



ARBORIST REPORT

DATE:

September 12, 2023

PREPARED FOR:

Jason & Melinda Moss

SITE ADDRESS:

6550 80th Ave SE Mercer Island, WA 98040 / Lot # 5452800700

PREPARED BY:

Kim Ettari - ISA Certified Arborist PN1301A / TRAQ

Arborist for Seattle Tree Service Providers TSP #212 and TSP #227

Laughing Trees Landscapes

5607 40th Ave NE Seattle, WA 98105

828-318-6088 / laughingtreeslandscapes@gmail.com

NARRATIVE

SCOPE OF WORK

You have asked me to complete a tree retention and replacement plan in preparation for the proposed construction project that will include 1) additions to the northeast corner and south sides of the residence 2) remodeling of the exterior of the home and 3) building of a new raised deck.

METHODOLOGY

The methods used for this assessment are as outlined in *Tree Risk Assessment* by Julian Dunster and as adopted by the International Society of Arboriculture (ISA). The end goal of most assessments is to provide the owner or manager of the tree(s) with factual information, enabling them to make decisions about the management of the tree(s). For this particular assessment, I used a Level II Assessment that includes inspection of the root collar, lower trunk, upper limbs and canopy of the trees as can be seen from the ground. Basic assessment does not include climbing the tree or excavation of soils to inspect root structure or condition.

I visited the site on 8/25/2023 and verified measurements of fifteen (15) large trees (10" diameter or greater) for their diameter at breast height (DBH), an industry standard of measuring trees at 4.5' above grade. Trees that were multi-stemmed or branched below the standard 4.5' point of measurement were measured using an alternative method and noted as such. Each tree had previously been tagged with metal tags with numbers that correspond to the inventory.

A tree inventory was created that details the trees by reference number, species/common name, size (DBH), drip line or canopy extension and condition with remarks as needed. Any recommended action items are also included on said sheet. (*See attached inventory.*)

A tree map was created indicating the location of the trees, their canopy extensions, the locations of required tree protection fencing and suggested locations for replacement trees (*See attached site plan marked with notes.*)

FINDINGS AND OBSERVATIONS

The subject site is a flat 14,743 sq ft residential property with an existing home in an established neighborhood on Mercer Island, WA.

The following fifteen (15) large trees were located and assessed on the property and the right-of-way:

Tree 1 - Pseudotsuga menziesii / Douglas Fir - 20" DBH - GOOD CONDITION - LOW RISK - RETAIN (right of way)

Tree 2 - Pseudotsuga menziesii / Douglas Fir - 20" DBH - GOOD CONDITION - LOW RISK - REMOVE /REPLACE

Tree 4 - Liquidambar styraciflua / Sweetgum - 14" DBH - GOOD CONDITION - LOW RISK - REMOVE / REPLACE

Tree 5 - x cupressus leylandii / Leyland Cypress - 32" DBH - GOOD CONDITION - LOW RISK - RETAIN

Tree 6 - x cupressus leylandii / Leyland Cypress - 34" DBH - GOOD CONDITION - LOW RISK - RETAIN

Tree 8 - Thuja plicata / Western Red Cedar - 11" DBH - FAIR CONDITION - LOW RISK - RETAIN

Tree 9 - Prunus species / Flowering Cherry - 12" DBH - FAIR CONDITION - LOW RISK - RETAIN

Tree 10 - Prunus species / Flowering Cherry - 12" DBH - FAIR CONDITION - LOW RISK - RETAIN

Tree 11 - Cedrus deodara / Deodara Cedar - 18" DBH - FAIR CONDITION - LOW RISK - RETAIN

Tree 12 - Pinus contorta / Shore Pine - 11" DBH - POOR CONDITION - MODERATE RISK - RETAIN

Tree 13 - Pinus contorta / Shore Pine - 14" DBH (exceptional) - FAIR CONDITION - LOW RISK - RETAIN (right of way)

Tree 14 - Pseudotsuga menz / Douglas Fir - 12" DBH - POOR CONDITION - MODERATE RISK - RETAIN (right of way)

Tree 15 - Pseudotsuga menz / Douglas Fir - 16" DBH - POOR CONDITION - MODERATE RISK - RETAIN (right of way)

Tree 16 - Pseudotsuga menz / Douglas Fir - 14" DBH - POOR CONDITION - MODERATE RISK - RETAIN (right of way)

Tree 17 - Pseudotsuga menz / Douglas Fir - 14" DBH - POOR CONDITION - MODERATE RISK - RETAIN (right of way)

RECOMMENDATIONS AND CONSIDERATIONS

TREE REMOVAL

As per the tree retention requirements in Mercer Island Municipal Code (19.10.060 (2.a)) a "minimum of 30 percent of trees with a diameter of 10 inches or greater, or that otherwise meet the definition of large trees, shall be retained over a rolling five-year period."

