

**Tree Inventory, Assessment,
and
Protection Report**

**APN 510-47-045
145 Wood Road
Los Gatos, CA 95032**

Prepared for:

Town of Los Gatos

March 22, 2021

Prepared By:



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Summary

The plans are to construct a new residence on the vacant lot and install all the required utilities. The access will largely mimic the current site ingress and egress. The inventory contains 37 trees comprised of 3 different species with 13 bay laurel (*Umbellularia californica*), 22 coast live oaks (*Quercus agrifolia*), and 2 valley oaks (*Quercus lobata*). Six oaks are considered Large Protected and no trees are Exempt. The trees are all in good or fair condition. None of them have been maintained as these are natural stands of trees with typical broken limbs and cavities. With the exception of trees in poor condition all have good suitability for preservation if retained within the stand. Their value is in their numbers in this instance because these are naturally occurring stands of native trees. Ten trees could be moderate to highly impacted primarily from the proposed retaining wall, driveway grading near #118, and the water and sanitary sewer bisecting the lower south stand of trees. Placing water and sewer under the driveway or directly down the slope adjacent to valley oak #128 could remove the utility issues. The retaining wall and grading around #109-#117 would need to be altered. For this project it would be best to protect the groves to the north and south of the proposed driveway and residence. There were 37 trees appraised for a rounded depreciated value of \$101,320.00.

Introduction

Background

The Town of Los Gatos asked me to assess the site, trees, and proposed footprint plan, and to provide a report with my findings and recommendations to help satisfy planning requirements.

Assignment

- Provide an arborist's report including an assessment of the trees within the project area and on the adjacent sites. The assessment is to include the species, size (trunk diameter), condition (health, structure, and form), and suitability for preservation ratings. Affix number tags on the trees for reference on site and on plans.
- Provide tree protection specifications, guidelines, and impact ratings for those affected by the project.
- Provide appraised values using the Trunk Formula Technique.

Limits of the assignment

- The information in this report is limited to the condition of the trees during my inspection on March 16, 2021. No tree risk assessments were performed.
- Tree heights and canopy diameters are estimates.



- The plans reviewed for this assignment were as follows (Table 1)

Table 1: Plans Reviewed Checklist

Plan	Date	Sheet	Reviewed	Source
Existing Site Topographic				
Proposed Site Plan	01/25/21	A1, A1.1	Yes	Kohlsaas & Associates
Erosion Control				
Grading and Drainage	01/15/2021	5 of 6	Yes	Hanna Brunetti
Utility Plan and Hook-up locations	01/15/2021	4 of 6	Yes	Hanna Brunetti
Exterior Elevations				
Landscape Plan				
Irrigation Plan				
T-1 Tree Protection Plan				

Purpose and use of the report

The report is intended to identify all the trees within the plan area that could be affected by a project. The report is to be used by the Town of Los Gatos and the property owners as a reference for existing tree conditions to help satisfy planning requirements.

Observations

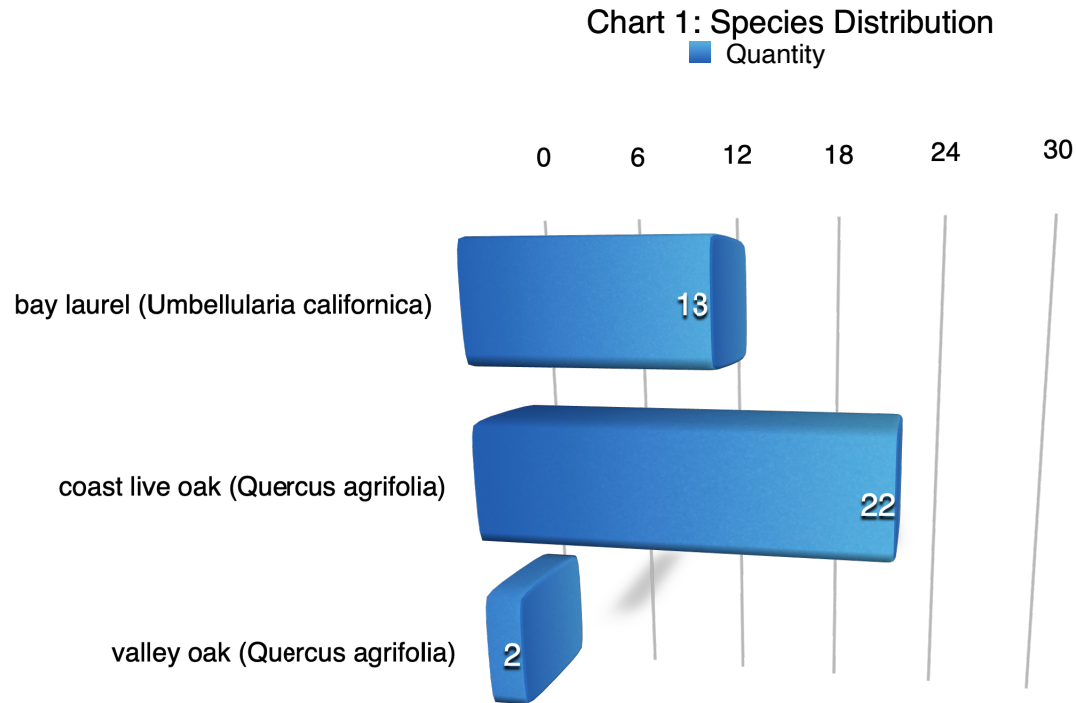
Tree Inventory

The inventory consists of trees protected by the Town of Los Gatos located on site and those in close proximity on neighboring properties. Sec. 29.10.0960. - Scope of protected trees. All trees which have a four-inch or greater diameter (twelve and one half-inch circumference) of any trunk, when removal relates to any review for which zoning approval or subdivision approval is required. (Appendix A and B). Los Gatos Town Ordinance 29.10.0970 Exceptions (1) states the following: “A fruit or nut tree that is less than eighteen (18) inches in diameter (fifty-seven-inch circumference).

