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24275 Via Mal Paso, Monterey CA
Tree Resource Assessment
Management Plan

Prepared for:

Eric Miller

Prepared by:

Frank Ono
Urban Forester
Society of American Foresters I.D. # 48004
Certified Arborist #536
1213 Miles Avenue
Pacific Grove, CA 93950

May 24, 2018

Owner:

Eric Miller
211 Hoffman Avenue
Monterey, CA 93940

Architect:

Eric Miller Architects, Inc.
211 Hoffman Avenue
Monterey, CA 93940

Forester and Arborist

Frank Ono, Society of American Foresters # 048004, Certified Arborist #536
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SUMMARY

Development is proposed for this site requiring the removal of six (6) trees on site. The project proposes to build a single family dwelling n auxiliary unit within an existing stand of oak and pine trees. The trees are considered to be in fair condition both structurally and in health. A tree assessment/arborist report has been prepared that identifies and addresses the potential affects that the project may have to the Oak/pine interface tree resources on site, as well as a list of recommendations for the project.

INTRODUCTION

This tree assessment/arborist report is prepared for Eric Miller, the owner of the property located at 24275 Via Mal Paso, Monterey CA by Frank Ono, Urban Forester and Certified Arborist, Society of American Foresters professional member #48004 and International Society of Arboriculture Certified Arborist #536 due to the proposed construction. The Greater Monterey Land Use Plan and Monterey County Zoning Ordinance Title 21 identify Oak trees as native tree species that require protection and special consideration for management.

ASSIGNMENT/SCOPE OF PROJECT

Development of this parcel will have various affects to the adjacent trees from construction. To ensure protection of the tree resources on site, the property owner, Mr. Eric Miller, has requested an assessment of the trees in proximity to proposed development areas and a tree resource assessment prepared to identify trees that may be affected by construction on this property. To accomplish this assignment, the following tasks have been completed;

- Evaluate health, structure and preservation suitability for each tree within or adjacent (15 feet or less) to proposed development of trees greater than or equal to six diameter inches at 24 inches above grade.
- Review proposed building site plans as provided by Eric Miller, Inc.
- Make recommendations for alternative methods and pre-construction treatments to facilitate tree retention.
- Create preservation specifications, as it relates to a Tree Location/Preservation Map.
- Determine the quantity of trees affected by construction that meet “Landmark” criteria as defined by the County of Monterey, Title 21 Monterey County Zoning Ordinance (sec 21.260.260); as well as mitigation requirements for those to be affected.
- Document findings in the form of a report as required by the County of Monterey Planning Department.

LIMITATIONS

This assignment is limited to the review of plans submitted to me by Mr. Eric Miller to assess affects from potential construction to trees within or adjacent to construction activities. The assessment has been made of these plans specifically and no other plans were reviewed. Only minor grading and erosion details are discussed in this report as it relates to tree health.

PURPOSE AND GOAL

This tree resource assessment report is prepared for this parcel due to proposed construction activities located at 24275 Via Malpaso, Monterey CA. The purpose of the report is to document and independent assessment of trees on site adjacent to proposed construction and to determine the trees affected by the proposed project. Oak trees are considered protected trees as defined by the County of Monterey, Title 21 Monterey County Zoning Ordinance (sec 21.260.260). The goal of this assessment is to protect and maintain the Greater Monterey Area forested resources through the adherence of development standards, which allow the protection, and maintenance of its forest resources. Furthermore it is the intended goal of this assessment to aid in planning to offset any potential effects of proposed development on the property while encouraging forest stability and sustainability, perpetuating the forested character of the property and the immediate vicinity.

