



## **Revised Arborist Report**

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28030 Natoma Road  
Los Altos Hills, CA

**Prepared for:**  
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28030 Natoma Road, Los Altos Hills CA

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***Attachments***

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***Tree Assessment Form***

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## ***Introduction and Overview***

Top Elegant Investment LLC is proposing to subdivide the property at 28030 Natoma Rd., in Los Altos Hills, California. The project includes subdivision of the property, construction of a new road, improvement of the access road leading to the property and installation of utilities to service the new lots. HortScience, Inc. was asked to prepare an **Arborist Report** for the project for review by the Town of Los Altos Hills.

This report provides the following information:

1. An assessment of the health and structural condition of those trees identified by the project's Civil Engineer, Wilsey Ham.
2. Identification of Heritage trees as defined by the Town of Los Altos Hills Ordinance #12-2.
3. An assessment of the impacts of constructing the proposed project on the trees.
4. A discussion of sudden oak death, its presence in the area and potential impacts to the site.
5. Guidelines for tree preservation during the design, construction and maintenance phases of development.

## ***Assessment Methods***

Trees were assessed on November 8, 2012 and April 15, 2014. The assessment included trees 6" and greater in diameter (19" in circumference). The survey procedure consisted of the following steps:

1. Identifying the tree as to species;
2. Measuring the trunk diameter at a point 48" above grade;
3. Evaluating the health and structural condition using a scale of 1 – 5:
  - 5** - A healthy, vigorous tree, reasonably free of signs and symptoms of disease, with good structure and form typical of the species.
  - 4** - Tree with slight decline in vigor, small amount of twig dieback, minor structural defects that could be corrected.
  - 3** - Tree with moderate vigor, moderate twig and small branch dieback, thinning of crown, poor leaf color, moderate structural defects that might be mitigated with regular care.
  - 2** - Tree in decline, epicormic growth, extensive dieback of medium to large branches, significant structural defects that cannot be abated.
  - 1** - Tree in severe decline, dieback of scaffold branches and/or trunk; most of foliage from epicormics; extensive structural defects that cannot be abated.
5. Rating the suitability for preservation as "high", "moderate" or "low". Suitability for preservation considers the health, age and structural condition of the tree, and its potential to remain an asset to the site for years to come.

**High:** Trees with good health and structural stability that have the potential for longevity at the site.

**Moderate:** Trees with somewhat declining health and/or structural defects than can be abated with treatment. The tree will require more intense management and monitoring, and may have shorter life span than those in 'high' category.

**Low:** Trees in poor health or with significant structural defects that cannot be mitigated. Tree is expected to continue to decline, regardless of treatment. The species or individual may have characteristics that are undesirable for landscapes, and generally are unsuited for use areas.

### **Description of Trees on the Development Site & Access Road**

One-hundred and fifty-eight (158) trees were assessed, including 135 trees on the development site and 23 along the access road connecting the site to Natoma Road. Descriptions of each tree are found in the **Tree Assessment Forms**, and locations are shown on the **Tree Assessment Plan** (see attachments). Walnut and eucalyptus trees were not included in the assessment.

The site sits at the edge of the oak-bay woodlands that extend down the east side of the coastal mountain range in this area. A closed canopy forest of coast live oak exists along the western edge of the property, with a small finger extending east and south to the driveway entrance (Photo 1, following page). The northeastern half of the site was an open oak woodland, dotted with open-grown valley oaks (Photo 2, following page).

Three (3) species of oaks were assessed at the site (Table 1). The most frequently occurring species was coast live oak (116 trees, or 73% of the population). Valley oak, with 41 trees (26%), was the second most frequent species assessed. One blue oak (#157) was also assessed. Tree size ranged from 6" to 46" in diameter. Forty-one (41) trees had multiple trunks arising below 48".

**Table 1: Condition ratings and frequency of occurrence of trees.  
28030 Natoma Rd., Los Altos Hills**

Common Name	Scientific Name	Condition Rating			No. of Trees
		Poor (1-2)	Fair (3)	Good (4-5)	
Coast live oak	<i>Quercus agrifolia</i>	6	51	59	116
Blue oak	<i>Quercus douglasii</i>	-	-	1	1
Valley oak	<i>Quercus lobata</i>	2	22	17	41
<b>Total</b>		<b>8</b> 5%	<b>73</b> 46%	<b>77</b> 49%	<b>158</b> 100%

Coast live oaks were growing in groups, or stands, where one or two trees were dominant and the rest were subordinate. Dominant trees tended to be mature to over-mature, with diameters from 24" to 46", and in good to excellent condition. Subordinate trees were typically young to semi-mature (<24" in diameter) and growing at the edge of the group or beneath their larger neighbors. The competition for light and resources among this group often produced trees in fair condition, that leaned or had asymmetric or one sided crowns. Fifty-nine (59) of the coast live oaks were in good or excellent condition, 51 were in fair and six (6) were in poor (Table 1).

Mature valley oaks dominated the northeast half of the site, with young to semi-mature trees located in the grove between Lots 1 and 2. The remaining seven (7) valley oaks were along the access road. Condition of the valley oaks was fair (22 trees) to good (17 trees). Two (2) of the valley oaks were in poor condition. There were fewer young valley oaks than coast live oaks (22 valley oaks with diameters <24" vs. 85 coast live oaks with diameters <24"), indicating that the valley oaks are not regenerating naturally and may slowly disappear from the landscape.

Overall, tree condition was good (77 trees or 49%) to fair (73 trees or 46%). Eight (8) trees (5% of the population), were in poor condition, including tree #51, a 42" diameter coast live oak with a several cavities and extensive trunk decay.

