

# Exhibit D

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Professional Consulting Services*



TREE RESOURCE EVALUATION  
PROJECT IMPACT ANALYSIS  
TREE PROTECTION PLAN

Santa Lucia Preserve  
Lot E15

January 2017

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## **INTRODUCTION**

This arboricultural resource assessment includes an evaluation of the condition of coast live oak trees and potential impacts related to proposed residential development project located on lot E15 of the Santa Lucia Preserve. In addition, recommendations for tree protection and methods for reducing impacts are included.

## **PROJECT DESCRIPTION AND LOCATION**

The project as proposed includes the construction of a single-family home with detached garage, guesthouse, driveway access and associated landscaping.

The property is an undeveloped parcel within the Santa Lucia Preserve subdivision, Phase E (Potrero Area Subdivision) within the County of Monterey.

## **ASSIGNMENT/SCOPE OF SERVICES**

In December of this year I was retained to prepare an arborist report to evaluate the condition of trees and analyze potential impacts related to residential development. The following scope of services was completed to prepare this report.

- Complete a visual inspection of oak trees growing within and adjacent to the homeland boundary of lot E15.
- Measure trunk diameter to determine “protected” status as defined in Monterey County Ordinance 21.64.260.
- Review plans to evaluate potential impacts related to the proposed development.
- Provide recommendations for reducing impacts that include creating a fenced exclusionary zone, tree pruning to provide clearance, proper root pruning and monitoring during construction.

## **SUMMARY**

I have completed an evaluation of the health and structural stability of 12 individual coast live oak trees and one large grove of oaks. Tree growth is relatively sparse; individual trees are scattered around the perimeter of the homeland. The southeast portion of the homeland and adjacent openland are more densely forested.

Several smaller diameter oaks are growing as a small grouping near the southern homeland. The trees are similar in size and structure. The Santa Lucia Preserve planted these trees in the last 15 years. Several properties that can be viewed from nearby roadways were planted with trees to provide screening. The placement of the trees will not provide significant screening for the proposed development. I have recommended relocating the trees to the west where they can provide the desired screening.

One small diameter oak will require removal to develop the site as proposed. Tree #2 is growing within the driveway access. The driveway route was determined based on the location of tree #1, a landmark size oak growing to the north. If tree #2 were retained the root zone of the landmark tree would be impacted.

No impacts to the other oaks are anticipated. All retained trees will be protected with exclusionary fencing bordered by straw bale barricades during construction.

## OBSERVATIONS/PROJECT OVERVIEW

The project site is a large undeveloped property that slopes downward at the entry and levels near the center and lower elevations.

The project includes the construction of a driveway access, single-family home with detached garage and guesthouse. The steep slope will be graded to facilitate driveway requirements and prepare the building pads.

### Tree Description

One tree species is represented on this site, coast live oak (*Quercus agrifolia*). Tree growth is concentrated around the perimeter of the homeland.

**Tree #1** is a healthy, well-structured mature tree with a trunk diameter of 36.8 inches.

The canopy is broad and spreading and joins with adjacent mature trees that are growing in the openland to the north.



**Tree #2** is an immature tree with a trunk diameter of 9.2 inches.

The tree is short with a symmetrical canopy that is thinning on one side. The tree has a significant structural defect at the main stem attachment. This codominant attachment with included bark is a weakness that can lead to eventual stem failure (pictured on following page).







Codominant attachment with included bark

**Tree #3** (at right) is a healthy, well-structured tree with a trunk diameter of 26.8 inches.

The canopy is broad and spreading, similar to tree #1.

**Tree #4** is a young tree with trunk diameter of 10 inches. The tree was planted within the last 15 years as an attempt to screen the future homesite from Rancho San Carlos Road.



**Trees #5-#9** are young trees that were planted for screening prior to the establishment of the homeland boundaries. They range in trunk diameter from eight to 13 inches.

The trees are single trunk with similar form and canopy configuration that is typical of a nursery grown tree.