The plans are to construct a new residence on the vacant lot and install all the required utilities. The access will largely mimic the current site ingress and egress.



The inventory contains 37 trees comprised of 3 different species (Chart 1). Six oaks are considered Large Protected¹ and no trees are Exempt².



¹ Large protected tree means any oak (*Quercus spp.*), California buckeye (*Aesculus californica*), or Pacific madrone (*Arbutus menziesii*) which has a 24-inch or greater diameter (75-inch circumference); or any other species of tree with a 48-inch or greater diameter (150-inch circumference).

² A fruit or nut tree that is less than eighteen (18) inches in diameter (fifty-seven-inch circumference).



Analysis

Tree appraisal was performed according to the Council of Tree & Landscape Appraisers *Guide for Plant Appraisal 10th Edition, 2019* (CLTA) along with Western Chapter International Society of Arboriculture *Species Classification and Group Assignment, 2004*. The trees were appraised using the “Cost Approach” and more specifically the “Trunk Formula Technique” (Appendix B).

“Trunk Formula Technique” is calculated as follows: Basic Tree Cost = (Unit tree cost x Appraised trunk area), Appraised Value = (Basic tree cost X functional Limitations (percentage) X Condition (percentage) X External Limitations (percentage)).

The trunk formula valuations are based on four tree factors; size (trunk cross sectional area), condition, functional limitations, and external limitations. There are two steps to determine the overall value. The first step is to determine the “Basic Tree Cost” based on size and unit tree cost. Unit tree cost is calculated by dividing the nursery wholesale cost of a 24 inch box specimen and its replacement size (cost per square inch trunk caliper) which is determined by the *Species Classification and Group Assignment, 2004 Western Chapter Regional Supplement*. The cost of the 24 inch box wholesale specimen was determined through personal communications with BrightView and Normans nurseries in Farmington and Central Wholesale in San Jose for an average of \$214.00.

The second part is to depreciate the tree’s Basic Cost through an assessment of condition, functional limitations, and external limitations. The condition assessment guidelines and percentages are defined in the “Condition Rating” section of this report. Functional limitations are based on factors associated with the tree’s interaction to its planting site that would affect condition, limit development, or reduce the utility in the future and include genetics, placement, and site conditions for the individual tree. External limitations are outside the property, out of control of the owner and also affect condition, limit development, or reduce the utility in the future (i.e power lines, municipal restrictions, drought adaptations, or species susceptibility to pests).

There were 37 trees appraised for a rounded depreciated value of \$101,320.00

Appraisal worksheets are available upon request



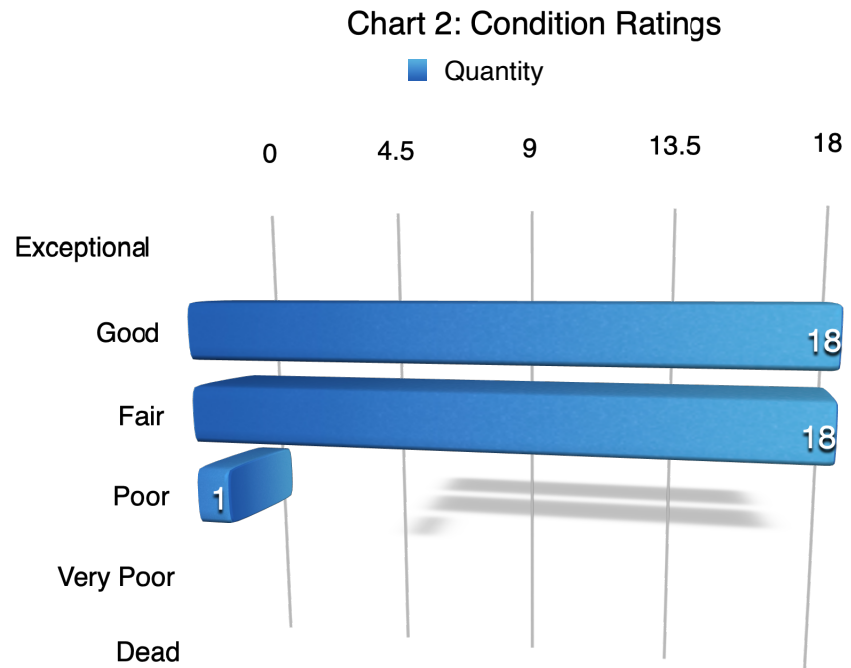
Discussion

Condition Rating

A tree's condition is a determination of its overall health, structure, and form. The assessment considered all three criteria for a combined condition rating.

- 100% - Exceptional = Good health and structure with significant size, location or quality.
- 61-80% - Good = Normal vigor, well-developed structure, function and aesthetics not compromised with good longevity for the site.
- 41-60 % - Fair = Reduced vigor, damage, dieback, or pest problems, at least one significant structural problem or multiple moderate defects requiring treatment. Major asymmetry or deviation from the species normal habit, function and aesthetics compromised.
- 21-40% - Poor = Unhealthy and declining appearance with poor vigor, abnormal foliar color, size or density with potential irreversible decline. One serious structural defect or multiple significant defects that cannot be corrected and failure may occur at any time. Significant asymmetry and compromised aesthetics and intended use.
- 6-20% - Very Poor = Poor vigor and dying with little foliage in irreversible decline. Severe defects with the likelihood of failure being probable or imminent. Aesthetically poor with little or no function in the landscape.
- 0-5% - Dead/Unstable = Dead or imminently ready to fail.

The trees are all in good or fair condition. None of them have been maintained as these are natural stands of trees with typical broken limbs and cavities. Eighteen are in good shape which are mostly smaller specimens and eighteen fair as they are older and have typical issues for mature trees.



Suitability for Conservation

A tree's suitability for preservation is determined based on Functional and External Limitations³ (ISA, 2019).