The Town of Los Altos Hills defines all oaks with a diameter of 12" (circumference of 36") as *Heritage Oaks*. Based on this definition, 132 of the 158 trees qualified as *Heritage Oaks*. *Heritage Oaks* are identified in the **Tree Assessment Forms** (see attachments).



**Photo 1** (above): A group of coast live oaks near the entrance to the property (looking east). This grove was dominated by mature coast live oaks #16 and 17, with smaller-diameter trees growing at the edge of their canopies.

**Photo 2** (below): Open-grown valley oak #58 was growing on the northeast half of the site. The location and growing conditions were typical of the other valley oaks assessed.



**Oak-Bay Woodland Census Outside of development Area**

For the remainder of the site, we performed a census of all trees 6" and greater in diameter. The census procedure consisted of the following steps:

1. Identifying the tree as to species;
2. Counting the number of trees of each species in the following diameter classes: 6-11", 12-17", 18-23", 24-32", and ≥32".

The remainder of the site was a west-facing slope with a dense cover of oak-bay woodland. The property boundary was defined by the creek running along the southern and western boundaries, except in the northwestern corner where the boundary extended over the creek (see attached **Tree Assessment Map**). Table 2 provides a summary of the census data by species and diameter class.

The majority of trees were coast live oaks (316 trees, or 63% of the census trees) and California bays (106 trees or 21%). Two-hundred and eighty-five (285) of the trees in this area qualified as *Heritage Oaks*, including 253 coast live oaks, 23 valley oaks and 9 blue oaks.

**Table 2: Oak-Bay Woodland Census.  
 28030 Natoma Rd., Los Altos Hills**

Common name	Scientific name	Diameter Classes					Total
		6-11	12-17	18-23	24-31	≥32	
Calif. buckeye	<i>Aesculus californica</i>	11	14	-	2	1	<b>28</b>
Toyon	<i>Heteromeles arbutifolia</i>	-	-	1	-	-	<b>1</b>
Coast live oak	<i>Quercus agrifolia</i>	63	94	63	52	44	<b>316</b>
Valley oak	<i>Quercus lobata</i>	9	10	7	2	4	<b>32</b>
Common elderberry	<i>Sambucus nigra</i>	2	5	-	-	-	<b>7</b>
Calif. Bay	<i>Umbellularia californica</i>	80	19	5	1	1	<b>106</b>
Blue oak	<i>Quercus douglasii</i>	2	4	-	4	1	<b>11</b>
<b>Total</b>		<b>167</b>	<b>146</b>	<b>76</b>	<b>61</b>	<b>51</b>	<b>501</b>

**Suitability for Preservation**

Before evaluating the impacts that will occur during development, it is important to consider the quality of the tree resource itself, and the potential for individual trees to function well over an extended length of time. Trees that are preserved on development sites must be carefully selected to make sure that they may survive development impacts, adapt to a new environment and perform well in the landscape.

Our goal is to identify trees that have the potential for long-term health, structural stability and longevity. For trees growing in open fields or creek channels, away from areas where people and property are present, structural defects and/or poor health presents a low risk of damage or injury if they fail. However, we must be concerned about safety in use areas. Therefore, where development encroaches into existing plantings, we must consider their structural stability as well as their potential to grow and thrive in a new environment. Where development will not occur, the normal life cycles of decline, structural failure and death should be allowed to continue.

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Evaluation of suitability for preservation considers several factors:

- **Tree health**  
Healthy, vigorous trees are better able to tolerate impacts such as root injury, demolition of existing structures, changes in soil grade and moisture, and soil compaction than are non-vigorous trees.
- **Structural integrity**  
Trees with significant amounts of wood decay and other structural defects that cannot be corrected are likely to fail. Such trees should not be preserved in areas where damage to people or property is likely. Coast live oak #51 is an example of such a tree.
- **Species response**  
There is a wide variation in the response of individual species to construction impacts and changes in the environment. In our experience, for example, valley oak is moderately sensitive to site disturbance, while coast live oak is more tolerant of root loss.
- **Tree age and longevity**  
Old trees, while having significant emotional and aesthetic appeal, have limited physiological capacity to adjust to an altered environment. Young trees are better able to generate new tissue and respond to change.
- **Species invasiveness**  
Species which spread across a site and displace desired vegetation are not always appropriate for retention. This is particularly true when indigenous species are displaced. None of the species surveyed at the Natoma Rd. property are considered invasive.

Each tree was rated for suitability for preservation based upon its age, health, structural condition and ability to safely coexist within a development environment. Table 3 provides a summary of the suitability ratings. Suitability ratings for individual trees are included in the **Tree Assessment Form** (see attachments).

**Table 3: Tree Suitability for Preservation  
28030 Natoma Rd., Los Altos Hills**

<b>High</b>	These are trees with good health and structural stability that have the potential for longevity at the site. Thirty-five (35) trees were highly suitable for preservation; including 25 coast live oaks and 10 valley oaks.
<b>Moderate</b>	Trees in this category have fair health and/or structural defects that may be abated with treatment. Trees in this category require more intense management and monitoring, and may have shorter life-spans than those in the "high" category. Ninety (90) trees were of moderate suitability for preservation, including 68 coast live oaks, 21 valley oaks and one (1) blue oak.
<b>Low</b>	Trees in this category are in poor health or have significant defects in structure that cannot be abated with treatment. These trees can be expected to decline regardless of management. The species or individual tree may possess either characteristics that are undesirable in landscape settings or be unsuited for use areas. Thirty-three (33) trees were of low suitability for preservation, including 23 coast live oaks and 10 valley oaks.