**Trees #10 & #11** are healthy and well-structured trees with trunk diameters of 10.8 and 13.6 inches.

**Tree #12** is growing in the openland the canopy extends into the homeland. Trunk diameter is 53.2 inches. The tree is healthy with structural form that is typical to the species.

**Tree Grove #13** is a large intact grove of mature trees that range in trunk diameter from 10 to 45 inches. They are generally healthy and display defects that are commonly seen in oaks growing in a native setting and crowded conditions.

## **DISCUSSION**

### **Tree Removal**

Monterey County ordinances encourage the preservation of trees and discourage unnecessary tree removal. On development projects tree removal must be kept to the minimum necessary on a case-by-case basis (21.64.260).

A Forest Management Plan was prepared for the Potrero Area Subdivision of the Santa Lucia Preserve by Ralph Osterling Consultants, Inc. in August of 2000. After visually inspecting the potential lot boundaries of each parcel they compiled “estimates” for tree removal to allow for residential development.

The Forest Management Plan has each potential development parcel listed; lot E15 was not included in the list and no site inspection or tree removal estimate was made.

The narrative of the report states that when the properties that were subjected to a visual inspection only trees six inches and greater were considered when tree removal estimates were made. It must be acknowledged that woodland and forest systems are dynamic and changing. Trees that were under six inches at the time the initial analysis was prepared could be as much as 12 or 15 inches at this time.

### **Oak Woodland Act**

California Public Resources code 2183.4 provides guidelines for determining impacts to oak woodlands proposed for conversion within the code, required mitigation strategies are defined and must include at least one of the following:

- Impact Avoidance
- Creation of permanent conservation easements
- Reforestation/replanting programs

Restrictions within the code state that replanting or reforestation efforts cannot be utilized as the only strategy for reducing impacts to the oak woodland. At least one of the other methods must be used in conjunction with replanting.

The project proposed for this site follows the guidelines for oak woodland protection required by the Oak Woodlands Conservation Law. The first and most important strategy, avoidance of impact has been utilized. The intact oak groves will not be disturbed or impacted.

The third mitigation strategy of the Oak Woodland Act is the creation of a conservation easement. All development sites within the Santa Lucia Preserve have areas set aside as conservation easements that are under the stewardship of the Santa Lucia Conservancy.

(The discussion of the California Oak Woodland Conservation Law is based on information included in the Oak Woodland Impact Decision Matrix 2008 prepared by the UC Integrated Hardwood Range Management Program.)

### **Tree Relocation**

The relocation of the planted trees in group #5-#9 will be completed by a qualified professional using the technique of either side boxing or with a tree spade. All tree relocations will be done under the supervision of the project arborist. The new locations are documented on the landscape plan for the project.

### **Construction Impacts**

No impacts to retained trees are anticipated. The bulk of the development is outside the Critical Root Zones of all trees. The removal of tree #2 has provided space to move the driveway further from tree #1, the landmark oak.

### **Tree Protection**

The attached guidelines define the exclusionary fencing and straw bale barricades along with other requirements for protecting the trees.