- Good = Trees with good health, structural stability and longevity.
- Fair = Trees with fair health and/or structural defects that may be mitigated through treatment. These trees require more intense management and monitoring, and may have shorter life spans than those in the good category.
- Poor = Trees in poor health with significant structural defects that cannot be mitigated and will continue to decline regardless of treatment. The species or individual may possess characteristics that are incompatible or undesirable in landscape settings or unsuited for the intended use of the site.

With the exception of trees in poor condition all the trees have good suitability for preservation if retained within the stand. As individuals none of the trees particularly stand out as exemplary specimens. Their value is in their numbers in this instance because these are naturally occurring stands of native trees.

Expected Impact Level

Impact level defines how a tree may be affected by construction activity and proximity to the tree, and is described as low, moderate, or high. The following scale defines the impact rating:

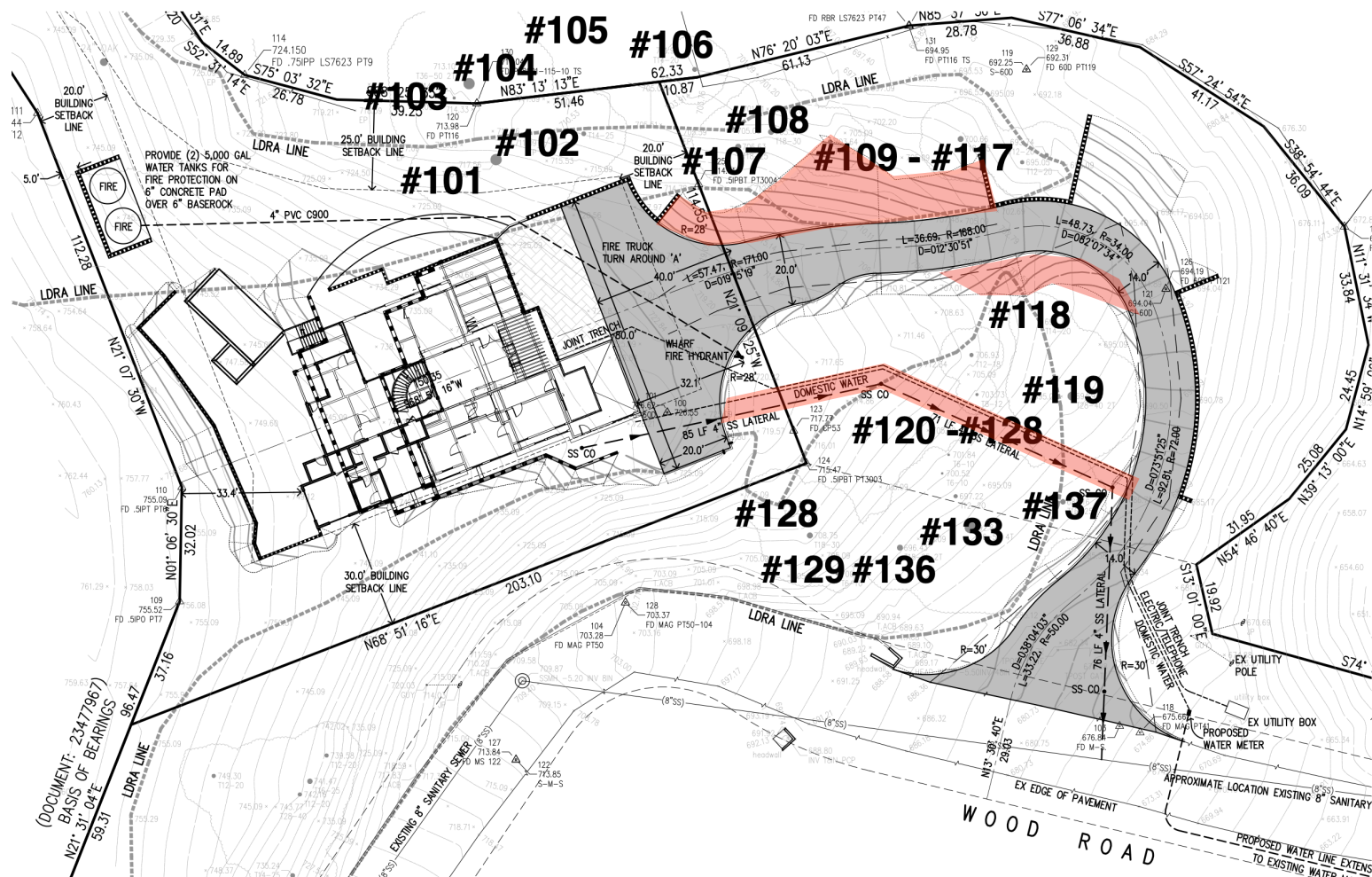
- Low = The construction activity will have little influence on the tree.
- Moderate = The construction may cause future health or structural problems, and steps must be taken to protect the tree to reduce future problems.
- High = Tree structure and health will be compromised and removal is recommended, or other actions must be taken for the tree to remain. The tree is located in the building envelope.

Ten trees could be moderate to highly impacted primarily from the proposed retaining wall near #115 - #117, driveway grading near #118, and the water and sanitary sewer bisecting the lower stand near trees #120 through #128.

³ Functional Limitations are based on factors associated with the tree's interaction to its planting site affecting plant condition, limiting plant development, or reducing the utility in the future and include genetics, placement, and site conditions for the individual tree (ISA, 2019). External Limitations are outside the property, out of control of the owner and also affect plant condition, limit plant development, or reduce the utility in the future (i.e power lines, municipal restrictions, drought adaptations, or species susceptibility to pests) (ISA, 2019).



The plan below indicates the area of expected impacts (Image 1). Highlighted in red are the areas where modifications could alleviate some issues. Running the water and sanitary sewer under the driveway or directly down the slope adjacent to valley oak #128 would remove the utility issues. The retaining wall and grading around #109-#117 would need to be altered.



