



URBAN FORESTRY ASSOCIATES, INC.

726 Point San Pedro Road Tree Protection Plan

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Tree Protection Plan

Table of Contents

	Page
ASSIGNMENT/ PURPOSE _____	3
SUMMARY _____	3
METHODOLOGY _____	3
SPECIFIC AREAS OF CONCERN _____	3
INSPECTION SCHEDULE _____	5
SCOPE OF WORK / LIMITATIONS _____	6
TREE WORK STANDARDS AND QUALIFICATION _____	6
ARBORIST'S CHECKLIST _____	7
SOURCES _____	7
TREE CONDITION RATINGS _____	8
TRUNK AND LIMB PROTECTION _____	9
TREE PROTECTION FENCING _____	10

ASSIGNMENT/ PURPOSE

Ruth Kiskaddon and John Wright hired me to consult on the design of a new home near a Heritage-size oak tree on a vacant parcel (APN 186-141-03) in unincorporated Marin County. The oak tree is the only tree onsite and is scheduled to be preserved for the project. I conducted site visits in January and March of 2021. During the site visits I evaluated the condition of the tree, discussed the distance at which construction activities should be minimized, and evaluated the extent of expected pruning that will be necessary to accommodate the new home. The purpose of this report is to document the condition of the tree and provide tree protection recommendations. There is a supplementary map that is to accompany this report.



SUMMARY

The property is subject to the Marin County Tree Ordinance. Protected status was determined using the trunk diameter sizes listed in the Ordinance, and the [Tree Removal Permit Fact Sheet](#).

The subject tree is a mature, Heritage-size Coast live oak (*Quercus agrifolia*) in good health and structural condition. The tree has a good suitability for preservation based on the tree's condition and home design, as minimal grading/excavation will occur within the dripline of the tree. Some pruning will be required to accommodate the new home but is not expected to irreversibly harm the tree.

Tree protection will be provided in the form of exclusion fencing, or a combination of soil armor and trunk armor.

METHODOLOGY

1. Identify trees to species and assign health, structure, and form ratings in accordance with Table 1.
2. Measure trunk circumference at 54" above grade (Dbh) unless noted otherwise in the inventory.
3. Assign a suitability for preservation ratings (Good, Fair, Poor) for each tree based on their current condition and expected construction impacts.
4. Determine protected status per the Marin County Tree Ordinance.

SUBJECT TREE

The subject tree is a mature Coast live oak tree. The tree stands approximately 40 feet high. The tree is composed of a single main trunk and possesses a balanced canopy. The canopy appears normal for the species and I observed no signs or symptoms of notable pest or disease activity. The tree stands between 726 Point San Pedro Rd. and 732 Point San Pedro Rd. within approximately 7 feet of the property line. The health of the tree is rated **good**. The structural condition of the tree is rated as **good**. The form of the tree is rated as **fair to good**. See Table 1, Page 8 for tree condition rating criteria.

SPECIFIC AREAS OF CONCERN

The contractor should review the inspection schedule on Page 5 and Arborist's Checklist on Page 7.

Pruning

Branches in the lower northwest quadrant of the canopy will have to be removed to accommodate the elevation of the new home. These limbs have been roughly indicated in green in Figure 1, Page 4. While removing the limbs will alter the overall form of the canopy the health and stability of the tree are not expected

to be irreversibly harmed. The minimum amount of pruning should be performed to achieve the necessary clearance between the tree and home, as required by the fire department. In my opinion five feet of clearance is sufficient. All pruning should be conducted by a qualified practicing arborist per the most current ISA Best management practices and ANSI 300 standards for pruning (See Tree Work Standards and Qualifications).

Tree Protection Zones

The tree protection zones (TPZ) indicated on the Arborist's map were determined by the trees' trunk diameter, canopy spread and distribution, topography around the tree and access needs. It is not a work exclusion zone, but a zone where the roots need to be protected from soil compaction and grading. Fencing locations shown on the arborist's map are approximate. Fencing locations shall be determined by the project arborist prior to construction.

Mulch

To promote tree health wood chips should be installed to a depth of 4 inches within the tree protection fencing area, but not directly against the trunk of any tree. If soil armoring is installed, wood chips should be installed to a depth of 6-inches.