## **CONCLUSION**

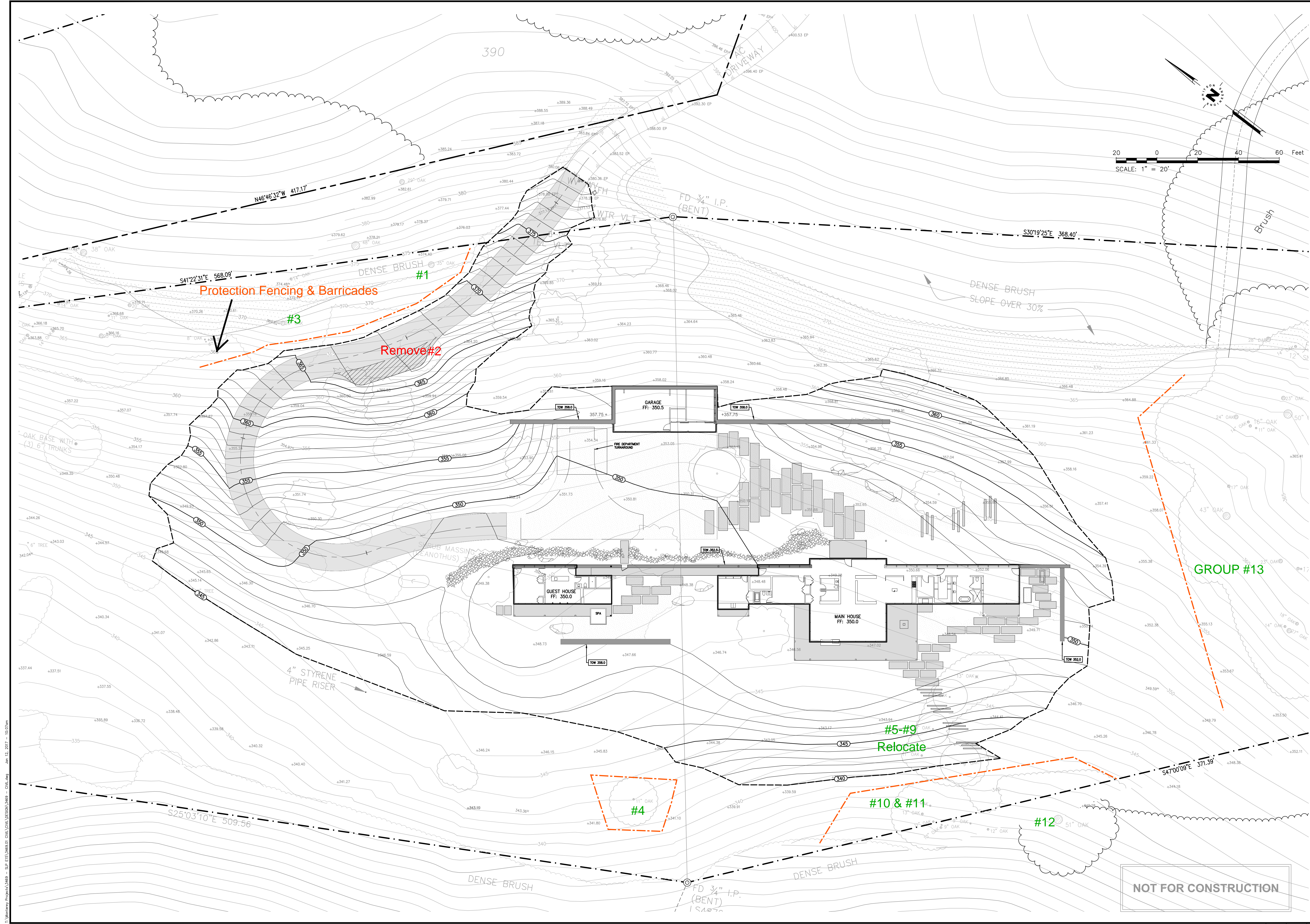
The residential development proposed for this site will require the removal of one small oak. All other trees will be retained and incorporated into the project. Several smaller trees will be relocated to provide additional screening.

Any questions regarding the trees on this development site or the content of this report can be directed to my office.

Respectfully submitted,

Maureen Hamb-Certified Arborist #WE2280





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INCHES





**TREE PROTECTION SPECIFICATIONS  
SANTA LUCIA PRESERVE LOT E15**

**Straw Bale Barricades**

Straw bales placed end to end will be installed inside or outside the protection fencing. They shall be secured in place with stakes (wooden or metal rebar). This barricade will limit damage to the fencing and prevent grading spoils from encroaching into the critical root zone area and help stop excess moisture from gathering under the retained trees.



**Restrictions within the Critical Root Zone (CRZ) of existing trees**

No storage of construction materials, debris, or excess soil will be allowed within the CPZ. Parking of vehicles or construction equipment will be allowed in defined areas only. Solvents or liquids of any type should be disposed of properly, never within this protected area.

**Minimize soil compaction on the construction site**

Protect the soil surface with a deep layer (at least three inches) of mulch (tree chips). The addition of mulch will reduce compaction, retain moisture, and stabilize soil temperature. Areas where equipment and personnel are concentrated will be mulched to a depth of at least six inches.