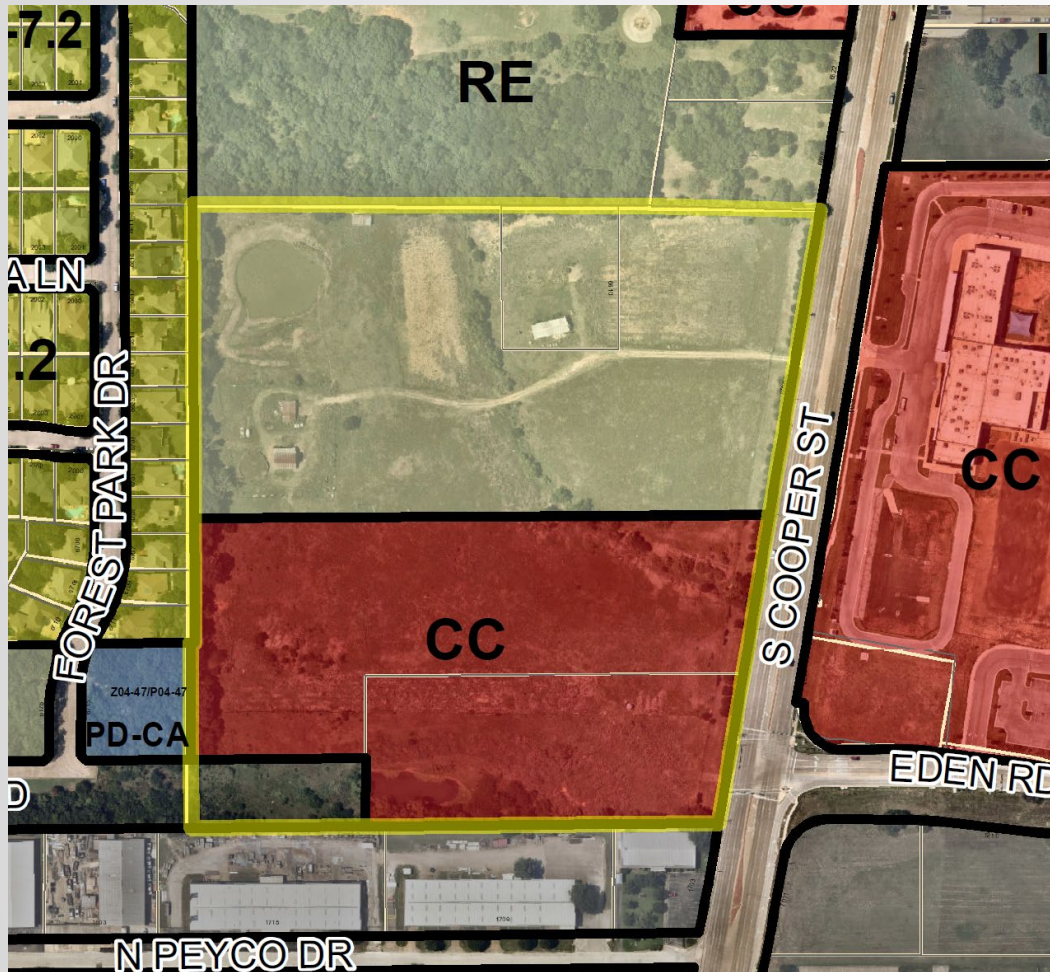


2009



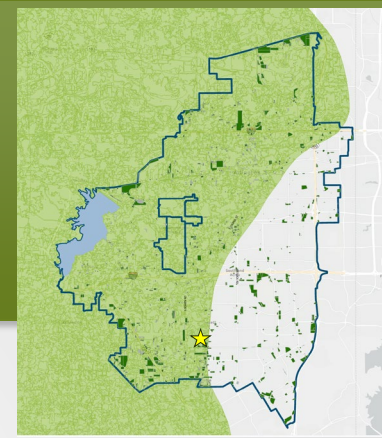
2024

# Eden Cooper (John Foster Site)



- Thanksgiving Weekend 2010
- Clear-cut site
  - Northern parcel zoned Agriculture
  - Southern parcel zoned Community Commercial
  - Mitigated thru tree replacement 4" live oaks on perimeter of southern parcel only

# Eden Cooper (John Foster Site)



2009



2011

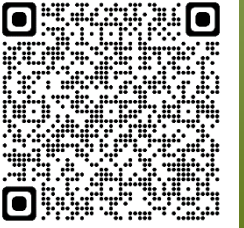


2024

# Future Considerations for Tree Preservation

- Mandatory protections for trees of a certain size and species.
- Tree canopy coverage goals.
- Updating Purpose and Intent statement in UDC regarding tree preservation.
- Mandating the preservation of stands in the interior of sites.