Irrigation

Supplemental irrigation should be provided periodically during construction to promote health and mitigate adverse impacts from construction. The details of irrigation should be discussed when tree protection is installed.



Figure 1. Green lines indicate limbs that will most likely have to be removed to accommodate the home.

INSPECTION SCHEDULE

Inspection of site: Prior to Equipment and Materials Move In, Site Work, Demolition and Tree Removal: The Project Arborist will meet with the General Contractor, Architect / Engineer, and Owner or their representative to review tree preservation measures, designate tree removals, delineate the location of tree protection / non-intrusion zone fencing, specify equipment access routes and materials storage areas, review the existing condition of trees and provide any necessary recommendations.

Inspection of site: After installation of NIZ fencing: Inspect site for the adequate installation of tree preservation measures. Review any requests by contractor for access, soil disturbance or excavation areas within root zones of protected trees. Assess any changes in the health of trees since last inspection.

Inspection of site: During excavation or any activities that could affect trees: Inspect site during any activity within the Non-Intrusion Zones of preserved trees and any recommendations implemented. Assess any changes in the health of trees since last inspection.

Final Inspection of Site: Inspection of site following completion of construction: Inspect for tree health and make any necessary recommendations.

SCOPE OF WORK / LIMITATIONS

Information regarding property boundaries, land ownership, and tree ownership was evident from a land survey, property fencing and/or provided by the client. UFA has no personal or monetary interest in the outcome of this matter. All determinations reflected in this report are objective and to the best of our ability. All observations regarding the sites and trees were made by UFA personnel, independently, based on our education and experience. Determinations of the health and hazard potential of the subject trees are through visual inspection only and of our best professional judgment.

The health and hazard assessments in this report are limited by the visual nature of the assessment. Defects may be obscured by soil, brush, vines, aerial foliage, branches, multiple trunks or other trees. None of the subject trees were examined using invasive techniques such as increment coring or Resistograph® tests. The probability of tree failure is dependent on a number of factors including: topography, geology, soil characteristics, wind patterns, species characteristics (both visually evident and concealed), structural defects, and the characteristics of a specific storm. Structurally sound, healthy trees fail during severe storms. Consequently, a conclusion that a tree does not require corrective surgery or removal is not a guarantee of no risk, hazard, or sound health.

TREE WORK STANDARDS AND QUALIFICATION

All tree work, removal, pruning, planting, shall be performed using industry standards as established by the International Society of Arboriculture. Contractor must have a State of California Contractors License for Tree Service (C61-D49) or Landscaping (C-27) with general liability, worker's compensation, and commercial auto/equipment insurance.

Contractor standards of workmanship shall adhere to current Best Management Practices of the International Society of Arboriculture (ISA) and the American National Standards Institute (ANSI) for tree pruning, fertilization and safety (ANSI A300 and Z133.1).



Zachary Vought, Urban Forester
Registered Consulting Arborist #691
ISA Board Certified Master Arborist WE-9995B
ISA Qualified Tree Risk Assessor