REMOVAL CALCULATION - The proposed construction project will require the removal of Tree 2 and Tree 4. These trees account for 22.2% of the trees on the actual property.

TREE RETENTION

RETENTION CALCULATION - Trees 5, 6, 8, 9, 10, 11 and 12 are marked for retention and protection and account for 77.8% of the trees on the actual property. As per MICC this percentage meets the 30% tree retention requirement.

PROTECTION OF RETAINED TREES

Trees 5, 6, 8, 9, 10, 11, 12 and right-of-way Trees 1, 13E, 14, 15, 16, 17: Tree protection fencing is to be installed at the drip line or tree protection zone on all trees on the site except for Tree 11. The drip lines will be the limits of disturbance for all of these trees.

Special instructions for Tree 11: This tree grows south of the residence along the southern property line. The canopy is weighted to the north into the area where the new addition and deck will be built. A notched tree protection fencing is shown encroaching into the tree protection zone in the northeast quadrant of the dripline. This area accounts for approximately 25% of the area under the dripline. Construction activity inside this notched area (marked in red on tree retention map) will be solely for the building of the raised deck. Three footings (also marked in red) will be hand dug to minimize traffic in this area. Absolutely no mechanized equipment is permitted into this area. 3-4" of bark mulch should be installed under the entire dripline of this tree including the notched area outside the tree protection fencing. These measures should prevent serious impacts to the tree's long term health.

Tree protection fencing should be at least 5' from the proposed new addition on the south side of the residence.

3-4" of bark mulch should also be installed inside the tree protection zones of Tree 1, 12 and 13E as these will encounter the most construction traffic during the construction process.

Mercer Island approved tree protection signage is to be used on all tree protection fences.

TREE PROTECTION AREA (TPZ)

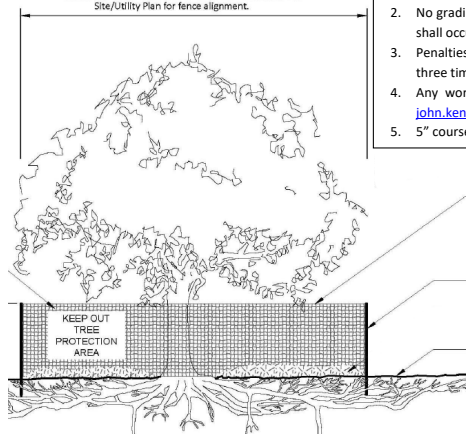
KEEP OUT!

DO NOT REMOVE OR ADJUST THE APPROVED LOCATION OF THIS TREE PROTECTION AREA

Trees enclosed by this fence are protected and are subject to the conditions of the tree permit. Violation of tree conditions may lead to:

1. Correction Notices or Stop Work Orders until compliance is achieved
2. RE Inspection Fees/financial penalties
3. Arborist reports recommending mitigation

Crown drip line or other limit of Tree Protection area. See Site/Utility Plan for fence alignment.



Notes

1. No pruning shall be performed unless under the direction of the Project Arborist. Including limbing trees up.
2. No grading, excavation, storage (materials, equipment, vehicles, etc.), or other unpermitted activity shall occur inside the protective fencing.
3. Penalties for damaging by root damage/compaction or removing a saved tree may be a fine up to three times the value of the tree plus restoration (MICC 19.10.160).
4. Any work in approved TPZ must be with the permission of the City Arborist (206) 275-7713, john.kenney@mercergov.org.
5. 5" course woodchips within the tree protection zone, but not against the tree trunk.

Tree protection fence: 4-6" chain link fence, solidly anchored into the ground, or if authorized High-density polyethylene fencing with 3.5" x 1.5" openings; color orange. Steel posts installed at 8' o.c.

2" x 6" steel posts or approved equal

Maintain existing grade with the tree protection fence unless otherwise indication on the plans

Any Work in the protected area must be with the permission of the City Arborist john.kenney@mercergov.org

TREE REPLACEMENT

As per MICC the removal of any significant tree ranging from 10" - 24" DBH requires the installation of two replacement trees (50% of which should be Pacific Northwest native species.) The removal of Tree 2 and Tree 4 will require the replanting of four (4) trees. I've suggested (2) Shore Pines and (2) Vine Maples be installed in locations marked on the attached tree map.

