

Exhibit D

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Tree Assessment/
Construction Impact Analysis
Poss Residence

Prepared for:

Mr. Roy Poss

Prepared by:

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

December 12, 2019

Owner:

Mr. Roy Poss
26934 Laureles Grad Rd
Carmel Valley, CA 93924

Forester and Arborist

Frank Ono, Society of American Foresters # 048004, Certified Arborist #536
F.O. Consulting
1213 Miles Ave
Pacific Grove, CA 93950

SUMMARY

Development is proposed for this site located at 1138 Chaparral Road, Pebble Beach, CA 93953. Because protected trees forest this site, a construction impact analysis/arborist report has been prepared that identifies and addresses the affects that the project will have to the existing tree resources on site as well as a list of recommendations for the project.

The project proposes to build a new single family home near protected trees which requires the pruning/removal of trees located on site and protection of others identified for retention. In studying the project, 35 trees are proposed for removal with this project (includes driveway area which was only generally located). Remaining trees that are adjacent to the proposed construction which are considered to be in fair condition both structurally and in health are to be protected and retained.

ASSIGNMENT/SCOPE OF PROJECT

To ensure protection of the tree resources on site, the property owner, Mr. Roy Poss has requested an assessment of the trees in proximity to proposed development areas and an arborist report for trees that are adjacent to these areas 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 Rasmussen Land Surveying, Inc.
- Make recommendations for alternative methods and preconstruction treatments to facilitate tree retention.
- Create preservation specifications, as it relates to numbered trees keyed to an annotated Tree Location 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; 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. Roy Poss dated December 9, 2019 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. No formalized driveway plan was submitted for review. Minor grading and erosion details discussed in this report as it relates to tree health include an area where the driveway area should logically be placed. All meetings and field review are focused on the area immediately surrounding the proposed development.

PURPOSE

This tree assessment/construction impact analysis report is prepared for this parcel due to proposed construction activities that are intent on building a new structure on the vacant lot located at 1138 Chaparral Road, Pebble Beach, CA 93953. The purpose of this report is to give an independent assessment of the existing trees that are on site and determine what trees will be affected by the proposed project. Coast live oak and Monterey pine trees are considered protected trees as defined by the County of Monterey, Title 21 Monterey County Zoning Ordinance.

GOAL

The goal of this plan is to protect and maintain the Greater Monterey Peninsula Area's 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 report 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.

INTRODUCTION

This construction impact analysis is prepared for Mr. Roy Poss owner of the lot located at 1138 Chaparral Road, Pebble Beach, CA 93953 by Frank Ono, Urban Forester and Certified Arborist, S.A.F. Member #48004 and ISA #536 due to construction. Monterey County's Zoning Ordinance Sec. 21.64.260D requires an arborist report when tree removal is necessary of native trees six inches diameter or greater so as to preserve and maintain the forest and its beneficial uses. The County identifies Monterey pine and oak trees as native tree species that require special consideration for management.

SITE DESCRIPTION

- 1) Assessor's Parcel Number: 007-543-004-000
- 2) Location: 1138 Chaparral Road, Pebble Beach, CA 93953
- 3) Parcel size: 0.26 Acres
- 4) Existing Land Use: The parcel is vacant and is zoned for residential use.
- 5) Slope: The parcel is on a marine terrace. Slopes range from 2% to 9%.
- 6) Soils: The parcel is located on soils classified by the Natural Resources Conservation Service as "Tangair" fine sand over 60 inches deep. Runoff and erosion hazard are low.
- 7) Vegetation: The vegetation is of the Monterey Pine Forest type. It is a mixture of Monterey pine tree overstory with Coastal live oak understory present. Understory shrubs consist of native and nonnative grasses, poison oak, and
- 8) Forest Condition and Health: The forest condition and health is evaluated with the use of the residual trees and those of the surrounding Monterey Pine Forest as a stand. The site is one of the last undeveloped lots in the area and is a remnant of the surrounding pine forest. The area has experienced steady tree failure and mortality over the past several years and the site itself has had dead trees removed in the past two years. The large mature overstory pines are beginning to decline and age out and the majority of the understory trees are suppressed.

BACKGROUND/PROJECT DESCRIPTION

In August 2019, I (Frank Ono, F.O. Consulting) I was contacted by Mr. Roy Poss who requested that I visit the site he owns for an assessment of trees adjacent or within the proposed construction areas. Mr. Poss requested the findings from the review and assessment of trees that occupy the land at 1138 Chaparral Road, Pebble Beach, CA 93953 that are adjacent to the proposed design development be prepared and documented in a report that would work in conjunction with other conditions for approval of the building permit application.