ARBORIST'S CHECKLIST

- An urban forester, certified or consulting arborist shall establish the Tree Protection Zone (TPZ) prior to starting the demolition work. Four-foot-high metal wire deer fencing will be erected by the contractor and inspected by the arborist to limit access to the TPZ. This will protect the trunk and root zone throughout construction.
- The Arborist shall have a pre-demolition meeting with contractor or responsible party and all other foremen or crew managers on site prior to any work to review all work procedures, access and haul routes, and tree protection. The contractor must notify the Arborist if roots are exposed or if trunk or branches are wounded.
- Any trunk and root crown that is not protected by a TPZ where heavy equipment operation is likely to wound the trunk, install a barrel stave-like trunk wrap out of 2 X 4 studs connected together with metal straps, attached to the 2 X 4's with driver screws or 1" nails.
- Storage of equipment shall be as far away from protected trees as possible and optimally on asphalt or ground protected by mulch / plywood.
- Heavy equipment use should be limited around trees and the roots. No equipment may be transported or used on bare ground within the root zone. A 6" layer of mulch and plywood must be placed under the path for access and egress. The protective "bridge" shall be maintained by the contractor and inspected by the arborist when on site.
- Any damage to trees due to demolition or construction activities shall be reported to the arborist within 6 hours, so that remedial action can be taken.
- All trenching within the NIZ shall be done pneumatically or by hand, being careful not to damage any of the bark of any root encountered.
- An arborist shall inspect all grading, trenching, tunneling or other excavation within the root zones of trees prior to backfill.
- No chemicals or other waste materials shall be dumped within 20' of the base of any tree. There shall be no material storage in the NIZ.
- Any tree pruning will be done in accordance with the latest version of ISA or ANSI best management practices/ standards. All pruning will be inspected by the arborist.
- The arborist must perform a final inspection to ensure that no unmitigated damage has occurred and to specify any pest, disease or other health care. The arborist shall specify and oversee any necessary restorative actions.
- Any suspected omissions or conflict between various elements of the plan shall be brought to the attention of the arborist and resolved before proceeding with the work.

SOURCES

- Field data collected by Urban Forestry Associates in January and March 2021
- Architectural plans produced by Engelhardt Architecture, Grading and Drainage Plan produced LTD Engineering, and Landscape plan produced by Pederson & Associates Landscape Architecture.

TREE CONDITION RATINGS

Rating category	Condition components		
	Health	Structure	Form
Excellent	High vigor and nearly perfect health with little or no twig dieback, discoloration, or defoliation	Nearly ideal and free of defects.	Nearly ideal for the species. Generally symmetric. Consistent with the intended use.
Good	Vigor is normal for the species. No significant damage due to diseases or pests. Any twig dieback, defoliation, or discoloration is minor.	Well-developed structure. Defects are minor and can be corrected.	Minor asymmetries/deviations from species norm. Mostly consistent with the intended use. Function and aesthetics are not compromised.
Fair	Reduced vigor. Damage due to insects or diseases may be significant and associated with defoliation but is not likely to be fatal. Twig dieback, defoliation, discoloration, and/or dead branches may comprise up to 50% of the crown.	A single defect of a significant nature or multiple moderate defects. Defects are not practical to correct or would require multiple treatments over several years.	Major asymmetries/deviations from species norm and/or intended use. Function and/or aesthetics are compromised.
Poor	Unhealthy and declining in appearance. Poor vigor. Low foliage density and poor foliage color are present. Potentially fatal pest infestation. Extensive twig and/or branch dieback.	A single serious defect or multiple significant defects. Recent change in tree orientation. Observed structural problems cannot be corrected. Failure may occur at any time.	Largely asymmetric/abnormal. Detracts from intended use and/or aesthetics to a significant degree.
Very poor	Poor vigor. Appears to be dying and in the last stages of life. Little live foliage.	Single or multiple severe defects. Failure is probable or imminent.	Visually unappealing. Provides little or no function in the landscape.
Dead			

Table 1. Sourced from *The Guide for Plant Appraisal, 10th Edition*

TRUNK AND LIMB PROTECTION

TRUNK AND LIMB PROTECTION IN CONSTRUCTION ZONES

Damage to tree trunks and limbs is common in construction zones, particularly where backhoes or excavators are used, but also simply due to impacts from demolition, material hauling, and other common construction activities.

In specific areas where demolition will occur, heavy equipment must operate or a lot of other construction activity must occur near trees, the trunks of the trees and possibly branches should be protected with a strapped, barrel stave-like armor of stud-length 2"x4"s (if possible given tree shape) around some or all of the circumference of the tree trunk and multiple layers of orange plastic tree protection fencing. Alternatively, a plywood/OSB box can be constructed around the base to a height of at least 6' but preferably higher.



TREE PROTECTION FENCING

4-foot-tall wire deer fencing shall be used to create the **tree protection zone**, installed as shown on the Arborist's Map. Fencing shall be supported with 6' metal t-stakes and installed 6-foot on center. Laminated signage shall be attached to fencing and read "Warning Tree Protection Zone Keep Out". Signage shall be kept visible and intact throughout the project. Failure to comply with the tree protection plan may result in a stop work order.