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### ***Evaluation of Impacts and Recommendations***

Appropriate tree retention develops a practical match between the location and intensity of construction activities and the quality and health of trees. The ***Tree Assessment Form*** was the reference point for tree condition and quality. Potential impacts from construction were evaluated using the Proposed Subdivision Map (dated May 22, 2015) and Access Road Improvement Plan (dated January 13, 2016), prepared Wilsey Ham.

The plan proposes to subdivide the property into 9 lots, with the existing house possibly to remain on Lot 9. Building envelopes and potential building and driveway locations were shown on the plans.

The existing dirt driveway will be improved and extended to the north. The new road would be 22' wide, with a 3' curb and gutter and a 5' wide pathway installed along the eastern edge. Utilities are shown on the plan and will be located within the new road. Accurate tree trunks were shown on the plans for most, but not all, of the trees.

In addition, the access road from Natoma Rd. to the development site will be widened to 20', with a 2' gutter and a 5' wide pathway installed along the northern edge. The path is proposed to be constructed of decomposed granite and will be designed to meander through the trees.

Potential impacts from construction of the new road, driveways, drainage and landslide repair on Lot 7 were estimated for each tree. Impacts from the development of individual lots were not assessed, as no development plans exist for each lot. The most significant impacts to the trees would occur as a result of the road grading, access road widening, curb and gutter installation and slide repair on Lot 7.

#### ***For the Development Site:***

Based on my evaluation of the plans and associated impacts on the trees, I recommend preservation for 111 trees, including 92 *Heritage Oaks*. Preservation is predicated on establishing a **Tree Protection Zone** and other recommendations listed in the ***Tree Preservation Guidelines*** (page 13).

Removal is recommended for 24 trees, including 9 that fall within the proposed road alignment, 6 that were adjacent to the new road but which would be impacted beyond their tolerance and 9 within the slide repair. Of the 24 trees recommended for removal, five (5) had low suitability for preservation and 19 qualified as *Heritage Oaks*. Table 4 (following page) provides the recommended action for each tree, along with their *Heritage Oak* status and a description of impacts.

Twenty-one (21) of the trees identified for preservation had low suitability for preservation. Most of these were suppressed trees with poor structure; however, some were structurally unstable including #11, 50, 51 and 64. I do not believe it is appropriate to recommend these for removal before we have an understanding of where they would be located relative to the individual lot developments. Although all of these trees had some amount of decay and had experienced limb or stem failures, they continue to provide environmental and aesthetic benefits as they decline and fail. I am recommending these trees be fenced at the dripline during construction of the subdivision improvements to protect construction personnel should they want to park and/or linger under the trees. However, trees #11, 50, 51 and 64 may have to be removed with the development of individual lots.

For the 49 trees identified for preservation adjacent to the subdivision improvements, I have provided specific **Tree Protection Zones** based on their proximity to the work (see ***Tree Preservation Guidelines*** (page 13)). Trees not given a specific **Tree Protection Zones** shall be fenced at the dripline in all directions.

For the 42 trees within the buildable area of each lot or other easements and which were appropriate for retention (high or moderate suitability for preservation) but far enough from the subdivision improvements to not be impacted at this time, I have provided what I consider the ideal **Tree Protection Zone** that would limit root loss and associated impacts (Table 5, page 11). This information is provided to help with the design of improvements on individual lots and distances provided represent radii in all directions. These distances are an ideal and some amount of encroachment may be acceptable based on the size, location and nature of the disturbance and construction techniques employed.

Thirteen (13) of the trees recommended for preservation will be in close proximity to the new road alignment and are expected to require canopy and root pruning for construction of the road and vehicle clearance. These are trees #1, 3, 4, 7, 23, 25-27, 28, 33, 66, 95 and 101. Pruning recommendations are provided in the **Tree Preservation Guidelines** (page 13).

**For the Access Road:**

Based on my evaluation of the plans and associated impacts on the trees, I recommend preservation for 18 of the 23 trees along the access road, including 16 *Heritage Oaks*. Preservation is predicated on establishing a **Tree Protection Zone** and other recommendations listed in the **Tree Preservation Guidelines** (page 13).

Removal is recommended for 5 trees, all of which qualified as *Heritage Oaks*. Table 4 provides the recommended action for each tree, along with their *Heritage* status and a description of impacts. Impacts were as follows:

- Tree #107 had failed at the base and will need to be removed to construct the path.
- Tree #108 fell within the proposed access road alignment, requiring removal.
- Trees #111, 118 and 119 were adjacent to the new access road but would be impacted beyond their tolerance.

Ten (10) of the trees recommended for preservation will be in close proximity to the new access road alignment, including trees #105, 106, 109, 110, 115-117, 120-122, and 125. For most of these trees, the new road alignment will match the existing alignment, however, root loss associated with construction of the access road may lead to decline, such as dieback of twigs and branches, for some trees. This is especially true for trees #106, 120-122 and 125, which are large-diameter trees in very close proximity to construction. In addition, these trees may require pruning for construction and vehicle clearance.

In summary, a total of 129 trees can be preserved (111 on the subdivision site and 18 along the access road), including 108 which qualified as *Heritage Oaks*. Twenty-nine (29) trees will require removal (24 on the subdivision site and 5 along the access road), 24 of which qualified as *Heritage Oaks*.