# Historic Trees

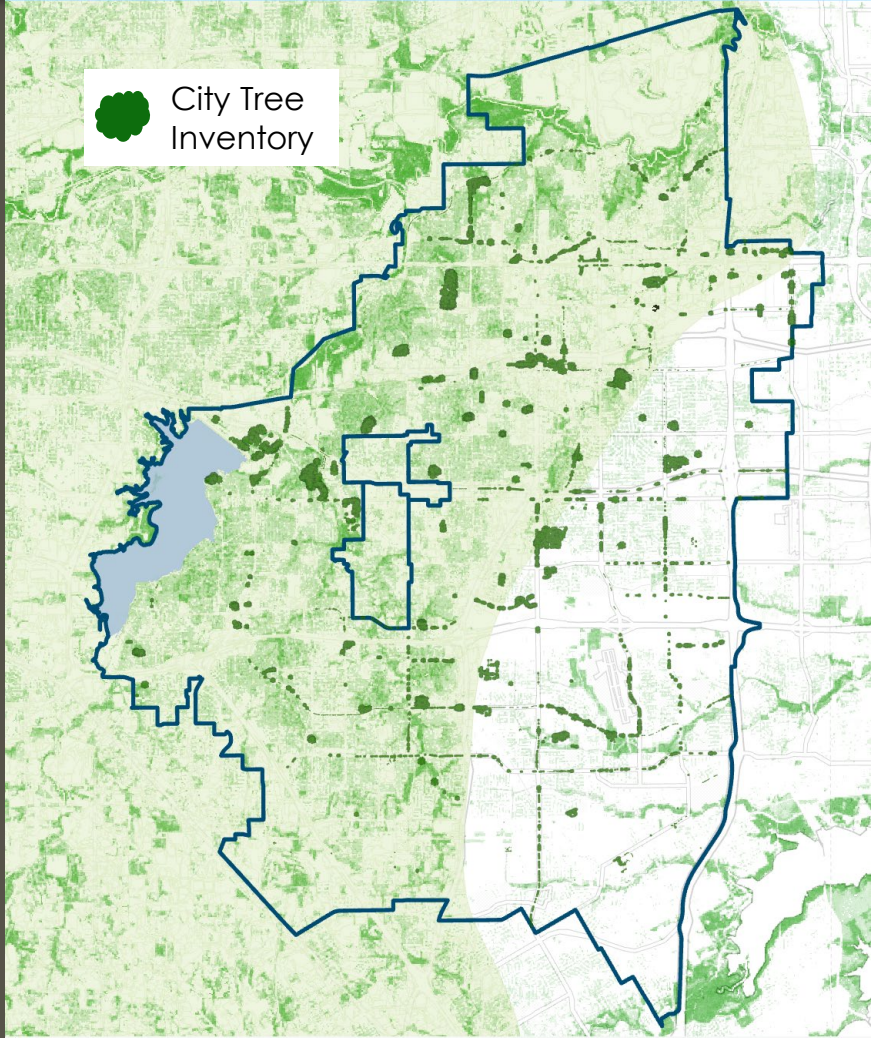


## The Old Caddo Oak

- A 200+ year old Post Oak
- Located in the Sheri Capehart Nature Preserve
- Placed in the Texas Historic Tree Register in 2019 as a recognized Historic Tree