WATERING PLAN FOR REPLACEMENT TREES

1. Above ground soaker hoses to be installed around each replacement tree. Smaller diameter trees to have hose looped around them once and larger diameter trees to have hose looped around them twice. If using hoses with emitters then multiple emitters are required for larger trees.
2. Watering times will depend on soaker hose system but deeper, less frequent waterings is ideal (possibly a couple of hours once or twice per week.) Check soil periodically to determine how deeply the water is soaking in. Trees that are planted near other large, established trees will likely need more water.
3. Watering to be applied for at least two full seasons (April - October or longer if little rainfall.)
4. 2-3" mulch to be applied over soaker hoses to aid water retention. Care should be taken to keep soaker hose and mulch away from the trunks.

LIMITATIONS

This report was based on the conditions of the trees and site at the time the report was written. Weather and site changes can alter the conditions at any time. Trees inherently pose a certain degree of hazard and risk from breakage, failure or other causes and conditions. Recommendations that are made by Laughing Trees Landscapes are intended to minimize or reduce hazardous conditions that may be associated with trees. However, there is and there can be no guarantee or certainty that efforts to correct unsafe conditions will prevent breakage or failure of the tree. Any recommendations made should reduce the risk of tree failure but they cannot eliminate such risk, especially in the event of a storm or any act of God. There can be no guarantee or certainty that all hazardous conditions will be detected.

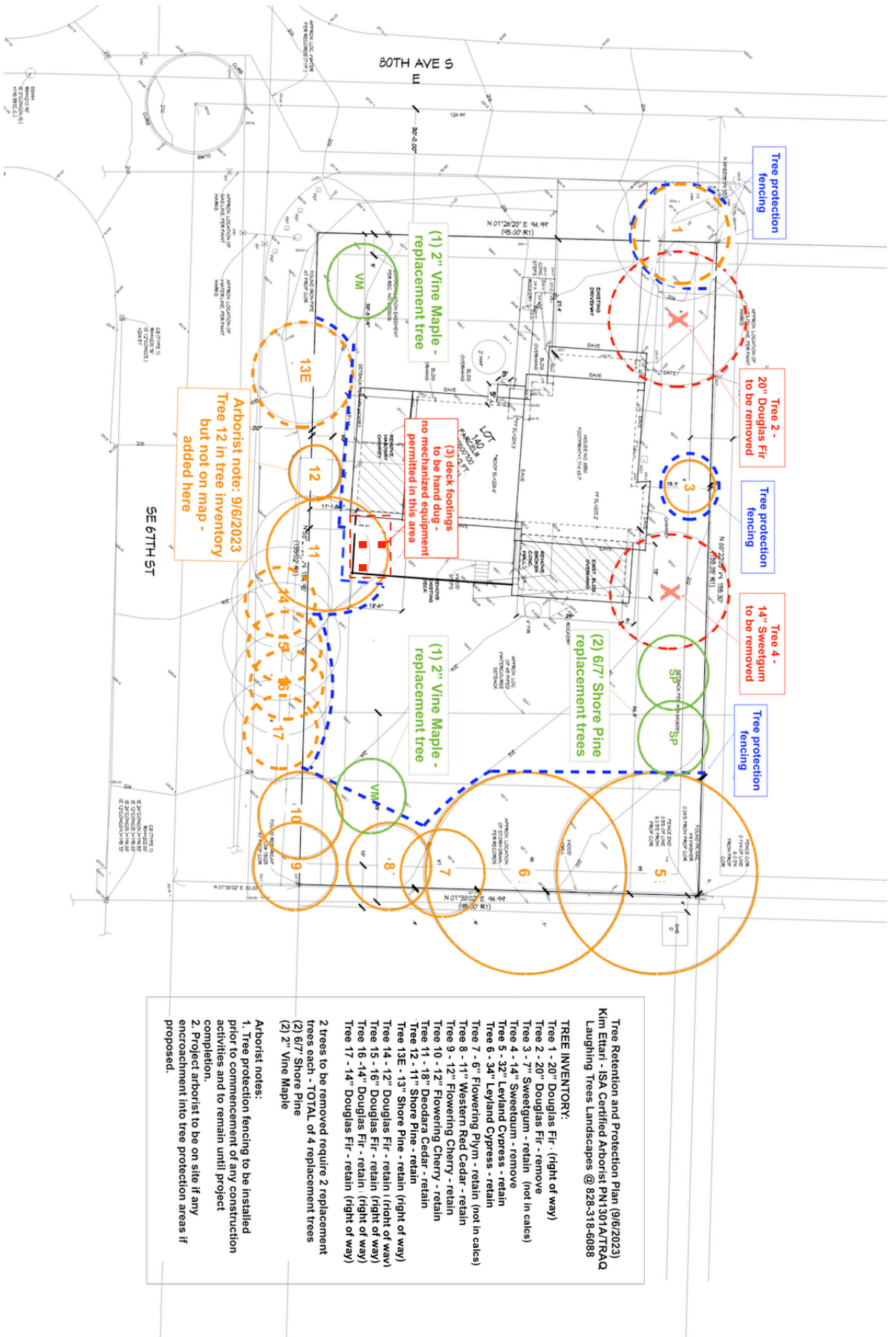
Jason Moss Tree Inventory - 6550 80th Ave SE Mercer Island, WA 98040