SITE DESCRIPTION

- 1) Assessor's Parcel Number: 259-101-066-000
- 2) Location: 24275 Via Malpaso, Monterey CA
- 3) Parcel size: Approximately 1.8 Acres
- 4) Existing Land Use: The parcel is zoned RDR/B-6-UR-D-S
- 5) Slope: The parcel is sloped. Slopes range from 5% to greater than 25%
- 6) Soils: The parcel is located on soils classified by the Monterey County Soils report as dissected Xerorthents (Xd), which are coarse or gravelly soils made up of cobbles, gravel, pebbles and stones from consolidated alluvium found on steep or extreme hills, Santa Ynez fine sandy loam (ShD) found on terraces and low hills, which are well drained soils made up sandy alluvium, and Santa Lucia shaley clay loam (SfF), which is made up of degraded shale on uplands and found on steeper soils. Drainage and runoff vary and ranges from very rapid in the Xd soils to moderate runoff and drainage on the ShD soils. Roots can penetrate to a depth of 60 inches or more with the ShD soils.
- 7) Vegetation: The vegetation on site is composed primarily of with Coast live oak with some Monterey pine, understory present is composed of planted Ceanothus (*Ceanothus sp.*), Sticky monkey flower (*Mimulus aurantiacus*), planted manzanita (*Arctostaphylos sp.*), Poison oak (*Rhus toxicodendron*), Woodmint (*Blephilia hirsute*), Coast silk tassel (*Garrya elliptica*) and grasses.
- 8) Forest Condition and Health: The stand of trees and their health is evaluated with the use of the residual trees and those of the surrounding adjacent trees as a complete stand. The canopy is fragmented and open in the area where development is proposed, composed mainly of Coast live oak interspersed with Monterey pine. Tree spacing's range from 20-30 feet apart or more in the open canopied areas and 10 feet or less apart in the more congested areas of the property. Tree condition overall ranges from fair to poor condition with obvious signs of decay on degrading Oak trees. Multiple oak trees are also observed with western oak bark beetle populations, these conditions have resulted with a number of snags with decayed trunks and stems. Main biotic stressors noted such as insects and disease, consist of natural occurrences of oak worm defoliation, oak borer pests (Western oak bark beetle), Stem fungal activity (*Hypoxylon*), and root crown water mold fungi (*Phytophthora* and *Diplodia*). Surrounding pines are exhibiting crown thinning and foliar dieback most likely attributed to fungal diseases such as pine pitch canker and beetles. Several younger pines are weakly rooted where they have fallen. Some have succumbed to pine bark beetle attacks, both Ips and Red turpentine bark beetle (*Ips paraconfusus* and *Dendroctonus valens*). The presence of abiotic stressors such as dominant seasonal northwest wind pressure and cut/fill grading for the paved access to the adjacent property may also responsible for some of the absence of tree cover noted adjacent or within the building envelope.

BACKGROUND

On August 9, 2017, I (Frank Ono, F.O. Consulting) I met with Mr. Miller who requested an assessment of trees adjacent or within proposed construction areas. The project consists of a new main residence, new garage, and driveway. The assessment is to determine the treatments necessary to complete the project to meet the goals of the landowner, focusing on incorporating the preliminary location of site improvements with consideration for the general goals of preserving trees to the greatest extent feasible, maintaining the view shed, general aesthetic quality of the area, and to comply with county codes. Trees within and immediately adjacent to the proposed development area were located, measured, inspected, and recorded, concluding with an opinion of whether trees should be removed, or preserved, based on the extent and effect of construction activity to the short and long term health of the tree. My assessment is prepared and documented in a report to work in conjunction with other conditions for approval of the building permit application

OBSERVATIONS/DISCUSSION

The following list includes observations made while on site, and summarizes details discussed during this stage of the planning process.

- The property has an existing roadway accessing the adjacent property which divides the property into two portions. The main residence will be located on the upper sloped portion with an accessory unit located on the lower sloped portion of the lot.
- A number of declining mature oaks and pines are located within the building foot print areas. The trees have declined or hare dead from biotic stressors such as beetles and fungal pathogens. Size classes for the decline range from less than significant (>10" in diameter) to more significant (<10" in diameter)
- Most of the trees on the property are of moderate size class range from 10"-20" in diameter. There is one landmark (24" or greater in diameter) size tree to be removed (26" diameter Oak).
- No alternate building sites were considered for this assessment. Development of this site is constrained by the building envelope configuration and the division between the two portions of the property, which accommodates access to an adjacent property.