Tree Protection

Typically there are three different tree protection schemes which are called Type I (Appendix D1), Type II and Type III (Appendix D2) trunk protection only. Tree protection focuses on avoiding damage to the roots, trunk, or scaffold branches (Appendix D). The most current accepted method for determining the TPZ is to use a formula based on species tolerance, tree age/vigor, and trunk diameter (Matheny, N. and Clark, J. 1998) (Fite, K, and Smiley, E. T., 2016). Preventing mechanical damage to the trunk from equipment or hand tools can be accomplished by wrapping the main stem with straw wattle or using vertical timbers (Appendix D).

There are two primary stands of trees on this site so there will not be any individual tree protection schemes. For this project it would be best to protect the groves to the north and south of the proposed driveway and residence.

Conclusion

The plans are to construct a new residence on the vacant lot and install all the required utilities. The access will largely mimic the current site ingress and egress. The inventory contains 37 trees comprised of 3 different species with 13 bay laurel, 22 coast live oaks, and 2 valley oaks. Six oaks are considered Large Protected and no trees are Exempt. The trees are all in good or fair condition. None of them have been maintained as these are natural stands of trees with typical broken limbs and cavities. Eighteen are in good shape which are mostly smaller specimens and eighteen fair as they are older and have typical issues for mature trees. With the exception of trees in poor condition all have good suitability for preservation if retained within the stand. As individuals none of the trees particularly stand out as exemplary specimens. Their value is in their numbers in this instance because these are naturally occurring stands of native trees. Ten trees could be moderate to highly impacted primarily from the proposed retaining wall near #115 - #117, driveway grading near #118, and the water and sanitary sewer bisecting the lower stand near trees #120 through #128. Running the water and sanitary sewer under the driveway or directly down the slope adjacent to valley oak #128 would remove the utility issues. The retaining wall and grading around #109-#117 would need to be altered. There are two primary stands of trees on this site so there will not be any individual tree protection schemes. For this project it would be best to protect the groves to the north and south of the proposed driveway and residence. There were 37 trees appraised for a rounded depreciated value of \$101,320.00.



Recommendations

1. Place tree numbers and tree protection fence locations and guidelines on the plans including the grading, drainage, and utility plans. Produce a T-1 plan sheet to reflect the tree numbers provided in Appendix A and B of this report.
2. Consider relocating the utilities to an area that does not bisect the southern grove of trees, possibly follow the driveway.
3. Consider adjusting the grading at the driveway radius to avoid the tree on both sides.
4. Place tree protection fence at the drip line radius around both the north and south stands of trees and eliminate grading in these areas.
5. All tree maintenance and care shall be performed by a qualified arborist with a C-61/D-49 California Contractors License. Tree maintenance and care shall be specified in writing according to American National Standard for Tree Care Operations: *Tree, Shrub and Other Woody Plant Management: Standard Practices* parts 1 through 10 and adhere to ANSI Z133.1 safety standards and local regulations. All maintenance is to be performed according to ISA Best Management Practices.
6. Provide a copy of this report to all contractors and project managers, including the architect, civil engineer, and landscape designer or architect. It is the responsibility of the owner to ensure all parties are familiar with this document.
7. Arrange a pre-construction meeting with the project arborist or landscape architect to verify tree protection is in place, with the correct materials, and at the proper distances.



Bibliography

American National Standard for Tree Care Operations: Tree, Shrub and Other Woody Plant Management : Standard Practices (Management of Trees and Shrubs During Site Planning, Site Development, and Construction)(Part 5). Londonderry, NH: Secretariat, Tree Care Industry Association, 2019. Print.

Fite, Kelby, and Edgar Thomas. Smiley. *Managing trees during construction*, second edition. Champaign, IL: International Society of Arboriculture, 2016.

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Matheny, Nelda P., Clark, James R. *Trees and development: A technical guide to preservation of trees during land development*. Bedminster, PA: International Society of Arboriculture 1998.

Smiley, E, Matheny, N, Lilly, S, ISA. *Best Management Practices: Tree Risk Assessment*: International Society of Arboriculture, 2017. Print



Glossary of Terms

Basic Tree Cost: The cost of replacement for a perfect specimen of a particular species and cross sectional area prior to location and condition depreciation.

Cost Approach: An indication of value by adding the land value to the depreciated value of improvements.

Defect: An imperfection, weakness, or lack of something necessary. In trees defects are injuries, growth patterns, decay, or other conditions that reduce the tree's structural strength.

Diameter at breast height (DBH): Measures at 1.4 meters (4.5 feet) above ground in the United States, Australia (arboriculture), New Zealand, and when using the Guide for Plant Appraisal, 9th edition; at 1.3 meters (4.3 feet) above ground in Australia (forestry), Canada, the European Union, and in UK forestry; and at 1.5 meters (5 feet) above ground in UK arboriculture.

Drip Line: Imaginary line defined by the branch spread or a single plant or group of plants. The outer extent of the tree crown.

Form: describes a plant's habit, shape or silhouette defined by its genetics, environment, or management.

Health: Assessment is based on the overall appearance of the tree, its leaf and twig growth, and the presence and severity of insects or disease.

Mechanical damage: Physical damage caused by outside forces such as cutting, chopping or any mechanized device that may strike the tree trunk, roots or branches.

Scaffold branches: Permanent or structural branches that form the scaffold architecture or structure of a tree.

Straw wattle: also known as straw worms, bio-logs, straw noodles, or straw tubes are man made cylinders of compressed, weed free straw (wheat or rice), 8 to 12 inches in diameter and 20 to 25 feet long. They are encased in jute, nylon, or other photo degradable materials, and have an average weight of 35 pounds.



Structural evaluation: focused on the crown, trunk, trunk flare, above ground roots and the site conditions contributing to conditions and/or defects that may contribute to failure.

Tree Protection Zone (TPZ): Defined area within which certain activities are prohibited or restricted to prevent or minimize potential injury to designated trees, especially during construction or development.

Tree Risk Assessment: Process of evaluating what unexpected things could happen, how likely it is, and what the likely outcomes are. In tree management, the systematic process to determine the level of risk posed by a tree, tree part, or group of trees.