**Table 4: Recommendations for action  
 28030 Natoma Rd., Los Altos Hills**

Tree #	Species	Trunk Diameter (in.)	Heritage Oak?	Impact
1	Coast live oak	14,9,9,6	Yes	<b>Preserve</b> , 8' N. of 5' new rd.
2	Coast live oak	13	Yes	Remove, impacted by new rd. alignment
3	Coast live oak	13	Yes	<b>Preserve</b> , 6' N. of 5' path.
4	Coast live oak	11	No	<b>Preserve</b> , 6' N. of 5' path.
5	Coast live oak	12,10,10,9,8	Yes	<b>Preserve</b> , 18' N. of 5' path.
6	Coast live oak	8	No	<b>Preserve</b> , 20' N. of 5' path.
7	Coast live oak	17	Yes	<b>Preserve</b> , 6' N. of 5' path.
8	Coast live oak	8	No	<b>Preserve</b> , 20' N. of 5' path.
9	Coast live oak	13	Yes	<b>Preserve</b> , 20' N. of 5' path.
10	Coast live oak	17	Yes	<b>Preserve</b> , outside impacts

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**Table 4: Recommendations for action, continued**  
**28030 Natoma Rd., Los Altos Hills**

Tree #	Species	Trunk Diameter (in.)	Heritage Oak?	Impact
11	Valley oak	32	Yes	<b>Preserve</b> , outside impacts
12	Coast live oak	12,10	Yes	<b>Preserve</b> , outside impacts
13	Coast live oak	7	No	<b>Preserve</b> , outside impacts
14	Coast live oak	17,9	Yes	<b>Preserve</b> , outside impacts
15	Valley oak	17,17	Yes	<b>Preserve</b> , outside impacts
16	Coast live oak	35	Yes	<b>Preserve</b> , within Lot 1 bldg. envelope
17	Coast live oak	25,22,18	Yes	<b>Preserve</b> , within Lot 1 bldg. envelope
18	Coast live oak	10	No	<b>Preserve</b> , within Lot 1 bldg. envelope
19	Valley oak	10	No	<b>Preserve</b> , within Lot 1 bldg. envelope
20	Valley oak	17,8	Yes	<b>Preserve</b> , within Lot 1 bldg. envelope
21	Coast live oak	28	Yes	<b>Preserve</b> , within Lot 1 bldg. envelope
22	Coast live oak	21,18	Yes	Remove, within new rd. alignment
23	Coast live oak	12,10	Yes	<b>Preserve</b> , 6' W. of new rd.
24	Coast live oak	18	Yes	<b>Preserve</b> , 20' W. of new rd.
25	Coast live oak	18,16	Yes	<b>Preserve</b> , 18' W. of new rd.; 12' N. of Lot 8 dr.
26	Coast live oak	20	Yes	<b>Preserve</b> , 8' W. of new rd.
27	Coast live oak	16,12,11	Yes	<b>Preserve</b> , 15' W. of new rd.
28	Coast live oak	20	Yes	<b>Preserve</b> , 10' W. of new rd.
29	Coast live oak	18,17	Yes	<b>Preserve</b> , outside impacts
30	Coast live oak	29	Yes	<b>Preserve</b> , outside impacts
31	Coast live oak	40	Yes	<b>Preserve</b> , outside impacts
32	Coast live oak	46	Yes	<b>Preserve</b> , outside impacts
33	Coast live oak	8	No	<b>Preserve</b> , 8' W. of new rd.
34	Valley oak	16	Yes	Remove, impacted by new rd. alignment
35	Coast live oak	12	Yes	Remove, within new rd. alignment
36	Coast live oak	11,10	Yes	Remove, within new rd. alignment
37	Coast live oak	8,8	Yes	Remove, within new rd. alignment
38	Valley oak	14	Yes	Remove, within new rd. alignment
39	Coast live oak	12	Yes	<b>Preserve</b> , outside impacts
40	Coast live oak	8	No	<b>Preserve</b> , outside impacts
41	Coast live oak	20	Yes	<b>Preserve</b> , 25' W. of new rd.
42	Coast live oak	9	No	<b>Preserve</b> , outside impacts
43	Coast live oak	14	Yes	<b>Preserve</b> , outside impacts
44	Coast live oak	8,8	Yes	<b>Preserve</b> , outside impacts
45	Coast live oak	17	Yes	<b>Preserve</b> , 25' W. of new rd.
46	Coast live oak	20	Yes	<b>Preserve</b> , 20' S. of Lot 7 drive
47	Coast live oak	18	Yes	<b>Preserve</b> , within Lot 7 bldg. envelope
48	Coast live oak	25	Yes	<b>Preserve</b> , within Lot 7 bldg. envelope
49	Coast live oak	42	Yes	<b>Preserve</b> , within Lot 7 bldg. envelope
50	Valley oak	32	Yes	<b>Preserve</b> , within Lot 8 bldg. envelope
51	Coast live oak	42	Yes	<b>Preserve</b> , declining and high risk
52	Coast live oak	29	Yes	<b>Preserve</b> , within Lot 8 bldg. envelope
53	Valley oak	28	Yes	<b>Preserve</b> , within Lot 8 bldg. envelope
54	Coast live oak	28	Yes	<b>Preserve</b> , outside impacts
55	Valley oak	20	Yes	<b>Preserve</b> , outside impacts
56	Valley oak	30	Yes	<b>Preserve</b> , outside impacts
57	Valley oak	28	Yes	<b>Preserve</b> , outside impacts
58	Valley oak	23	Yes	<b>Preserve</b> , outside impacts
59	Valley oak	16	Yes	<b>Preserve</b> , outside impacts
60	Valley oak	23	Yes	<b>Preserve</b> , within Lot 4 bldg. envelope

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**Table 4: Recommendations for action, continued**  
**28030 Natoma Rd., Los Altos Hills**

