

Exhibit D

This page intentionally left blank.

29003 Robinson Canyon Road Tree Resource Assessment

Prepared for:

Brad Cox

Prepared by:

Frank Ono

Forester

Society of American Foresters I.D. # 48004

Certified Arborist #536

1213 Miles Avenue

Pacific Grove, CA 93950

May 9, 2016

Owner:

Mr. Brad Cox
1872 Rollins Road
Burlingame, CA 94010

Designer:

Moore Design
John Moore
225 Cannery Row, Suite I
Monterey, CA 93940

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 requiring the removal of 19 existing oak trees with potential for removal of two additional trees. The trees are mostly considered to be in fair condition both structurally and in health. A tree resource assessment report has been prepared that identifies these trees, addresses potential affects the project may have to the existing tree resources on site, and lists recommendations for the sustainability of the existing remaining oak woodland forest resources.

INTRODUCTION

This tree assessment/arborist report is prepared for Mr. Brad Cox, the owner of the property located at 29003 Robinson Canyon Road, Carmel Valley by Frank Ono, Urban Forester and Certified Arborist (Society of American Foresters member #48004 and International Society of Arboriculture Certified Arborist #536) due to proposed construction. The Carmel Valley Land Use Plan and Monterey County Zoning Ordinance Title 21 identify Oak trees as native tree species requiring protection and special consideration for management.

ASSIGNMENT/SCOPE OF PROJECT

Development of this parcel may affect adjacent trees from construction of a new building on this site. To ensure protection of the tree resources on site, the property owner, Mr. Brad Cox, has requested an assessment of the trees in proximity to proposed development areas documented in a report. 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 Moore Designs.
- Make recommendations for alternative methods and preconstruction 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 dated April 19, 2016 by John Moore, Moore Designs, 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 is prepared for this parcel due to proposed construction located at 29003 Robinson Canyon Road, CA. Its purpose is to give an independent assessment of the existing tree resources on site and determine what trees will be 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 plan is to protect and maintain the Carmel Valley 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 document 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: 416-021-043-000
- 2) Location: 29003 Robinson Canyon Road, Carmel CA
- 3) Parcel size: Approximately 30.8 Acres
- 4) Existing Land Use: The parcel is zoned for residential use
- 5) Slope: The parcel has varying slopes. Slopes range from 5% to over 30%
- 6) Soils: The parcel is located mostly on soils classified by the Monterey County Soils report as Santa Ynez and San Andreas fine sandy loam. Construction is to be in an area where both soils integrate. The Santa Ynez series consists of moderately well drained soils formed on terraces in alluvium derived from sandstone and granitic rock. Slopes range from 2 to 30 percent. San Andreas fine sandy loam, 30 to 75 percent slopes are a steep and very steep soil on low hills. Depth to sandstone is 20 to 40 inches. Runoff is medium and well drained. Roots can penetrate to a depth of 20 to 40 inches. The available water capacity is 2 to 6.5 inches.
- 7) Vegetation: The vegetation consists of annual grasses, forbs, ferns, scattered oaks, Redwood, and brush. Vegetation type is oak woodland where construction is proposed; there is as a section of the property where there is an oak redwood association, but this is located in a stream area intersecting the property downslope far away from the proposed construction site. The main vegetation where construction is proposed is coast live oak woodland which has a fragmented canopy and is oak savannah like.
- 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. Redwoods observed appear healthy with no significant insects or disease present and are present in the lower section of the property in a riparian corridor. Oaks observed throughout to property vary in health and condition. Trees within the proposed construction area appear to be in overall fair to poor condition; they are stressed due to the recent drought conditions with numerous signs of Western oak bark beetle and secondary Hypoxylon fungal infections. Phytophthora root crown rot is also observed on many of the trees near the construction area as well as sunscald damage on many of the trees.

BACKGROUND

The property owner, Mr. Brad Cox wishes to construct a new house on this property. Access to the building site is located on a previously graded dirt roadway and water tanks are previously installed. I have been requested to assess trees adjacent to proposed development with my findings prepared and documented in a report that will work in conjunction with other conditions for approval of the building permit application.

The assessment focuses on incorporating the preliminary location of site improvements coupled with consideration for the general goals of site improvement desired of the landowner. The study of the individual trees was made to determine the treatments necessary to complete the project and meet the goals of the land owner resulted with trees within and immediately adjacent to the proposed development area located, measured, inspected, flagged and recorded. The assessment of each tree concluded 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. All meetings and field review were focused on the area immediately surrounding the proposed development.