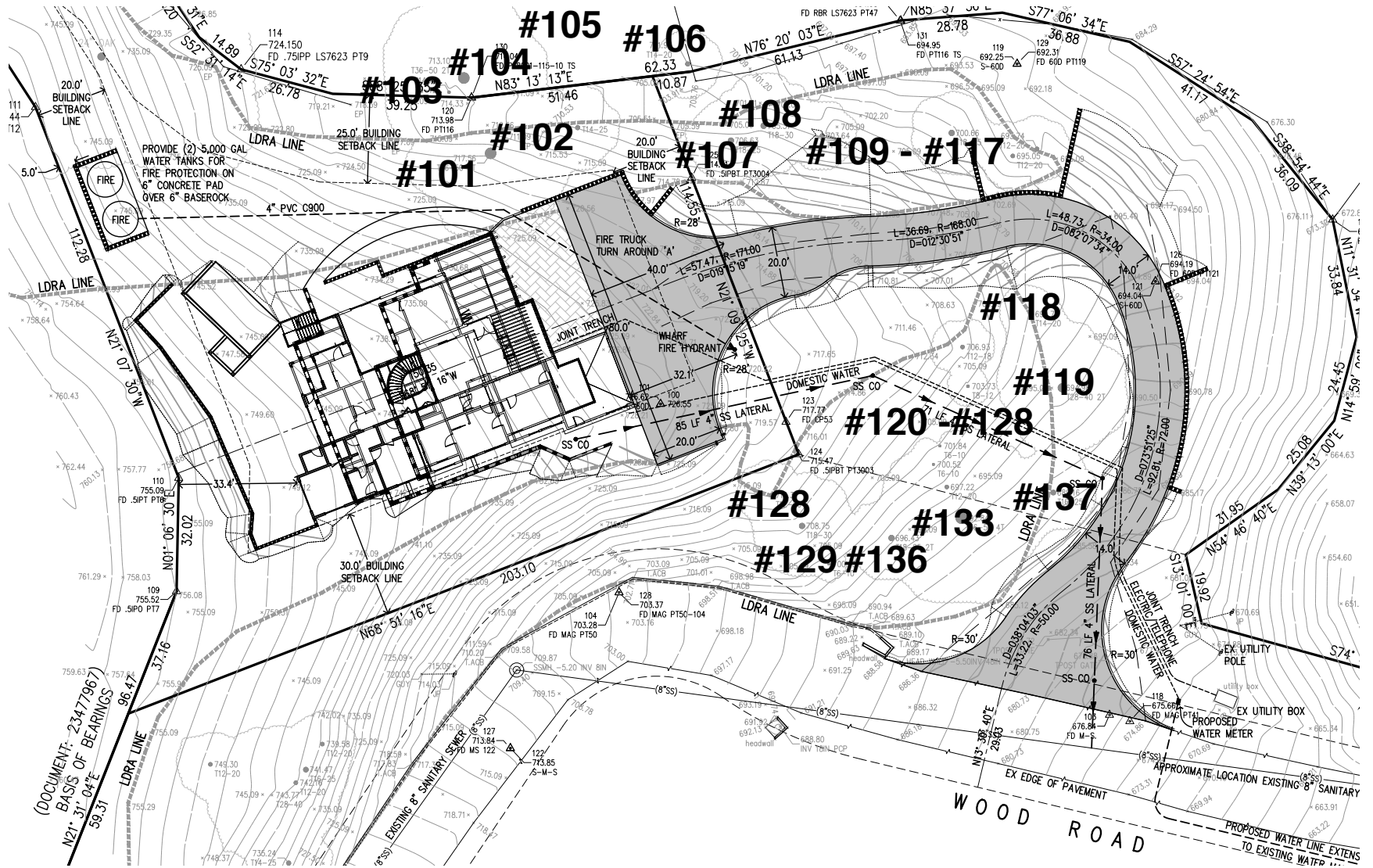
Trunk: Stem of a tree.

Trunk Formula Technique: Method to appraise the monetary value of trees considered too large to be replaced with nursery or field grown stock. Based on developing a representative unit cost for replacement with the same or comparable species of the same size and in the same place, subject to depreciation for various factors. Contrast with replacement cost method.

Volunteer: A tree, not planted by human hands, that begins to grow on residential or commercial property. Unlike trees that are brought in and installed on property, volunteer trees usually spring up on their own from seeds placed onto the ground by natural causes or accidental transport by people. Normally, volunteer trees are considered weeds and removed, but many desirable and attractive specimens have gone on to become permanent residents on many public and private grounds.



Appendix A: Tree Inventory Map and Site Plan



Appendix B: Tree Inventory and Assessment Tables

Table 3: Inventory and Assessment Summary

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Suitability	Expected Impact	Protection Status	Rounded Depreciated Value
valley oak (<i>Quercus agrifolia</i>)	101	24	45	Fair/50%	Fair	Low	Large Protected	\$5,700.00
bay laurel (<i>Umbellularia californica</i>)	102	12, 6	15	Fair/50%	Fair	Low	Protected	\$1,950.00
bay laurel (<i>Umbellularia californica</i>)	103	9	15	Good/70%	Good	Low	Protected	\$1,130.00
coast live oak (<i>Quercus agrifolia</i>)	104	16, 16, 16, 12		Fair/50%	Fair	Low	Large Protected	\$9,000.00
coast live oak (<i>Quercus agrifolia</i>)	105	18	35	Good/70%	Good	Low	Protected	\$4,510.00
coast live oak (<i>Quercus agrifolia</i>)	106	18	25	Fair/50%	Fair	Low	Protected	\$3,220.00
coast live oak (<i>Quercus agrifolia</i>)	107	20	35	Fair/50%	Fair	Low	Protected	\$3,980.00
bay laurel (<i>Umbellularia californica</i>)	108	16	25	Good/70%	Good	Low	Protected	\$3,560.00
coast live oak (<i>Quercus agrifolia</i>)	109	10	20	Good/70%	Good	Low	Protected	\$1,390.00
coast live oak (<i>Quercus agrifolia</i>)	110	18	25	Good/70%	Good	Low	Protected	\$4,510.00
coast live oak (<i>Quercus agrifolia</i>)	111	6	15	Good/70%	Good	Low	Protected	\$500.00



Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Suitability	Expected Impact	Protection Status	Rounded Depreciated Value
coast live oak (<i>Quercus agrifolia</i>)	112	6	15	Good/70%	Good	Low	Protected	\$500.00
coast live oak (<i>Quercus agrifolia</i>)	113	27	45	Good/70%	Good	Low	Large Protected	\$10,200.00
coast live oak (<i>Quercus agrifolia</i>)	114	8	20	Good/70%	Good	Low	Protected	\$890.00
coast live oak (<i>Quercus agrifolia</i>)	115	2, 4	12	Fair/	Fair	Low	Protected	\$250.00
bay laurel (<i>Umbellularia californica</i>)	116	4, 4 multi	12	Fair/	Fair	Moderate-High	Protected	\$250.00
coast live oak (<i>Quercus agrifolia</i>)	117	9, 6	25	Fair/	Fair	Moderate-High	Protected	\$1,200.00
coast live oak (<i>Quercus agrifolia</i>)	118	12, 12	35	Fair/	Fair	Moderate-High	Large Protected	\$2,870.00
coast live oak (<i>Quercus agrifolia</i>)	119	20, 26	45	Fair/	Fair	Low	Large Protected	\$10,800.00
coast live oak (<i>Quercus agrifolia</i>)	120	8	20	Good/70%	Good	Moderate-High	Protected	\$890.00
coast live oak (<i>Quercus agrifolia</i>)	121	12	25	Good/70%	Good	Moderate-High	Protected	\$2,010.00
bay laurel (<i>Umbellularia californica</i>)	122	6	10	Good/70%	Good	Moderate-High	Protected	\$500.00
coast live oak (<i>Quercus agrifolia</i>)	123	8	20	Good/70%	Good	Moderate-High	Protected	\$890.00
bay laurel (<i>Umbellularia californica</i>)	124	11	20	Good/70%	Good	Moderate-High	Protected	\$1,680.00



Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Suitability	Expected Impact	Protection Status	Rounded Depreciated Value
bay laurel (<i>Umbellularia californica</i>)	125	9	20	Good/70%	Good	Moderate-High	Protected	\$1,130.00
coast live oak (<i>Quercus agrifolia</i>)	126	7	20	Fair/50%	Fair	Moderate-High	Protected	\$490.00
coast live oak (<i>Quercus agrifolia</i>)	127	12, 12	35	Fair/50%	Fair	Low	Large Protected	\$2,870.00
valley oak (<i>Quercus agrifolia</i>)	128	24	40	Fair/50%	Fair	Low	Large Protected	\$5,700.00
coast live oak (<i>Quercus agrifolia</i>)	129	12	25	Good/70%	Good	Low	Protected	\$2,010.00
bay laurel (<i>Umbellularia californica</i>)	130	5, 5	20	Fair/50%	Fair	Low	Protected	\$640.00
bay laurel (<i>Umbellularia californica</i>)	131	8	15	Good/70%	Good	Low	Protected	\$890.00
bay laurel (<i>Umbellularia californica</i>)	132	8	15	Poor/15	Poor	Low	Protected	\$380.00
coast live oak (<i>Quercus agrifolia</i>)	133	13, 18, 18	45	Fair/50%	Fair	Low	Large Protected	\$7,800.00
bay laurel (<i>Umbellularia californica</i>)	134	7, 11, 10	30	Fair/50%	Fair	Low	Protected	\$2,550.00
bay laurel (<i>Umbellularia californica</i>)	135	6	15	Good/70%	Good	Low	Protected	\$500.00
bay laurel (<i>Umbellularia californica</i>)	136	12	30	Fair/50%	Fair	Low	Protected	\$1,430.00
coast live oak (<i>Quercus agrifolia</i>)	137	16	30	Fair/50%	Fair	Low	Protected	\$2,550.00