Tree #	Species	Trunk Diameter (in.)	Heritage Oak?	Impact
61	Valley oak	38	Yes	<b>Preserve</b> , within Lot 4 bldg. envelope
62	Valley oak	26	Yes	<b>Preserve</b> , 35' SE. of Lot 4 drive
63	Valley oak	28	Yes	<b>Preserve</b> , 35' SE. of Lot 4 drive
64	Valley oak	44	Yes	<b>Preserve</b> , 35' NW. of Lot 4 drive
65	Valley oak	44	Yes	<b>Preserve</b> , 20' W. of Lot 4 drive
66	Valley oak	36	Yes	<b>Preserve</b> , 15' NE. of rd., 15' S. of Lot 4 drive
67	Coast live oak	20,18,18	Yes	<b>Preserve</b> , within Lot 6 bldg. envelope
68	Coast live oak	40	Yes	<b>Preserve</b> , within Lot 6 bldg. envelope
69	Coast live oak	19,19	Yes	<b>Preserve</b> , outside impacts
70	Coast live oak	7,5	Yes	<b>Preserve</b> , outside impacts
71	Coast live oak	8	No	<b>Preserve</b> , outside impacts
72	Coast live oak	9	No	<b>Preserve</b> , outside impacts
73	Coast live oak	35	Yes	<b>Preserve</b> , outside impacts
74	Coast live oak	18,18,15	Yes	<b>Preserve</b> , outside impacts
75	Coast live oak	16	Yes	<b>Preserve</b> , outside impacts
76	Coast live oak	10,10	Yes	<b>Preserve</b> , outside impacts
77	Coast live oak	14	Yes	<b>Preserve</b> , outside impacts
78	Coast live oak	17	Yes	<b>Preserve</b> , outside impacts
79	Coast live oak	8	No	Remove, within slide repair
80	Coast live oak	9	No	Remove, within slide repair
81	Coast live oak	12	Yes	Remove, within slide repair
82	Coast live oak	20	Yes	Remove, within slide repair
83	Coast live oak	20	Yes	Remove, within slide repair
84	Coast live oak	14	Yes	Remove, within slide repair
85	Coast live oak	26	Yes	Remove, within slide repair
86	Coast live oak	6	No	Remove, within slide repair
87	Coast live oak	32	Yes	<b>Preserve</b> , 15' S. of Lot 7 drive, 10' E. of slide rpr.
88	Coast live oak	17	Yes	<b>Preserve</b> , 8' E. of slide repair
89	Coast live oak	11	No	<b>Preserve</b> , 5' E. of slide repair
90	Coast live oak	9	No	<b>Preserve</b> , outside impacts
91	Coast live oak	14	Yes	<b>Preserve</b> , outside impacts
92	Coast live oak	9	No	Remove, within slide repair
93	Coast live oak	9,4,4	Yes	<b>Preserve</b> , 5' E. of slide repair
94	Valley oak	17	Yes	Remove, impacted by new rd. alignment
95	Coast live oak	33	Yes	<b>Preserve</b> , 15' E. of new rd., 10' E' of path
96	Coast live oak	10	No	Remove, within new rd. alignment
97	Coast live oak	13,11	Yes	Remove, within new rd. alignment
98	Coast live oak	16	Yes	Remove, impacted by new rd. alignment
99	Coast live oak	14,10	Yes	Remove, within new rd. alignment
100	Coast live oak	18	Yes	Remove, impacted by new rd. alignment
101	Coast live oak	22,21	Yes	<b>Preserve</b> , 15' E. of new rd., 10' E' of path
102	Coast live oak	21,20	Yes	Remove, impacted by new rd. alignment
103	Valley oak	9	No	<b>Preserve</b> , outside impacts
104	Coast live oak	15	Yes	Remove, within new rd. alignment
105	Coast live oak	27	Yes	<b>Preserve</b> , 6' S. of access rd. alignment
106	Coast live oak	25,24,22,19,17, 12,6	Yes	<b>Preserve</b> , at edge of access rd. alignment
107	Coast live oak	17,14 ,12,6	Yes	Remove, tree failed at base.
108	Coast live oak	21,19	Yes	Remove, within access rd. alignment

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**Table 4: Recommendations for action, continued**  
**28030 Natoma Rd., Los Altos Hills**