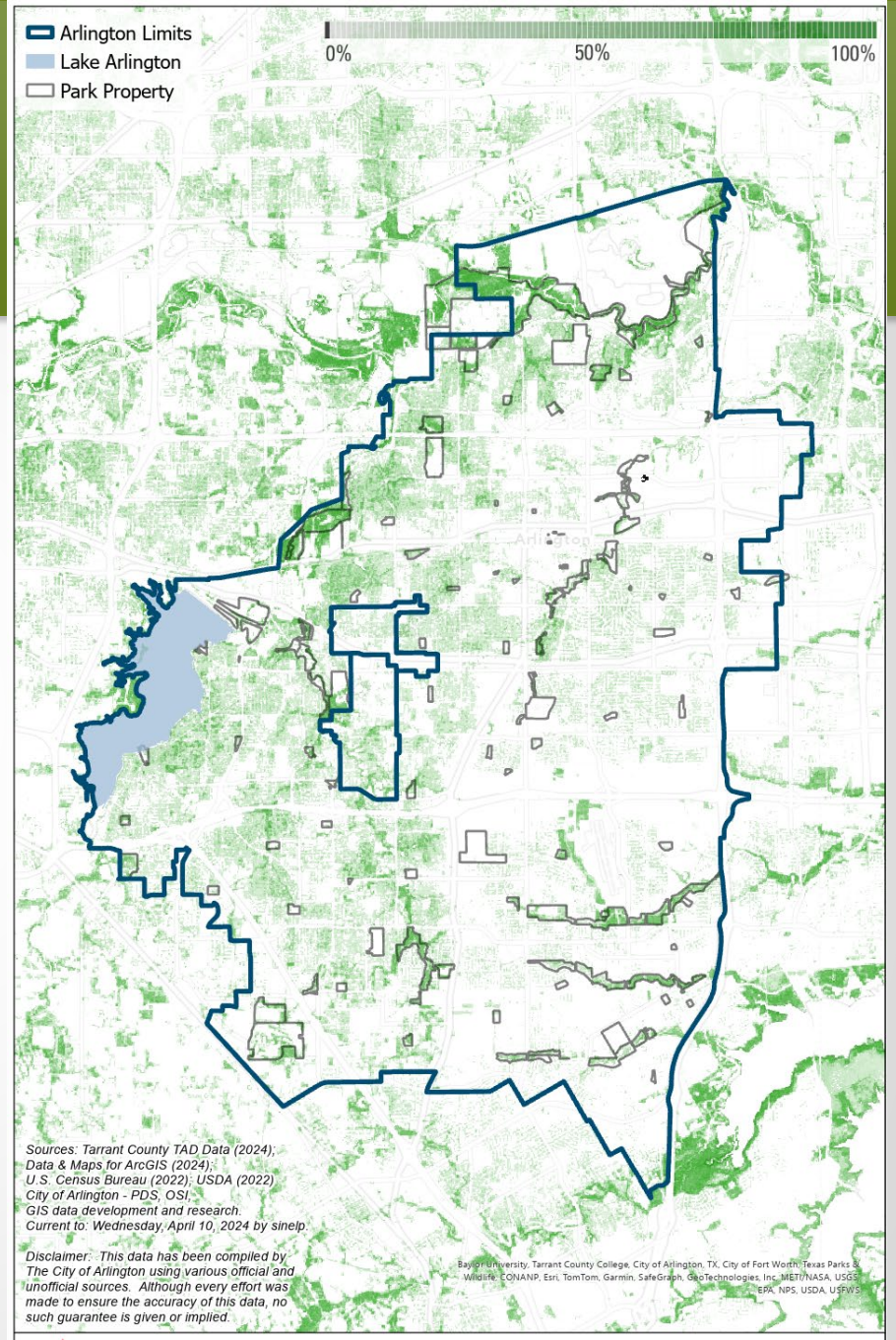
# Tree Canopy Coverage



**Citywide: 22.5%**



**Parks: 57%**



Sources: Tarrant County TAD Data (2024);  
 Data & Maps for ArcGIS (2024);  
 U.S. Census Bureau (2022); USDA (2022)  
 City of Arlington - PDS, OSI,  
 GIS data development and research.  
 Current to: Wednesday, April 10, 2024 by sineip.

Disclaimer: This data has been compiled by  
 The City of Arlington using various official and  
 unofficial sources. Although every effort was  
 made to ensure the accuracy of this data, no  
 such guarantee is given or implied.