Appendix C: Photographs

C1: North stand

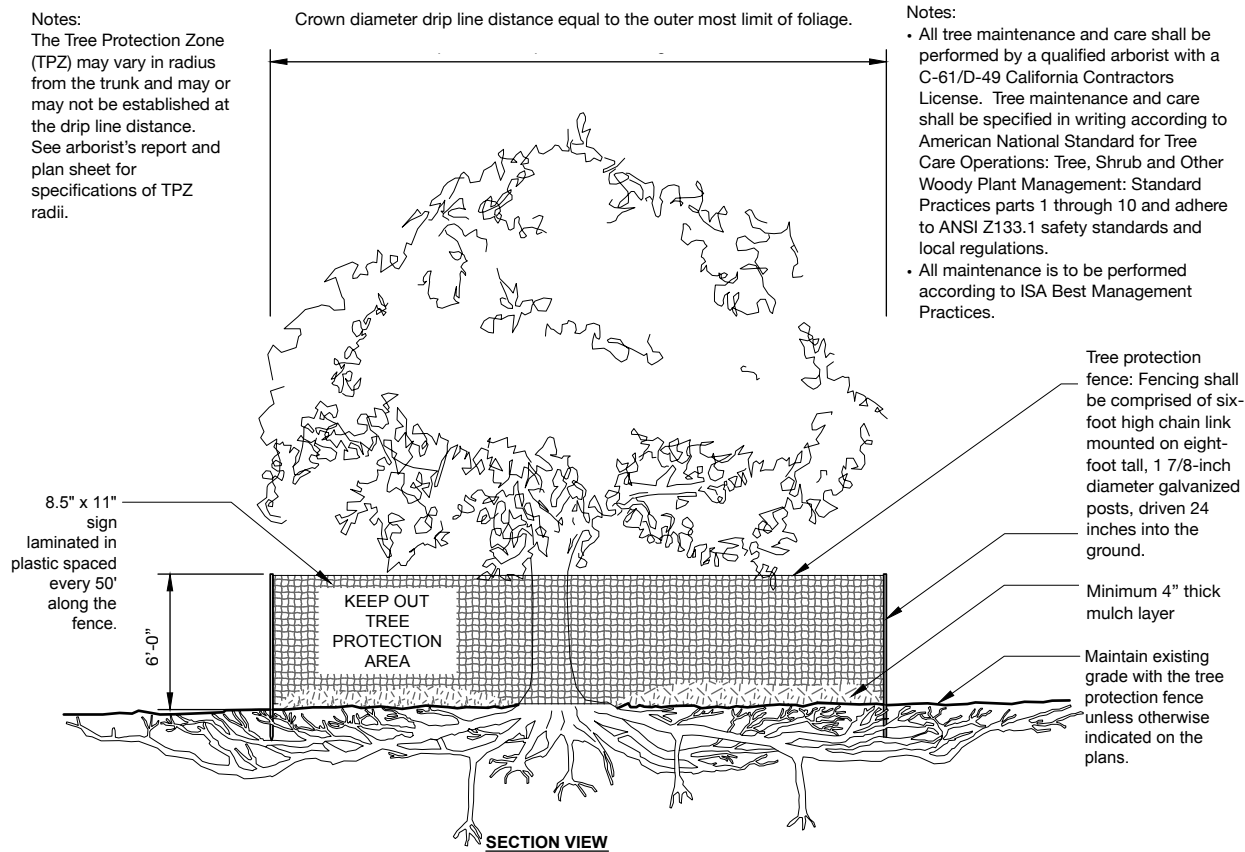


C2: South stand



Appendix D: Tree Protection Guidelines

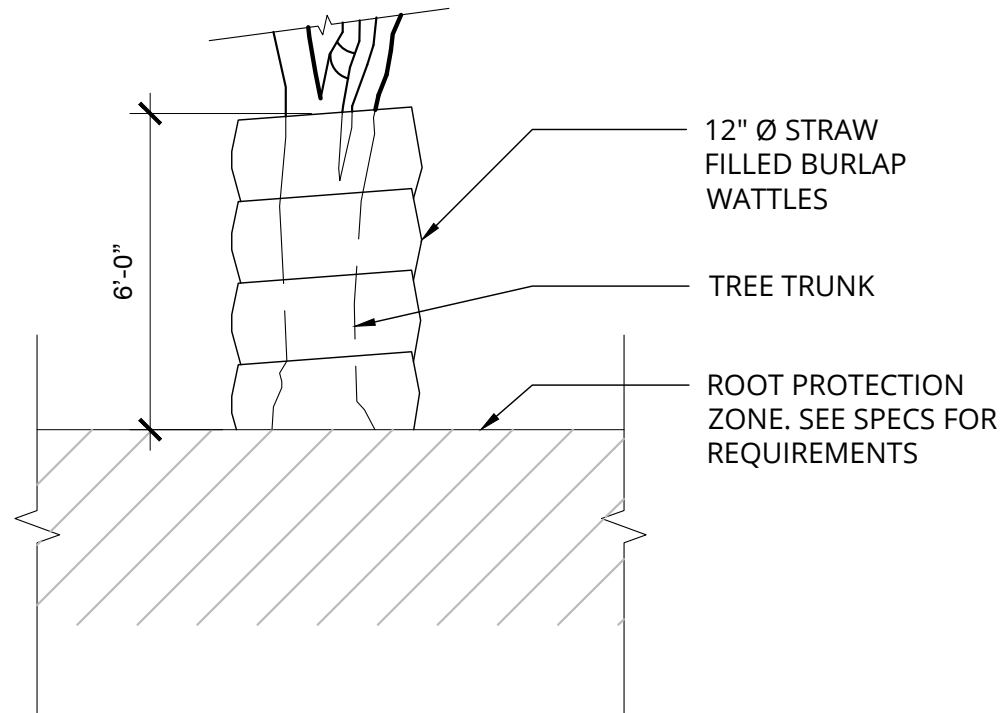
D1: Plan Sheet Detail S-X (Type I)



URBAN TREE FOUNDATION © 2014
OPEN SOURCE FREE TO USE
Modified by Monarch Consulting
Arborists LLC, 2019



D2: Plan Sheet Detail S-Y (Type III)



SECTION VIEW

S-Y

TRUNK PROTECTION WITH WATTLE



D3: Section 29.10.1005. - Protection of Trees During Construction

Tree Protection Zones and Fence Specifications

1. **Size and materials:** Six (6) foot high chain link fencing, mounted on two-inch diameter galvanized iron posts, shall be driven into the ground to a depth of at least two (2) feet at no more than ten-foot spacing. For paving area that will not be demolished and when stipulated in a tree preservation plan, posts may be supported by a concrete base.
2. **Area type to be fenced:** Type I: Enclosure with chain link fencing of either the entire dripline area or at the tree protection zone (TPZ), when specified by a certified or consulting arborist. Type II: Enclosure for street trees located in a planter strip: chain link fence around the entire planter strip to the outer branches. Type III: Protection for a tree located in a small planter cutout only (such as downtown): orange plastic fencing shall be wrapped around the trunk from the ground to the first branch with two-inch wooden boards bound securely on the outside. Caution shall be used to avoid damaging any bark or branches.
3. **Duration of Type I, II, III fencing:** Fencing shall be erected before demolition, grading or construction permits are issued and remain in place until the work is completed. Contractor shall first obtain the approval of the project arborist on record prior to removing a tree protection fence.
4. **Warning Sign:** Each tree fence shall have prominently displayed an eight and one-half-inch by eleven-inch sign stating: "Warning—Tree Protection Zone—This fence shall not be removed and is subject to penalty according to Town Code 29.10.1025." Text on the signs should be in both English and Spanish (Appendix E).