TREE REMOVAL

The following trees were identified to be removed with this design due to location of the trees to the building footprint and grading:

ID#	Diameter	Species	Condition	Remove	Comments
1	26	Coast live oak	Fair	X	Crown dieback
2	10	Coast live oak	Poor	X	Crown dieback
3	6	Coast live oak	Fair	X	Crown dieback
4	10	Coast live oak	Poor	X	Crown dieback
5	11	Monterey pine	Good	X	
6	11	Monterey pine	Fair	X	

CONCLUSION/PROJECT ASSESSMENT

Short term site affects are confined to the construction envelope and immediate surroundings where six (6) trees (three pines and four oaks) are identified to be removed and a few adjacent trees may have their root systems reduced. The pruning of tree crowns above 30% and reduction of root area may have a short term effect on those trees treated, including a reduction of growth, dieback, and potentially death. No significant long term affects to the forest ecosystem are anticipated. The site is heavily wooded, consequently the project as proposed is not likely to significantly reduce the availability of wildlife habitat over the long-term. The trees proposed for removal are on the edge of existing openings therefore have trees behind them. The proposal to build a single family residence and driveway is planned to maintain the existing mixed forest (oak woodland/pine interface) environment and allows the forest to continue to exist and regenerate over time. The remainder of the property contains tree cover, which will remain undisturbed.

Evaluation of potential for adverse environmental affects due to the oak and pine tree removals are evaluated in the following subject areas:

Soil Erosion: Potential is low to moderate. Adequate erosion control measures will apply and can address potential impacts.

Water Quality: No water courses are nearby and tree removal at this site is unlikely to generate harmful substances that could be detrimental to the plant, animal or human environment.

Ecological Impacts: No significant change in land use is proposed, the area is already a partially developed residential area and remaining native trees on the property will be retained.

Noise Pollution: Not a significant factor due to the rural nature of the site.

Air Movement: Removal of the trees will have little or no effect on the movement of air in this vicinity.

Wildlife Habitat: The site is bordered by developed residences and wildlife use in the area is already conditioned by surrounding the residential use.

RECOMMENDATIONS

Pre-Construction Meeting

It is recommended that prior to the start of site clearance or construction that tree protection or exclusionary fencing is installed prior or in concert with site clearing; all involved parties including site clearance personnel, construction managers, heavy equipment operators, and tree service operators must be trained in tree protection procedures. Training will be conducted by a certified professional such as a Monterey County qualified forester or arborist.

Grading Near Oaks

The site will experience some cut and fill. Fill soil from grade changes should not be allowed against the bases of tree trunks or root collars and any temporary grade changes returned to pre-disturbance levels. Whenever there are anticipated grade changes near trees, soils near trees may be terraced by constructing a dry retaining wall a minimum of five feet upslope of the trees. It is recommended to not backfill with earth or rocks around the trunk of trees. If the grade immediately around a tree must be elevated, first construct a vertical well of stone or concrete around the tree, to keep soil away from where the trunk enters the ground. Then construct a drainage system at the original soil level to allow air and water penetration to the roots, and water drainage away from the root crown.

Tree Removal

Six trees (two Pines and four Oaks) are identified for removal with this proposed project; trees adjacent to the site will remain and be protected from construction affects when closer than 25 feet from construction.

Tree Replacement

Because it is recommended that replacement of removed trees be undertaken replacement planting is necessary. Trees should be planted in those areas with the greatest opening in the stand to allow for a minimum of competition and maximum sunlight. Replacement trees should be five gallon stock or larger, if available. Spacing between trees should be at least 10 feet. There appears to be enough room to plant trees on the parcel on a 1:1 ratio with small five gallon species, the use of larger specimen trees can reduce the replant ratio to 1:2. Occasional deep watering (more than two weeks apart) during the late spring, summer, and fall is recommended during the first two years after establishment. Grinding of stumps onsite is permissible.

Replant Success Monitoring

Monitoring is recommended to ensure the sustainability and proper growth of the replacement trees. Replant success must meet a 100% survival rate or better.