A site visit was taken to the property on September 19, 2019 where trees were assessed for health and condition at that time. The assessment focused on incorporating the preliminary location of site improvements coupled with consideration for the general goals of site improvement desired of the landowner. During this site visit, the proposed improvements assessed included preserving trees to the greatest extent feasible with this design, maintaining the view shed and general aesthetic quality of the area while complying with county codes. A study of the individual trees determined the treatments necessary to complete the project and meet the goals of the landowner. Trees within and immediately adjacent to the proposed development area were located, measured, inspected, and recorded and the assessment of each tree concludes with an opinion of whether the tree should be removed, or preserved, based on the extent and effect of construction activity to the short- and long-term health of the tree.

TREE REMOVAL CHART

The following trees are impacted by proposed construction

ID	Diameter	Species	Condition	Remove	Pruning/Comments
105	10	Coast live oak	Fair	x	
106	8	Coast live oak	Fair	x	
107	9	Coast live oak	Fair	x	
108	6	Coast live oak	Fair	x	
109	36	Monterey pine	Fair	x	
110	6	Coast live oak	Fair	x	
111	6	Coast live oak	Poor	x	Suppressed
112	10	Coast live oak	Fair	x	
113	12	Coast live oak	Fair	x	
114	10	Coast live oak	Fair	x	
115	7	Coast live oak	Fair	x	
123	48	Monterey pine	Fair	x	Lean, Bark beetles
126	18	Monterey pine	Fair	x	
127	6	Coast live oak	Fair	x	
128	10	Coast live oak	Fair	x	
129	24	Monterey pine	Fair	x	
134	6	Coast live oak	Fair	x	
135	30	Monterey pine	Fair/Poor	x	Lean, Thinning crown
136	15	Monterey pine	Fair	x	Lean
137	12	Monterey pine	Fair	x	
138	15	Monterey pine	Fair	x	
139	12	Monterey pine	Fair	x	
140	15	Monterey pine	Poor	x	Lean, Fungus
141	8	Coast live oak	Fair	x	
142	6	Coast live oak	Fair	x	
143	6	Coast live oak	Fair	x	
144	18	Monterey pine	Fair	x	
145	6	Monterey pine	Fair	x	
146	18	Monterey pine	Fair	x	
147	18	Monterey pine	Fair	x	Bark beetles
148	12	Monterey pine	Poor	x	Dying top
149	18	Monterey pine	Poor	x	Dying top
150	6	Monterey pine	Fair	x	
151	8	Coast live oak	Fair	x	
155	15	Monterey pine	Fair	x	

OBSERVATIONS/DISCUSSION

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

- The site is forested mainly with Monterey pine and Coast live oak trees.
- Trees range in size classes, a few Landmark sized (24" in diameter or larger) with most of the trees on the property of moderate size (less than 24" in diameter" diameter) and compose the stand of trees. Average spacing is 10 – 15 feet.
- 35 trees are proposed for removal, the trees are as follows:
 - 17 Coast live oaks in the 6-12 – inch diameter class.
 - Five (5) Monterey pines in the 6 -12 – inch diameter class.
 - Nine (9) Monterey pines in the 13-23 – inch diameter class.
 - Four (4) Monterey pine trees identified as landmark trees (24 – inches or greater)
 - Tree #109 is 36 inches and located within the building envelope.
 - Tree #123 is a 48- inch diameter Monterey pine inside the proposed driveway.
 - Tree #129 is 24 inches and located within the building envelope.
 - Tree #135 is 30 inches and located within the building envelope.
- No alternate building sites were considered for this assessment as the site constrained by pre-existing conditions and lack of available space.

PROJECT ASSESSMENT/CONCLUSION

Significant tree removal is required to develop this site due to it being so densely forested. Whenever construction activities take place near trees, there is the potential for those trees to experience decline or instability in both the short and long-term as well. Therefore, the greatest attempt has been made to identify and remove trees likely to experience such a decline. The site, being an overcrowded site with many mature pines in their later stages of life, will require tree removal to safely construct the proposed project.

Short Term Impacts

Site disturbance will occur during driveway and home construction. Short term site impacts are confined to the construction envelope and immediate surroundings where trees will be removed and trimmed, and root systems reduced. The pruning of tree crowns above 30% and reduction of root area may have a short-term impact on those trees treated, including a reduction of growth, dieback, instability, and in some cases, potentially death. Every attempt has been made to recommend removing those trees likely to experience instability, severe decline and/or death as a result of planned activities.

Long Term Impacts

No significant long-term impacts to the surrounding forest ecosystem are anticipated due to the area around the site being already developed, and the forested nature of the area surrounding the proposed residence. The project as proposed is not likely to significantly reduce the availability of wildlife habitat over the long-term.

RECOMMENDATIONS

Tree Removal

There are 35 trees to be removed with the design as stated in the previous tree removal chart. Tree removal contractor shall verify absence of active animal or bird nesting sites prior to any tree removal. If any active animal or bird nesting sites are found prior to tree removal, work shall be stopped until a qualified biologist is consulted for further recommendations.