Tree #	Species	Trunk Diameter (in.)	Heritage Oak?	Impact
109	Coast live oak	33,8	Yes	<b>Preserve</b> , 6' N. of access rd., 5' S. of path
110	Coast live oak	25	Yes	<b>Preserve</b> , 7' N. of access rd., at edge of path N.
111	Coast live oak	22	Yes	Remove, impacted by new access rd. alignment
112	Coast live oak	21,20	Yes	<b>Preserve</b> , 10' N. of access rd., 2' N. of path
113	Coast live oak	33,13	Yes	<b>Preserve</b> , 12' N. of access rd., 2' N. of path
114	Valley oak	10,6	Yes	<b>Preserve</b> , 13' N. of access rd., 3. N' of path
115	Coast live oak	23,22,13,12,9	Yes	<b>Preserve</b> , 6' N. of access rd., 2' S. of path
116	Coast live oak	12	Yes	<b>Preserve</b> , 3' N. of access rd., 5' S. of path
117	Valley oak	11	No	<b>Preserve</b> , 3' N. of access rd., 5' S. of path
118	Valley oak	16,9	Yes	Remove, impacted by new access rd. alignment
119	Coast live oak	29	Yes	Remove, impacted by new access rd. alignment
120	Valley oak	25	Yes	<b>Preserve</b> , 3' S. of access rd. alignment
121	Coast live oak	19	Yes	<b>Preserve</b> , 4' N. of access rd., 5' S. of path
122	Valley oak	35	Yes	<b>Preserve</b> , at edge of access rd., 5' S. of path
123	Coast live oak	6	No	<b>Preserve</b> , 13' N. of access rd., path at base S.
124	Coast live oak	18	Yes	<b>Preserve</b> , 10' N. of access rd., 2' N. of path
125	Valley oak	28	Yes	<b>Preserve</b> , 3' S. of access rd.
126	Coast live oak	15,14,8	Yes	<b>Preserve</b> , 10' S. of access rd.
127	Valley oak	14	Yes	<b>Preserve</b> , 12' N. of access rd., 5' N. of path
128	Coast live oak	22,14,10	Yes	<b>Preserve</b> , outside impacts
129	Coast live oak	35,19	Yes	<b>Preserve</b> , outside impacts
130	Valley oak	18	Yes	<b>Preserve</b> , outside impacts
131	Valley oak	14	Yes	<b>Preserve</b> , outside impacts
132	Coast live oak	18	Yes	<b>Preserve</b> , within Lot 1 bldg. envelope
133	Coast live oak	28,10	Yes	<b>Preserve</b> , within Lot 1 bldg. envelope
134	Coast live oak	30	Yes	<b>Preserve</b> , within Lot 1 bldg. envelope
135	Coast live oak	29	Yes	<b>Preserve</b> , outside impacts
136	Valley oak	8,4	Yes	<b>Preserve</b> , outside impacts
137	Valley oak	11	No	<b>Preserve</b> , outside impacts
138	Valley oak	9	No	<b>Preserve</b> , outside impacts
139	Valley oak	12	Yes	<b>Preserve</b> , outside impacts
140	Coast live oak	19	Yes	<b>Preserve</b> , outside impacts
141	Coast live oak	12	Yes	<b>Preserve</b> , outside impacts
142	Valley oak	29	Yes	<b>Preserve</b> , outside impacts
143	Valley oak	21	Yes	<b>Preserve</b> , outside impacts
144	Coast live oak	9	No	<b>Preserve</b> , outside impacts
145	Coast live oak	22	Yes	<b>Preserve</b> , outside impacts
146	Coast live oak	26	Yes	<b>Preserve</b> , within Lot 1 bldg. envelope
147	Valley oak	8	No	<b>Preserve</b> , within Lot 1 bldg. envelope
148	Valley oak	15	Yes	<b>Preserve</b> , within Lot 1 bldg. envelope
149	Coast live oak	10,9,8	Yes	<b>Preserve</b> , within Lot 1 bldg. envelope
150	Coast live oak	17	Yes	<b>Preserve</b> , outside impacts
151	Coast live oak	20	Yes	<b>Preserve</b> , outside impacts
152	Coast live oak	29,23,19,10	Yes	<b>Preserve</b> , outside impacts
153	Coast live oak	23	Yes	<b>Preserve</b> , outside impacts
154	Coast live oak	16,11	Yes	<b>Preserve</b> , outside impacts
155	Valley oak	18	Yes	<b>Preserve</b> , outside impacts
156	Coast live oak	22	Yes	<b>Preserve</b> , outside impacts
157	Blue oak	9	No	<b>Preserve</b> , outside impacts
158	Valley oak	16	Yes	<b>Preserve</b> , 15' E. of new rd.

**Table 5: Ideal Tree Protection Zones for future lot development  
 28030 Natoma Rd., Los Altos Hills**

Tree #	Species	Trunk Diameter (in.)	Heritage Oak?	Ideal Tree Protection Zones
12	Coast live oak	12,10	Yes	10' in all directions
13	Coast live oak	7	No	10' in all directions
14	Coast live oak	17,9	Yes	12' in all directions
15	Valley oak	17,17	Yes	12' in all directions
16	Coast live oak	35	Yes	20' in all directions
17	Coast live oak	25,22,18	Yes	20' in all directions
18	Coast live oak	10	No	8' in all directions
19	Valley oak	10	No	10' in all directions
20	Valley oak	17,8	Yes	15' in all directions
21	Coast live oak	28	Yes	15' in all directions
46	Coast live oak	20	Yes	15' in all directions
47	Coast live oak	18	Yes	12' in all directions
48	Coast live oak	25	Yes	18' in all directions
49	Coast live oak	42	Yes	20' in all directions
52	Coast live oak	29	Yes	20' in all directions
53	Valley oak	28	Yes	20' in all directions
54	Coast live oak	28	Yes	15' in all directions
55	Valley oak	20	Yes	15' in all directions
56	Valley oak	30	Yes	25' in all directions
57	Valley oak	28	Yes	25' in all directions
58	Valley oak	23	Yes	20' in all directions
59	Valley oak	16	Yes	15' in all directions
60	Valley oak	23	Yes	20' in all directions
61	Valley oak	38	Yes	25' in all directions
62	Valley oak	26	Yes	20' in all directions
63	Valley oak	28	Yes	20' in all directions
67	Coast live oak	20,18,18	Yes	15' in all directions
68	Coast live oak	40	Yes	20' in all directions
69	Coast live oak	19,19	Yes	15' in all directions
70	Coast live oak	7,5	Yes	DL in all directions
71	Coast live oak	8	No	DL in all directions
72	Coast live oak	9	No	DL in all directions
73	Coast live oak	35	Yes	20' in all directions
74	Coast live oak	18,18,15	Yes	15' in all directions
75	Coast live oak	16	Yes	10' in all directions
78	Coast live oak	17	Yes	10' in all directions
90	Coast live oak	9	No	8' in all directions
132	Coast live oak	18	Yes	DL in all directions
133	Coast live oak	28,10	Yes	18 in all other directions
134	Coast live oak	30	Yes	20' all other directions
146	Coast live oak	26	Yes	DL in all directions
149	Coast live oak	10,9,8	Yes	DL in all directions

### **Sudden Oak Death**

I was asked to provide some information on the current state of the disease, its presence in the region and the potential for it to affect trees at the 28030 Natoma Rd. site. Sudden Oak Death (SOD) is caused by *Phytophthora ramorum*, a fungal pathogen (actually a water mold) affecting oaks in the red oak group, including coast live oak. Valley oak, in the white oak group, is not affected.