- Tree health and growth rates of new planting assessed by a qualified forester or certified arborist. The qualified professional will monitor newly planted trees for a minimum period as specified by the County.
- Trees suffering poor growth rates or declining health are to be identified and documented as to reason it was not successful.
- Invigoration treatments if feasible will be recommended and implemented.
- Dead trees or trees identified in an irreversible state of decline will be replaced after a written recommendation is made by a qualified forester or certified arborist identifying type and location of new replacement. Trees found that need replacement will be replaced on a 1:1 ratio for replacement trees. Replant replacement material shall be the same size or larger as originally specified.
- Tree relocation/removal contractor shall communicate methods and practices to the project forester or arborist regarding tree removal or relocation and a record kept chronicling any changes, deviations, or methods not included in this report.
- Near the end of the monitoring period, the status of the new plantings will be again assessed to make certain that success criteria has been met and all mitigation trees planted are performing well.
- A report shall be prepared by a Monterey County qualified forester or certified arborist and submitted to the Planning Department for review and approval of the Director of Planning describing reforestation activities, success rates and adjustments for previous failures or unsuccessful transplanting.

Tree Protection

Prior to the commencement of construction activities:

- Trees located adjacent to the construction area shall be protected from damage by construction equipment by the use of temporary fencing and through wrapping of trunks with protective materials.
- Fencing shall consist of chain link, snowdrift, plastic mesh, hay bales, or field fence. Existing fencing can also be used.
- Fencing is not to be attached to the tree but free standing or self-supporting so as not to damage trees. Fencing shall be rigidly supported and shall stand a minimum of height of four feet above grade.
- Soil compaction, parking of vehicles or heavy equipment, stockpiling of construction materials, and/or dumping of materials should not be allowed adjacent to trees on the property especially within fenced areas.

- Fenced areas and the trunk protection materials should remain in place during the entire construction period.

During grading and excavation activities:

- All trenching, grading or any other digging or soil removal that is expected to encounter tree roots should be monitored by a qualified arborist or forester to ensure against drilling or cutting into or through major roots.
- The project architect and qualified arborist should be on site during excavation activities to direct any minor field adjustments that may be needed.
- Trenching for the retaining wall and driveway located adjacent to any tree should be done by hand where practical and any roots greater than 3-inches diameter should be bridged or pruned appropriately.
- Any roots that must be cut should be cut by manually digging a trench and cutting exposed roots with a saw, vibrating knife, rock saw, narrow trencher with sharp blades, or other approved root pruning equipment.
- Any roots damaged during grading or excavation should be exposed to sound tissue and cut cleanly with a saw.

If at any time potentially significant roots are discovered:

- The arborist/forester will be authorized to halt excavation until appropriate mitigation measures are formulated and implemented.
- If significant roots are identified that must be removed that will destabilize or negatively affects the target trees negatively, the property owner will be notified immediately and a determination for removal will be assessed and made as required by law for treatment of the area that will not risk death decline or instability of the tree consistent with the implementation of appropriate construction design approaches to minimize affects, such as hand digging, bridging or tunneling under roots, etc..

Remedial pruning should occur prior to construction. Following construction, any above ground tree pruning/trimming should be delayed until one year after completion of construction. Following construction, a qualified arborist should monitor trees adjacent to the improvements area and if any decline in health that is attributable to the construction is noted, additional trees should be planted on the site.

General Standards to Observe

The trees preserved around the construction site will have the greatest chance of success if the following practices are adhered to:

- A) Do not deposit any fill around trees, which may compact soils and alter water and air relationships. Avoid depositing fill, parking equipment, or staging construction materials near existing trees. Covering and compacting soil around trees can alter water and air relationships with the roots. Fill placed within the drip line may encourage the development of oak rot fungus (*Armillaria mellea*). As necessary, trees may be protected by boards, fencing or other materials to delineate protection zones.
- B) Pruning shall be conducted so as not to unnecessarily injure the tree. General principals of pruning include placing cuts immediately beyond the branch collar, making clean cuts by scoring the underside of the branch first, and for live oak, avoiding the period from February through May.
- C) Native live oaks are not adapted to summer watering and may develop crown or root rot as a result. Do not regularly irrigate within the drip line of oaks. Native, locally adapted, drought resistant species are the most compatible with this goal.
- D) Root cutting should occur outside of the springtime. Late June and July would likely be the best. Pruning of the live crown should not occur February through May.
- E) Oak material greater than 3 inches in diameter remaining on site more than one month that is not cut and split into firewood should be covered with black plastic that is dug in securely around the pile. This will discourage infestation and dispersion of bark beetles.
- F) A mulch layer up to approximately 4 inches deep should be applied to the ground under selected oaks following construction. Only 1 to 2 inches of mulch should be applied within 1 to 2 feet of the trunk, and under no circumstances should any soil or mulch be placed against the root crown (base) of trees. The best source of mulch would be from chipped material generated on site.
- G) If trees along near the development are visibly declining in vigor, a Professional Forester or Certified Arborist should be contacted to inspect the site to recommend a course of action.