Replanting

The County of Monterey through the Greater Monterey Peninsula Land Use plan has tree replacement conditions as part of a tree removal permit when sufficient space exists to replant that does not create an overcrowded vegetated situation. The site is currently approaching the stocking limits for its size and planting a high number of smaller trees after construction is not beneficial to this or surrounding site. If replanting is a requirement it should be at a no more than a 1:7 ratio with only five trees.

Tree Protection

The health of trees remaining should not be affected 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 dripline may encourage the development of oak root 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 Protection Standards

Prior to the commencement of any construction activity the following tree protection measures shall be implemented and approved by a qualified arborist or forester:

- 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. No stripping of topsoil or grubbing of understory shall occur in these tree preservation zones.
- Fenced areas and the trunk protection materials shall remain in place during the entire construction period. Should access to the area be necessary a Professional Forester or Certified Arborist must be contacted to inspect the site for a recommended a course of action.
- Fencing shall consist of chain link, snowdrift, plastic mesh, hay bales, or field fence. Photographs of tree protection in good functional condition shall be taken during different phase of the construction (i.e. grading, foundation, rough carpentry and finish carpentry) to be presented to the County at the end of the project.
- 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 and should be placed to the farthest extent possible from the trees base to protect the area within the trees drip line (typically 10-12 feet away from the base of a tree).
- In cases where access or space is limited for tree protection it is permissible to protect the tree within the 10-12-foot distance after determination and approval by a qualified forester or arborist.
- Soil compaction, parking of vehicles or heavy equipment, stockpiling of construction materials, cleaning of concrete or plaster, and/or dumping of spoils or materials shall not be allowed adjacent to trees on the property especially within or near fenced areas.

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. Again, no stripping of topsoil or grubbing of understory shall occur in tree preservation zones.
- 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 retaining walls or footings located adjacent to any tree shall be done by hand where practical and any roots greater than 3-inches diameter shall be bridged or pruned appropriately.
- Any roots that must be cut shall 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 shall 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..

Tree Pruning

It is understood that the pruning of retained trees will be expected for this site, especially where the proposed addition is to be constructed. Pruning will also include the trees that have deadwood or are exhibiting some minor structural defect or minor disease that must be compensated. Those trees that may require pruning and possible monitoring are the closest to the proposed structure improvements. Trees should be monitored on occasion for health and vigor after pruning. Should the health and vigor of any tree decline it will be treated as appropriately recommended by a certified arborist or qualified forester.

The following are offered as guidelines when pruning

- In general, the trees will be pruned first for safety, next for health, and finally for aesthetics.
- Type of pruning is determined by the size of branches to be removed.
General guidelines for branch removal are:
 1. Fine Detail pruning- limbs under 2-inch diameter are removed
 2. Medium Detail Pruning – Limbs between 2- and 4-inch diameter
 3. Structural Enhancement – limbs greater than 4-inch diameter.
 4. Broken and cracked limbs-removed will be removed in high traffic areas of concern.

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 forester/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.

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 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 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.

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 Forest 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.

Report Prepared By:



Frank Ono, SAF Forester #48004 and ISA Certified Arborist #536

December 12, 2019

Date

Recommendations Agreed to by landowner:

Landowner

Date

Construction Impact Plan approved by:

Director of Planning

Date

FULL TREE CHART

ID	Diameter	Species	Condition	Remove	Pruning/Comments
101	10	Coast live oak	Fair		
102	36	Monterey pine	Fair		
103	30	Monterey pine	Fair/Poor		Lean, Dieback
104	30	Monterey pine	Fair		
105	10	Coast live oak	Fair	x	
106	8	Coast live oak	Fair	x	
107	9	Coast live oak	Fair	x	
108	6	Coast live oak	Fair	x	
109	36	Monterey pine	Fair	x	
110	6	Coast live oak	Fair	x	
111	6	Coast live oak	Poor	x	Suppressed
112	10	Coast live oak	Fair	x	
113	12	Coast live oak	Fair	x	
114	10	Coast live oak	Fair	x	
115	7	Coast live oak	Fair	x	
116	6	Coast live oak	Fair		
117	8	Coast live oak	Fair		
118	12	Coast live oak	Fair		
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146	18	Monterey pine	Fair	x	
147	18	Monterey pine	Fair	x	Bark beetles
148	12	Monterey pine	Poor	x	Dying top
149	18	Monterey pine	Poor	x	Dying top
150	6	Monterey pine	Fair	x	
151	8	Coast live oak	Fair	x	
152	8	Coast live oak	Fair		
153	6	Coast live oak	Fair		
154	6	Coast live oak	Fair		
155	15	Monterey pine	Fair	x	
156	6	Coast live oak	Fair		
157	8	Coast live oak	Fair		
158	8	Coast live oak	Fair		
159	10	Coast live oak	Fair		
160	8	Coast live oak	Fair		
161	8	Coast live oak	Fair		
162	8	Coast live oak	Fair		

PHOTOGRAPHS



View from Arrowhead Road



View from Chaparral Road looking south east



View looking south from Chaparral Road



View looking northwest

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