The disease was first recognized in Santa Cruz and Marin counties in the mid 1990's. Research indicates it was likely introduced through the nursery industry and may have been in the environment for many years before it 'escaped' into the forest.

The disease requires water to grow and spread, and has many host species that are not affected by the disease but play a critical role in its spread. The disease has been shown to move from plant to plant via wind-driven rain, water, plant material, and human activities. The disease typically lands on the foliage of a susceptible plant and migrates with water movement onto the trunk. Trunk lesions and foliar dieback ensue, eventually girdling the trunk, but the tree may remain green for several months or even years before it suddenly turns brown (hence the name). Bleeding cankers and dieback are not sufficient to make a positive SOD identification. Lab analysis of plant material is required before the suspected case can be confirmed.

In general, SOD is a forest disease and has had limited impact in the urban-wildland interface. However, there are thousands of confirmed cases of SOD in Santa Clara County (mostly in the forested areas), but there are dozens within the immediate area around the 28030 Natoma Rd. site. We did not see any indications of SOD during our November field work, however, several precautions are recommended to help limit the possibility of infection. A detailed list of susceptible and host species, management and monitoring guidelines and prophylactic treatments are provided on the California Oak Mortality Task Force website (link provided below).

The greatest potential for the disease to move onto the site will be during the development process, including the road construction and development of the lots. Current research indicates that the wet months (typically November through March) are when the disease is most active, with the highest probability of infection occurring in March. The same research has revealed that the presence of Calif. bay laurel (*Umbellularia californica*) within 20 meters of a susceptible oak species is the best indicator of a high probability for infection.

Should the disease become established at the 28030 Natoma Rd. site, all coast live oaks would be at risk, representing approximately 2/3 of the tree population. Although not included in the current assessment, other species, such as black oak, tan oak and madrone are also at risk for infection and death. Several species such as Calif. bay laurel are host species and do not decline as a result of the infection, but are important vectors in the movement of the disease.

Following is a **brief** list of the most important steps to take to limit the chances of SOD becoming established. I have also included the Best Management Practices for minimizing the chances of infection on individual trees and the movement of infected material, provided by the California Oak Mortality Task Force (see attachments).

- Monitor the coast live oaks and other susceptible species for indicators of the disease.
- If susceptible species are showing SOD indicators, have the presence of the disease confirmed through a recognized laboratory. Contact the Project Arborist or the County Agriculture Commissioner for assistance with sampling of oaks.
- Avoid the purchase and movement of host plants, including several ornamental plants commonly available in the nursery trade.

- Avoid construction activities and major tree removal during the wet months (typically November through March).
- Make sure arborist performing tree work are aware of and follow all sanitation guidelines for personnel and equipment during the course of their work.
- The movement of infested soil and plant material is regulated by the state and federal government. Avoid movement of plant material, including dead and downed woody debris. Debris from tree removal, whether confirmed to have SOD or not, should be left on site. It can be chipped and spread as mulch but cannot be moved off site without contacting your County Agricultural Commissioner.
- Certain phosphate containing compounds have been registered for use as prophylactics against infection from SOD. These compounds are not a cure but can be used on individual, high-value trees as a preventative against infection. Where appropriate, consider the use of these compounds to help protect trees.

Current information on susceptible species can be found at the US Dept. of Food and Agriculture website: [http://www.aphis.usda.gov/plant\\_health/plant\\_pest\\_info/pram/index.shtml](http://www.aphis.usda.gov/plant_health/plant_pest_info/pram/index.shtml)

Information on the current research can be found at the California Oak Mortality Task Force website: <http://www.suddenoakdeath.org/>

Information on the local presence of the disease can be found at the Oak Mapper website: <http://oakmapper.org/>

### ***Tree Preservation Guidelines***

The goal of tree preservation is not merely tree survival during development but maintenance of tree health and beauty for many years. Trees retained on sites that are either subject to extensive injury during construction or are inadequately maintained become a liability rather than an asset. The response of individual trees will depend on the amount of excavation and grading, the care with which construction is undertaken, and the construction methods. Coordinating any construction activity inside the **Tree Protection Zone** can minimize these impacts.

The following recommendations will help reduce impacts to trees from development and maintain and improve their health and vitality through the clearing, grading and construction phases.

### ***Design recommendations***

1. All plans affecting trees shall be reviewed by the Consulting arborist with regard to tree impacts. These include, but are not limited to, demolition plans, grading and utility plans, landscape and irrigation plans.
2. Evaluate the design of the path to minimize grading and provide as much room from trees #109, 110, 112, 113, 115, 116, 121 and 122 as possible. By placing the path on grade, or as close to existing grade as possible, and providing as much room from trees as possible, root loss will be minimized.
3. To the extent feasible, underground services including utilities, sub-drains, water or sewer shall be routed around the **TREE PROTECTION ZONE**. Where encroachment cannot be avoided, special construction techniques such as hand digging or tunneling under roots shall be employed where necessary to minimize root injury.