Tree Maintenance Guidelines

The following recommendations are for general maintenance of trees in the vicinity of the proposed construction. Tree maintenance is to be implemented prior, during and after construction.

Pruning

Native oaks require very little pruning, however, mature oaks may benefit from removal of dead, diseased, or weakened branches. To control the size of pine trees and to increase bushiness, the new growth, called candles, may be pruned in the spring as they appear. Remove dead or dying branches through is recommended through canopy thinning. Canopy thinning consists of the removal of ten to twenty percent of the leaf area also benefits surrounding vegetation by allowing more sunlight through the canopy to the forest floor. The preferred time to prune is when the tree is dormant. Heavy pruning of evergreen oaks should be performed during July and August. Deciduous oaks are best pruned during December and January. Light pruning can be performed at any time of the year. Avoid excessive pruning, leaving stubbed branches, or painting the pruning wounds. Major pruning of any tree should be performed by properly trained and equipped professional tree care specialists.

Maintenance Watering of Established Oaks

Native oak trees are adapted to the long dry summers of California and normally do not need supplemental irrigation. Established pine trees require occasional deep watering to remain healthy. Newly planted trees should be at minimum watered thoroughly once per week for the first six months and twice per month for one year after that until established. Many species of native oaks (i.e. Coast live oak) are susceptible to root disease when they are subjected to summer irrigation with the most vulnerable portion of the oak root zone extending out six to ten feet from the trunk of the tree, therefore summer irrigation should be avoided within the inner third (one-third of the distance from the trunk to canopy drip line) of the root zone of undisturbed oaks. Planting plants with high water requirements beneath the canopy of native oaks should be avoided. Supplemental watering during drought periods may help maintain tree vigor and resistance to insect attack but should be restricted to the outer two-thirds of the root zone. Occasional light overhead watering may be required to wash off dust from accumulation construction during the construction phase.

Fertilizing

Undisturbed native oaks should not require supplemental fertilizing; as they receive natural fertilizer from detritus leaf litter. Established pine trees require occasional deep watering accompanied by a light fertilization to remain healthy. Trees under stress due to disease, root pruning, or lack of natural fertilizer may benefit from annual fertilizer application. Nitrogen is the nutrient most often found to be deficient in trees and should be applied only in the outer two-thirds of the root zone where feeding roots exist. Nitrogen application typically should be at a rate of two to four pounds of actual nitrogen per one thousand square feet of surface area.

Agreement by Landowner

The following standard conditions are made a part of all Monterey County Forest Management Plans:

A. Management Objectives

1. Minimize erosion in order to prevent soil loss and siltation.
2. Preserve natural habitat including native forest, understory vegetation and associated wildlife.
3. Prevent forest fire.
4. Preserve scenic forest canopy as located within the Critical View shed (any public viewing area).
5. Preserve landmark trees to the greatest extent possible as defined below.