Tree #	Botanical Name	Common Name	DBH	Dripline	Condition	Notes	Action
1	Pseudotsuga mezesii	Douglas Fir	20"	10N/10E/10S/ 10W	GOOD	70' tall, good vigor, balanced crown	RETAIN (ROW)
2	Pseudotsuga mezesii	Douglas Fir	20"	15N/15E/15S/ 15W	GOOD	80' tall, good vigor	REMOVE - 2 replacement trees required
3	Liquidambar styraciflua	Sweetgum	7"	5N/5E/5S/5W	GOOD	20' tall, balanced crown	RETAIN
4	Liquidambar styraciflua	Sweetgum	14"	20N/20E/20S/ 20W	GOOD	50' tall, co-dominant stems at 20', overextended limbs	REMOVE - 2 replacement trees required
5	x cupressocyparis leylandii	Leyland Cypress	32"	20N/15E/15S/ 25W	GOOD	50' tall, wide spreading crown, good vigor	RETAIN
6	x cupressocyparis leylandii	Leyland Cypress	34"	20N/15E/15S/ 25W	GOOD	50' tall, wide spreading crown, good vigor	RETAIN
7	Prunus cerasifera	Flowering Plum	6"	8N/8E/10S/ 12W	FAIR	20' tall, moderate vigor	RETAIN
8	Thuja plicata	Western Red Cedar	11"	10N/5E/10S/ 10W	FAIR	25' tall, moderate vigor	RETAIN
9	Prunus species	Flowering Cherry	12"	8N/8E/8S, 8W	FAIR	12' tall, sparse foliage and branching	RETAIN
10	Prunus species	Flowering Cherry	12"	8N/8E/8S, 8W	FAIR	12' tall, sparse foliage and branching	RETAIN
11	Cedrus deodara	Deodara Cedar	18"	15N/10E/10S/ 10W	FAIR	50' tall, slightly corrected trunk bow and lean, sparse branching and foliage, canopy weighted to north towards residence	RETAIN
12	Pinus contorta	Shore Pine	11"	6N/6E/6S/6W	POOR	35' tall, co-dominant stems at 20', no interior needles, 10% live crown	RETAIN
13	Pinus contorta	Shore Pine	13" exceptional	10N/10E/10S/ 10W	FAIR	35' tall, some interior needle drip, moderate vigor	RETAIN (ROW)
14	Pseudotsuga mezesii	Douglas Fir	12"	6N/6E/6S/6W	POOR	40' tall, no interior needles, epicormic growth, heavy cone production, extremely low vigor	RETAIN (ROW)
15	Pseudotsuga mezesii	Douglas Fir	16"	6N/6E/6S/6W	POOR	40' tall, no interior needles, epicormic growth, heavy cone production, extremely low vigor	RETAIN (ROW)
16	Pseudotsuga mezesii	Douglas Fir	14"	6N/6E/6S/6W	POOR	40' tall, no interior needles, epicormic growth, heavy cone production, extremely low vigor	RETAIN (ROW)
17	Pseudotsuga mezesii	Douglas Fir	14:	6N/6E/6S/6W	POOR	40' tall, no interior needles, epicormic growth, heavy cone production, extremely low vigor	RETAIN (ROW)

Inventory completed on 8/25/2023 by Laughing Trees Landscapes - Kim Ettari (ISA Certified Arborist PN1301A/TRAQ)

*DBH = diameter at breast height / 4.5' from base **DBH for multi-stem = square root of sum of squared stem diameters

*Dripline = measured in radius



Tree Retention and Protection Plan (9/6/2023)
 Kim Ettari - ISA Certified Arborist, PNI301A/TRAQ
 Laughing Trees Landscapes @ 828-318-6088