OBSERVATIONS/DISCUSSION

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

- Tree canopy cover is dense in some areas, open in others, and has areas where there is no canopy just grass, forbs, or Brush.
- Approximately eight acres of the 30 acres or approximately 25% of the parcel has oak crown cover. The site is approximated to have 720 trees estimated through random point sampling (1/10th acre sample areas). The sampling revealed an average of 90 trees /acre in those areas with canopy coverage.
- Tree removal will consist of 19 trees, or 2.6 % of trees found on the parcel; many of the trees seen have structural defects and harbor significant amount of insect pests, a number of the oaks are also exhibiting signs of fungal activity. Two trees were found questionable for retention and may need removal dependent on extent of grading. Tree removal will be on edges of the existing oak canopy and have trees behind them.
- One tree greater than 24" (#497-26" Oak) Landmark is proposed for removal with the remaining 18 trees for removal between 23" in and 12" in diameter. Size for removal averages 14" in diameter. Please refer to the tree chart for removal for structural condition or health condition.

TREE REMOVAL

The Oak trees listed in the following table are trees identified for removal or potential removal. They have been tagged in the field and rated Good, Fair, or Poor according to their health, vigor and structural condition. Trees with a good rating are trees that are in the best condition and health for the surrounding climate. Trees that are rated as fair are usually trees of lesser condition that may have some structural problem or health factor limiting them from fully developing as a healthy tree. Trees that are rated poor are of less quality condition and have either structural flaws that cannot be overcome over time, or that are in poor health.

Oak Tree Removal Chart

ID#	Diameter	Structure	Health	Dominance	Comments	Remove
490	12	Fair	Fair	Co-dominant	Oak bark beetles	X
501	12	Fair	Fair	Co-dominant		X
488	13	Fair	Fair	Co-dominant	Stem decay, Dead limbs	X
492	13	Poor	Fair	Dominant	Dead limbs	X
502	13	Fair	Poor	Co-dominant	Sunscald	X
486	14	Fair	Fair	Co-dominant		X
500	14	Fair	Fair	Co-dominant	Crown die back	X
489	16	Fair	Fair	Co-dominant	Root crown fungus	X
485	18	Good	Fair	Co-dominant	Sunscald, Crown die back	X
491	18	Poor	Fair	Co-dominant	Root crown fungus, Hollow at base	X
493	18	Poor	Fair	Dominant	Oak bark beetles, Termites	X
497	26	Poor	Poor	Dominant	Beetles and Termites	X
499	10,10	Fair	Fair	Co-dominant	Root crown fungus	X
496	12,12	Poor	Poor	Dominant	Root crown fungus, Hypoxylon	X
495	13,6	Fair	Poor	Co-dominant	Hypoxylon	X
494	14,12	Fair	Poor	Co-dominant	Stem decay, Hypoxylon	X
498	14,12,9	Poor	Fair	Dominant	Root crown fungus	X
505	15,12	Poor	Fair	Co-dominant	Stems separating at the base	X
504	18,14	Poor	Poor	Co-dominant	Root crown fungus, Beetles	X
487	24	Good	Poor	Co-dominant	Hypoxylon, Dying	Maybe
503	13,13,12	Fair	Fair	Co-dominant	Sunscald	Maybe

CONCLUSION/PROJECT ASSESSMENT

This proposal to build a single-family residence and driveway is planned to maintain the existing oak woodland environment and allows the oak forest to continue to exist and regenerate over time. Tree removal will be approximately 2.6 % of existing oak tree cover. The remainder of the property is dedicated scenic easement containing oak tree cover which will remain undisturbed. No watercourses are near the planned construction.

Short Term affects

Site disturbance will occur during building construction Short term site affects are confined to the construction envelope and immediate surroundings where a tree stem 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 effects on those trees treated, including a reduction of growth, and potential limb dieback.

Long Term Affects

No significant long-term affects to the forest ecosystem is anticipated. The project as proposed is not likely to significantly reduce the availability of wildlife habitat over the long-term as the area where the construction is proposed. Oak canopy is degraded with stressed trees in the project area.

Evaluation of potential for adverse environmental impacts due to tree removals are in the following subject areas:

Soil Erosion: Potential is low. Slopes where construction is proposed is gentle and appropriate erosion control measures will apply and can address potential impacts.