B. Management Measures

1. Tree Removal: No tree will be removed without a Forest Management Plan or an Amended Forest Management Plan.
2. Application Requirements: Trees proposed for removal will be conspicuously marked by flagging or by paint. Proposed removal of native trees greater than six inches will be the minimum necessary for the proposed development. Removal not necessary for the proposed development will be limited to that required for the overall health and long term maintenance of the forest, as verified in this plan or in subsequent amendments to this plan.
3. Landmark Trees: All landmark trees will be protected from damage if not permitted to be removed as a diseased tree, which threatens to spread the disease to nearby healthy trees or as a dangerous tree, which presents an immediate danger to human life or structures. Landmark oaks are trees that are visually, historically, or botanically significant specimens or are greater than 24 inches or more in diameter at breast height (DBH), or more than 1,000 years old.
4. Dead Trees: Because of their great value for wildlife habitat (particularly as nesting sites for insect eating birds) large dead trees (unless deemed hazardous by a qualified authority) will normally be left in place. Smaller dead trees will normally be removed in order to reduce the fire hazard. Dead trees may be removed at the convenience of the owner.
5. Thinning: Trees less than six inches diameter breast height may be thinned to promote the growth of neighboring trees, without first developing a Forest Management Plan.
6. Protection of Trees: All trees other than those approved for removal shall be retained and maintained in good condition. Trimming, where not injurious to the health of the tree, may be performed wherever necessary in the judgment of the owner, particularly to reduce personal safety and fire hazards. Retained trees which are located close to the construction site shall be protected from inadvertent

damage by construction equipment through wrapping of trunks with protective materials, bridging or tunneling under major tree roots where exposed in foundation or utility trenches and other measures appropriate and necessary to protect the well-being of the retained trees.

7. Fire prevention: In addition to any measures required by the local California Department of Forestry fire authorities, the owner will;

- A) Maintain a spark arrester screen atop each chimney.
- B) Maintain spark arresters on gasoline-powered equipment.
- C) Establish a "greenbelt" by keeping vegetation in a green growing condition to a distance of at least 50 feet around the house.
- D) Break up and clear away any dense accumulation of dead or dry underbrush or plant litter, especially near landmark trees and around the greenbelt.

8. Use of fire (for clearing, etc.): Open fires will be set or allowed on the parcel only as a forest management tool under the direction of the Department of Forestry authorities, pursuant to local fire ordinances and directives.

9. Clearing Methods: Brush and other undergrowth, if removed, will be cleared through methods, which will not materially disturb the ground surface. Hand grubbing, crushing and mowing will normally be the methods of choice.

10. Irrigation: In order to avoid further depletion of groundwater resource, prevent root diseases and otherwise maintain favorable conditions for the native forest, the parcel will not be irrigated except within developed areas. Caution will be exercised to avoid over watering around trees.

11. Exotic Plants: Care will be taken to eradicate and to avoid introduction of the following pest species:

- A) Pampas grass
- B) Genista (Scotch broom, French broom)
- C) Eucalyptus (large types)

Amendments

The Monterey County Director of Planning may approve amendments to this plan, provided that such amendments are consistent with the provisions of the discretionary permit or building submittal. Amendments to this Forest Management Plan will be required for proposed tree removal not shown as part of this Plan, when the proposed removal falls within the description of a Forest Management Plan or Amendment to an existing Forest Management Plan.

Amended Forest Management Plan

A) An amended Forest Management Plan shall be required when:

1. The Monterey County Director of Planning has previously approved a Forest

Management Plan for the parcel.

2. The proposed tree removal as reviewed as part of a development has not been shown in the previously approved Forest Management Plan.

B) At a minimum, the Amended Management Plan shall consist of:

1. A plot showing the location, type and size of each tree proposed for removal, as well as the location and type of trees to be replanted,
2. A narrative describing reasons for the proposed removal, alternatives to minimize the amount and impacts of the proposed tree removal, tree replanting information and justification for removal of trees outside of the developed area if proposed.

Compliance

It is further understood that failure to comply with this Plan will be considered as failure to comply with the conditions of the Use Permit.

Transfer of Responsibility

This plan is intended to create a permanent forest management program for the site. It is understood, therefore, that in the event of a change of ownership, this plan shall be as binding on the new owner as it is on the present owner. As a permanent management program, this Plan will be conveyed to the future owner upon sale of the property.

Prepared By:



Frank Ono, Arborist and Urban Forestry ISA #536

May 24, 2018

Date

Recommendations Agreed to by landowner:

Landowner

Date

Management Plan approved by:

Director of Planning

Date

PHOTOGRAPHS



Tree #1



Trees #3 and #2



Tree #4



Tree #5



Tree #6