Baylor University, Tarrant County College, City of Arlington, TX, City of Fort Worth, Texas Parks &  
 Wildlife, TCOMAP, Esri, TomTom, Garmin, SafeGraph, GeoTechnology, Esri, NPS, USDA, USFWS



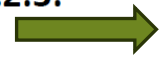
**Tree Canopy Coverage**

0 0.5 1 2 3 4 Miles



# Current Tree Preservation Purpose Statement

## 5.2.3. TREE PRESERVATION AND REPLACEMENT



### A. Non-residential and Mixed-Use Development: Tree Preservation Requirements

#### 1. Purpose and Applicability

This section provides a methodology for tree removal and replacement. The intent is to preserve certain size trees and/or require that their removal shall be mitigated through replacement. This section is applicable to all non-residential and mixed-use development, including non-structural improvements such as parking lots, site layouts, landscape setbacks, and buffer yards.

### B. Residential Development: Tree Preservation Requirements

#### 1. Applicability

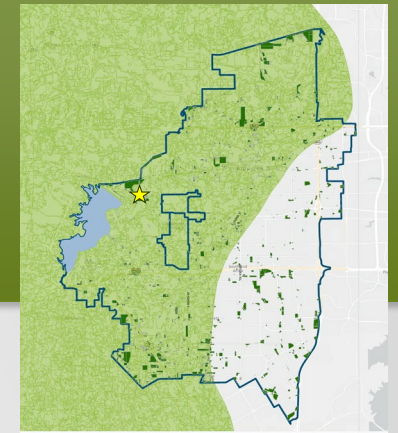
- a. This section applies to all residential property that is vacant, undeveloped, or property to be redeveloped that is over one acre in size.
- b. This section shall not apply to tracts and/or platted lots under one acre in size with an occupied residential structure.

# Purpose and Intent - Proposed

Large mature trees, particularly those of native species, provide habitat for birds and wildlife, moderate climatic extremes, add beauty to the community, increase property values, improve air quality, and represent a historic resource. This section is intended to preserve and protect mature trees that represent a significant resource to the community; to ensure environmentally sensitive site planning which furthers the preservation of mature trees and natural areas; to protect trees during construction; and to control the removal of trees when necessary to achieve the following broader objectives:

- Prohibit the indiscriminate clearing of property
- Protect and increase the value of residential and commercial properties within the City
- Maintain and enhance a positive image for the attraction of new residences and business enterprises to the City
- Protect healthy quality trees and promote the natural, ecological, environmental, and aesthetic qualities of the City

# Green Oaks Preserve (W Pioneer and W Green Oaks)



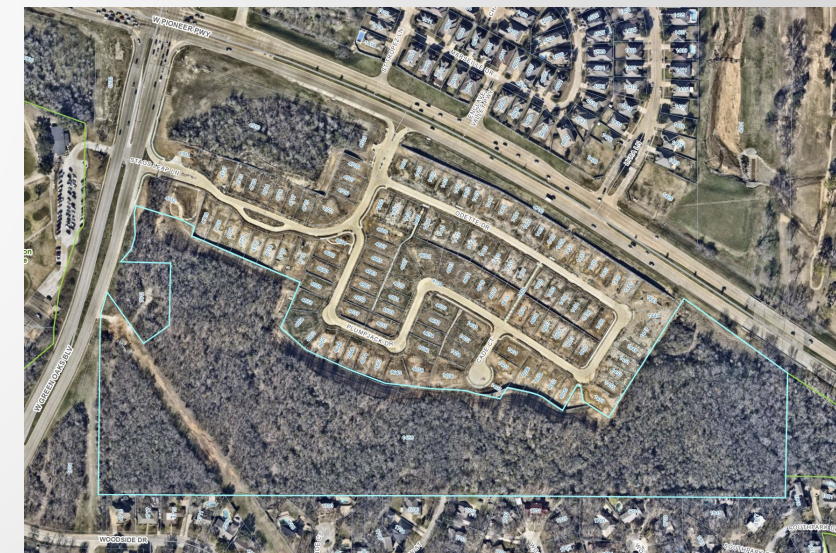
- Interior residential lots cleared in 2020
- No further action on site
- Meets 35% tree preservation requirements
- Preservation only on southern parcel