Water Quality: Tree removal at this site is unlikely to generate harmful substances that could be detrimental to the plant, animal or human environment. The redwood/oak association and stream is far down slope and will not be disturbed by construction.

Ecological Impacts: Negligible potential. No significant change in land use is proposed in this already developed rural residential area. The remaining native trees on the property will be retained.

Noise Pollution: Not a significant factor.

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

Wildlife Habitat: Negligible impact as site has some a developed residences surrounding the property and the vegetation on the site is somewhat degraded and open. Wildlife use in the area has been already conditioned by surrounding residential use.

RECOMMENDATIONS

Pre-Construction Meeting

It is highly recommended that a project arborist be retained. Prior to the start of construction a meeting and training session must be conducted in order to be communicate and instruct personnel about tree retention and protection. The pre-construction meeting will include what will be required for tree protection and exclusionary fencing installed prior to grading, excavation and construction procedures. Meeting attendees will be all involved parties including site clearance personnel, construction managers, heavy equipment operators, and tree service operators; a certified professional such as a Monterey County qualified forester or County qualified arborist will conduct training. A list of pre-construction attendees and the materials discussed may be maintained to be provided to the county. Meeting attendees must agree to abide to tree protection and instructions as indicated during the meeting and agree to insure tree protection will remain in place during entire construction period.

Tree Removal

19 oak trees for removal are proposed for this project; two additional trees are to be retained however may need to be monitored for removal. All other trees are to remain and be protected from construction affects when closer than 25 feet from construction. After proper authorization, the trees shall be cut down by a licensed insured professional tree service. No surrounding tree protection is necessary when the tree drop zone is clear of vegetation. Tree removal shall be consistent with safe arboricultural work practices utilizing removal of trees and their parts in smaller manageable pieces and roped down carefully so as not to damage any surrounding trees or plants. The use of specialized equipment may be authorized if it can be shown that no damage to surrounding ecosystem will be sustained. At no time shall the trees be dropped in one piece so as to damage any surrounding trees or property. Tree wood and clippings are to be disposed of consistent with current California Department of Forestry guidelines which would include stockpiling of material on site or disposal at an approved refuse site. When the listed trees are removed, other immediately remaining trees adjacent these should be inspected for potential for pruning (utilizing current arboricultural standards) and deadwood removal.

Tree Replacement

The County of Monterey through the Carmel Valley 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 County requires a 1:1 ratio replacement for trees measuring less than 24" in diameter and a 2:1 tree replacement for trees removed 24" in diameter or more. The site has ample space to accommodate tree replacement of 20 five gallon or larger oak trees. In addition, the County also requires independent monitoring of replanted trees to insure replanting is successful (the term of monitoring is at County discretion, typically one –three years). For best success trees should be placed on a temporary drip irrigation system and areas beneath them mulched to prevent them from drying out and minimize weed growth.

Tree Protection - Construction

Prior to the commencement of construction activities:

- Trees located adjacent to construction areas 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 may also be used.
- Fencing must not be attached to the tree. It shall be 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 must 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 will be monitored by a qualified arborist or forester to ensure against drilling or cutting into or through major roots.
- The project 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..

Best Management Practices to Observe (BMP)

The following best management practices must be adhered to:

- A) Tree service Contractors will verify animal or bird nesting prior to tree work. If nesting activity of migratory birds are found, work must stop and a wildlife biologist consulted before commencing work (the typical bird nesting season ranges from February 22 to August 1).
- B) 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.
- C) 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.
- D) Native live trees 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.
- E) 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.
- F) Tree material greater than 3 inches in diameter remaining on site more than one month that is not cut and split into firewood must be covered with thick clear plastic that is dug in securely around the pile to discourage infestation and dispersion of bark beetles.
- G) A mulch layer up to approximately 4 inches deep should be applied to the ground under selected preserved and planted trees 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.
- H) 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.

Report Prepared By:



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

May 10, 2016

Date

PHOTOGRAPHS (not all trees are photographed, photographs are to show condition of trees around proposed building)

Building site view taken from west parking area, tree on left is #488



Base of #488 is decayed



Tree #487- limb is dead and needs pruning



Tree #503 – may need removal or trimming due to grading



Trees#497, #497, #494



View of site where development is to occur these are trees 485-#496

521_COX

N: ----
B NUMBER: 1521



DRAWING RECORD

T DATE: 4/19/2016

A	I
B	D

ings are not to be scaled. Written
isions on these drawings shall
precedence over scale dimensions.

TE PLANS

A1.1