All persons, shall comply with the following precautions

1. Prior to the commencement of construction, install the fence at the dripline, or tree protection zone (TPZ) when specified in an approved arborist report, around any tree and/or vegetation to be retained which could be affected by the construction and prohibit any storage of construction materials or other materials, equipment cleaning, or parking of vehicles within the TPZ. The dripline shall not be altered in any way so as to increase the encroachment of the construction.
2. Prohibit all construction activities within the TPZ, including but not limited to: excavation, grading, drainage and leveling within the dripline of the tree unless approved by the Director.
3. Prohibit disposal or depositing of oil, gasoline, chemicals or other harmful materials within the dripline of or in drainage channels, swales or areas that may lead to the dripline of a protected tree.
4. Prohibit the attachment of wires, signs or ropes to any protected tree.
5. Design utility services and irrigation lines to be located outside of the dripline when feasible.
6. Retain the services of a certified or consulting arborist who shall serve as the project arborist for periodic monitoring of the project site and the health of those trees to be preserved. The project arborist shall be present whenever activities occur which may pose a potential threat to the health of the trees to be preserved and shall document all site visits.
7. The Director and project arborist shall be notified of any damage that occurs to a protected tree during construction so that proper treatment may be administered.

Prohibited Activities

The following are prohibited activities within the TPZ:

- Grade changes (e.g. soil cuts, fills);
- Trenches;
- Root cuts;
- Pedestrian and equipment traffic that could compact the soil or physically damage roots;
- Parking vehicles or equipment;
- Burning of brush and woody debris;
- Storing soil, construction materials, petroleum products, water, or building refuse; and,
- Disposing of wash water, fuel or other potentially damaging liquids.



Monitoring

Any trenching, construction or demolition that is expected to damage or encounter tree roots should be monitored by the project arborist or a qualified ISA Certified Arborist and should be documented.

The site should be evaluated by the project arborist or a qualified ISA Certified Arborist after construction is complete, and any necessary remedial work that needs to be performed should be noted.

Root Pruning

Roots greater than two inches in diameter shall not be cut. When roots over two inches in diameter are encountered and are authorized to be cut or removed, they should be pruned by hand with loppers, handsaw, reciprocating saw, or chain saw rather than left crushed or torn. Roots should be cut beyond sinker roots or outside root branch junctions and be supervised by the project arborist. When completed, exposed roots should be kept moist with burlap or backfilled within one hour.

Boring or Tunneling

Boring machines should be set up outside the drip line or established Tree Protection Zone. Boring may also be performed by digging a trench on both sides of the tree until roots one inch in diameter are encountered and then hand dug or excavated with an Air Spade® or similar air or water excavation tool. Bore holes should be adjacent to the trunk and never go directly under the main stem to avoid oblique (heart) roots. Bore holes should be a minimum of three feet deep.

Tree Pruning and Removal Operations

All tree pruning or removals should be performed by a qualified arborist with a C-61/D-49 California Contractors License. Treatment, including pruning, shall be specified in writing according to the most recent ANSI A-300A Standards and Limitations and performed according to ISA Best Management Practices while adhering to ANSI Z133.1 safety standards. Trees that need to be removed or pruned should be identified in the pre-construction walk through.



Appendix E: Tree Protection Signs
E1: English

Warning

Tree Protection Zone

**This Fence Shall Not Be Removed
And Is Subject To Penalty According To
Town Code 29.10.1025**



E2: Spanish

Cuidado Zona De Arbol Pretejido

Esta valla no podrán ser sacados
Y está sujeta a sanción en función de
Código Ciudad del 29.101025



Qualifications, Assumptions, and Limiting Conditions

Any legal description provided to the consultant is assumed to be correct. Any titles or ownership of properties are assumed to be good and marketable. All property is appraised or evaluated as though free and clear, under responsible ownership and competent management.

All property is presumed to be in conformance with applicable codes, ordinances, statutes, or other regulations.

Care has been taken to obtain information from reliable sources. However, the consultant cannot be responsible for the accuracy of information provided by others.

The consultant shall not be required to give testimony or attend meetings, hearings, conferences, mediations, arbitration, or trials by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services.

This report and any appraisal value expressed herein represent the opinion of the consultant, and the consultant's fee is not contingent upon the reporting of a specified appraisal value, a stipulated result, or the occurrence of a subsequent event.

Sketches, drawings, and photographs in this report are intended for use as visual aids, are not necessarily to scale, and should not be construed as engineering or architectural reports or surveys. The reproduction of information generated by architects, engineers, or other consultants on any sketches, drawings, or photographs is only for coordination and ease of reference. Inclusion of said information with any drawings or other documents does not constitute a representation as to the sufficiency or accuracy of said information.

Unless otherwise expressed: a) this report covers only examined items and their condition at the time of inspection; and b) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that structural problems or deficiencies of plants or property may not arise in the future.



Certification of Performance

I Richard Gessner, Certify:

That I have personally inspected the tree(s) and/or the property referred to in this report, and have stated my findings accurately. The extent of the evaluation and/or appraisal is stated in the attached report and Terms of Assignment;

That I have no current or prospective interest in the vegetation or the property that is the subject of this report, and I have no personal interest or bias with respect to the parties involved;

That the analysis, opinions and conclusions stated herein are my own;

That my analysis, opinions, and conclusions were developed and this report has been prepared according to commonly accepted Arboricultural practices;

That no one provided significant professional assistance to the consultant, except as indicated within the report.

That my compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party, nor upon the results of the assessment, the attainment of stipulated results, or the occurrence of any other subsequent events;

I further certify that I am a Registered Consulting Arborist® with the American Society of Consulting Arborists, and that I acknowledge, accept and adhere to the ASCA Standards of Professional Practice. I am an International Society of Arboriculture Board Certified Master Arborist®. I have been involved with the practice of Arboriculture and the care and study of trees since 1998.

Richard J. Gessner



ASCA Registered Consulting Arborist® #496
ISA Board Certified Master Arborist® WE-4341B



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