May 2020

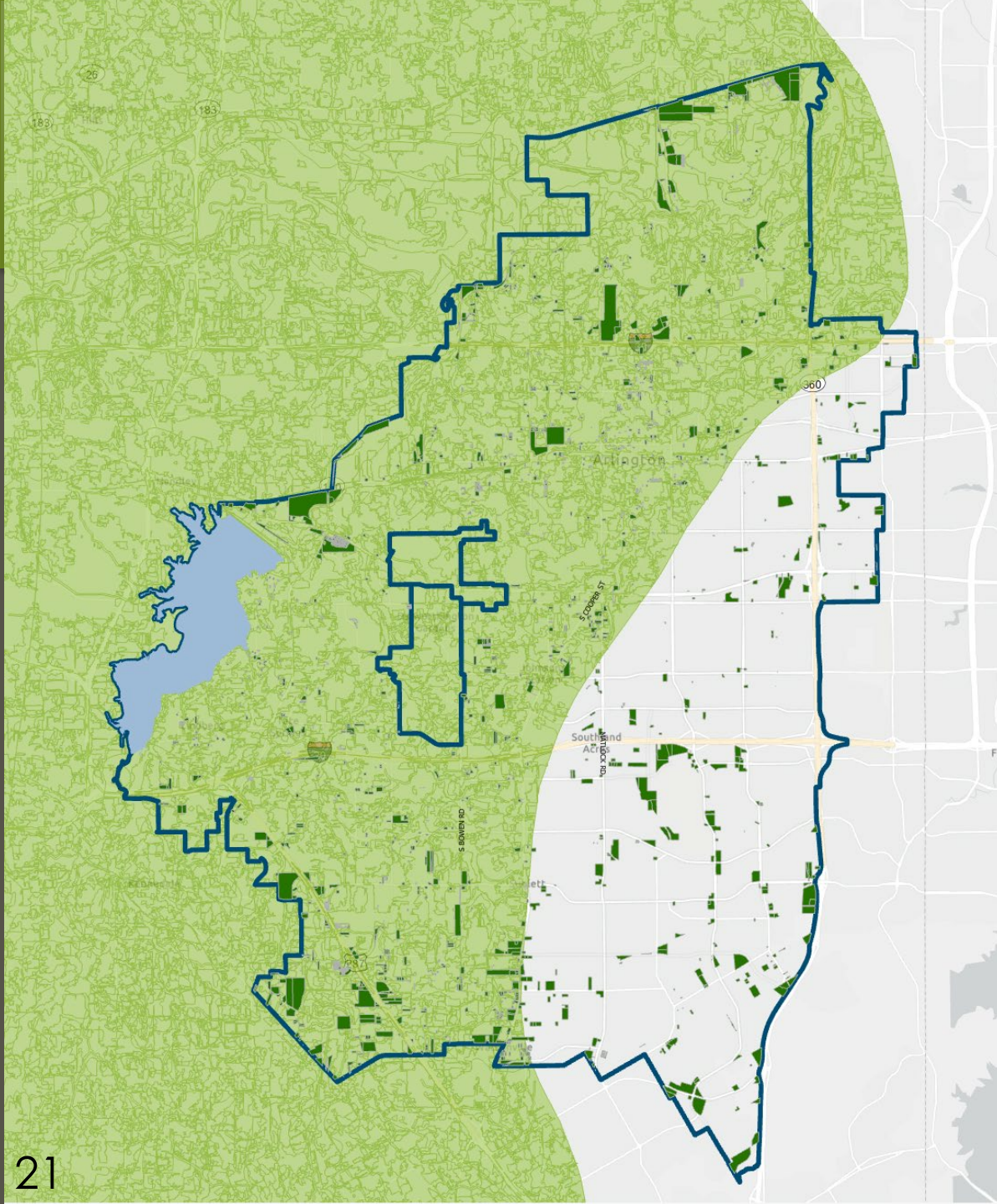


November 2020



2024

# Vacant Developable Properties and the Eastern Cross Timbers Ecoregion



-  Arlington Limits
-  Cross Timbers Range
-  Vacant Developable Land

# Questions and Recommendations