TREE INVENTORY:
 Tree 1 - 20" Douglas Fir - (right of way)
 Tree 2 - 20" Douglas Fir - remove
 Tree 3 - 7" Sweetgum - retain (not in calice)
 Tree 4 - 14" Sweetgum - remove
 Tree 5 - 32" Leyland Cypress - retain
 Tree 6 - 34" Leyland Cypress - retain
 Tree 7 - 6" Flowering Plym - retain (not in calice)
 Tree 8 - 11" Western Red Cedar - retain
 Tree 9 - 12" Flowering Cherry - retain
 Tree 10 - 12" Flowering Cherry - retain
 Tree 11 - 18" Decidua Cedar - retain
 Tree 12 - 11" Shore Pine - retain
 Tree 13E - 13" Shore Pine - retain (right of way)
 Tree 14 - 12" Douglas Fir - retain (right of way)
 Tree 15 - 16" Douglas Fir - retain (right of way)
 Tree 16 - 14" Douglas Fir - retain (right of way)
 Tree 17 - 14" Douglas Fir - retain (right of way)

2 trees to be removed require 2 replacement trees each - **TOTAL of 4 replacement trees**
 (2) 6/7" Shore Pine
 (2) 2" Vine Maple

Arborist notes:
 1. Tree protection fencing to be installed prior to commencement of any construction activities and to remain until project completion.
 2. Project arborist to be on site if any encroachment into tree protection areas if proposed.

CITY OF MERCER ISLAND

COMMUNITY PLANNING & DEVELOPMENT

9611 SE 36TH STREET | MERCER ISLAND, WA 98040

PHONE: 206.275.7605 | www.mercergov.org



MERCER ISLAND TREE INVENTORY & REPLACEMENT SUBMITTAL INFORMATION

PROJECT INFORMATION

Property Owner

Name: Jason & Melinda Moss

Site Address or

Parcel Number: 6550 80th Ave SE Mercer Island, WA 98040

Project Contact

Name: Jason Moss

Contact Email

Address: jmoss01@gmail.com

Contact Phone

Number:

EXCEPTIONAL TREES

Exceptional Trees- means a tree or group of trees that because of its unique historical, ecological or aesthetic value constitutes an important community resource. A tree that is rare or exceptional by virtue of its size, species, condition, cultural/historical importance, age, and/or contribution as part of a tree grove. Trees with a diameter of more than 36 inches, or with a diameter that is equal to or greater than the diameter listed in the Exceptional Tree Table shown in MICC 19.16 under Tree, Exceptional.

List the total number of trees for each category and the tree identification numbers from the arborist report.

Number of trees 36" or greater _____

List tree numbers: _____

Number of trees 24" or greater (including 36" or greater) **2**

List tree numbers: **5, 6**

Number of trees from Exceptional Tree Table (MICC 19.16) **1**

List tree numbers: **13 (in right-of-way)**

LARGE REGULATED TREES

Large Regulated Trees- means any tree with a diameter of 10 inches or more, and any tree that meets the definition of an Exceptional Tree.

Number of Large Regulated Trees on site 9 (A)
 List tree numbers: 2, 4, 5, 6, 8, 9, 10, 11, 12

Number of Large Regulated Trees on site proposed for removal 2 (B)
 List tree numbers: 2, 4

Percentage of trees to be retained ((A-B)/Ax100) note: must be at least 30% 70 %

RIGHT OF WAY TREES

Right of Way Trees- means a tree that is located in the street right of way adjacent to the project property.

Number of Large Regulated Trees in right of way 6
 List tree numbers: 1, 13E, 14, 15, 16, 17

Number of Large Regulated Trees in right of way proposed for removal 0
 List tree numbers: _____
 Reason for removal: _____

TREE REPLACEMENT

Tree replacement- removed trees must be replaced based on the ratio in the table below. Replacement trees shall be conifers at least six feet tall and or deciduous at least one and one-half inches in diameter at base.

Diameter of Removed Tree (measured 4.5' above ground)	Tree replacement Ratio	Number of Trees Proposed for Removal	Number of Tree Required for Replacement Based on Size/Type
Less than 10"*	1		
10" up to 24"	2	2	4
Greater than 24" up to 36"	3		
Greater than 36" and any Exceptional Tree	6		
TOTAL TREE REPLACEMENTS			4

**no replacement tree is needed if the tree fits all of the following;
 Less than 10 inches in diameter, not an exceptional tree, and not a replacement tree from another tree permit. **