4. A **TREE PROTECTION ZONE** must be established for trees to be preserved, in which no disturbance is permitted without the prior review by and approval of the Consulting Arborist. **TREE PROTECTION ZONES** for trees identified for preservation adjacent to the subdivision improvements are identified in the following table. No grading, excavation, construction or storage of materials shall occur within that zone. Trees not given a specific **Tree Protection Zones** shall be fenced at the dripline in all directions.

**Specific Tree Protection Zones**

<b>Tree No.</b>	<b>TPZ</b>
#120 and 125	3' N. DL in all other directions
#116 and 117	3' S., 5' N. DL in all other directions
#121	4' S., 5' N., DL in all other directions
#122	5' N., DL E. & W.
#109	5' S., 5' N., DL in all other directions
#89 and 93	5' W., DL in all other directions
#1, 3,4 and 7	6' S. and DL in all other directions.
#23	6' E. and DL in all other directions.
#105	6' N., DL in all other directions
#115	6' S., 2' N., DL in all other directions
#26, 33	7' E. and DL in all other directions.
#110	7' S., 2' N. DL in all other directions
#88	8' W., DL in all other directions
#6, 8, 112, 124 and 127	10' S. and DL in all other directions.
#106	DL S., E. & W.
#126	10' N. DL in all other directions
#9 and 113	12' S., DL in all other directions
#114 and 123	13' S. and DL in all other directions.
#87	15' N., 10' W., DL in all other directions
#5 and 10	15' S. and DL in all other directions.
#66	15' SW. DL in all other directions
#24 and 27	15' E. and DL in all other directions.
#25	15' E., 12' S. & DL N. & W.
#95, 101 and 158	15' W. DL in all other directions
#115	13' S., 2' N. DL in all other directions
#41 and 45	20' E. DL in all other directions
#46	20' N. DL in all other directions
#65	20' S. DL in all other directions
#62 and 63	35' NW. DL in all other directions
64	35' SE. DL in all other directions

5. As trees withdraw water from the soil, expansive soils may shrink within the root area. Therefore, foundations, footings and pavements on expansive soils near trees should be designed to withstand differential displacement.
6. Underground services including utilities, sub-drains, water or sewer shall be designed to avoid the **TREE PROTECTION ZONE**. Where possible. Where not possible, special construction techniques, such as boring or hand trenching and threading of utilities beneath roots 2" in diameter and larger must be employed.
7. **Tree Preservation Notes**, prepared by the Consulting Arborist, should be included on all plans.

8. Do not lime within 50' of any tree. Lime is toxic to tree roots.
9. Any herbicides placed under paving materials must be safe for use around trees and labeled for that use.
10. Irrigation systems must be designed so that no trenching will occur within the **TREE PROTECTION ZONE**.

***Pre-construction treatments and recommendations***

1. The construction superintendent shall meet with the Consulting Arborist before beginning work to discuss work procedures and tree protection.
2. Fence all trees to be retained to completely enclose the **TREE PROTECTION ZONE** prior to demolition, grubbing or grading. Fences shall be 6 ft. chain link or equivalent as approved by Consulting Arborist. Fences are to remain until all grading and construction is completed.
3. Pruning trees to provide construction and access clearance will be required. Trees #3, 4, 7, 23, 25, 27, 28, 33, 66, 95, 101, 121, 122 and 125 have been preliminarily identified for pruning to provide construction and road clearance. Additional trees may require pruning for pedestrian clearance over the path.
4. Prune trees to be preserved to clean the crown and to provide clearance. All pruning shall be done by a State of California Licensed Tree Contractor (C61/D49). All pruning shall be done by Certified Arborist or Certified Tree Worker in accordance with the Best Management Practices for Pruning (International Society of Arboriculture, 2002) and adhere to the most recent editions of the American National Standard for Tree Care Operations (Z133.1) and Pruning (A300).
5. All tree work shall comply with the Migratory Bird Treaty Act as well as California Fish and Wildlife code 3503-3513 to not disturb nesting birds. To the extent feasible tree pruning and removal should be scheduled outside of the breeding season. Breeding bird surveys should be conducted prior to tree work. Qualified biologists should be involved in establishing work buffers for active nests.
6. Have brush from the pruning and removal operations chipped and spread beneath the trees within the **TREE PROTECTION ZONE**. Mulch shall be 2" to 4" in depth and kept a minimum of 3' from the base of the trees.

***Recommendations for tree protection during construction***

1. Prior to beginning work, the contractors working in the vicinity of trees to be preserved are required to meet with the Consulting Arborist at the site to review all work procedures, access routes, storage areas and tree protection measures.
2. Except as absolutely necessary, no grading, construction, demolition or other work shall occur within the **TREE PROTECTION ZONE**. Any modifications must be approved and monitored by the Consulting Arborist.
3. Fences have been erected to protect trees to be preserved. Fences define a specific **TREE PROTECTION ZONE** for each tree or group of trees. Fences are to remain until all site work has been completed. Fences may not be relocated or removed without permission of the Consulting Arborist.
4. Construction trailers, traffic and storage areas must remain outside fenced areas at all times.

5. Prior to grading, pad preparation, excavation for foundations/footings/walls, trenching, trees may require root pruning outside the **TREE PROTECTION ZONE**. Any root pruning required for construction purposes shall receive the prior approval of, and be supervised by, the Consulting Arborist.
6. If injury should occur to any tree during construction, it should be evaluated as soon as possible by the Consulting Arborist so that appropriate treatments can be applied.
7. No excess soil, chemicals, debris, equipment or other materials shall be dumped or stored within the **TREE PROTECTION ZONE**.
8. Any additional tree pruning needed for clearance during construction must be performed by a Certified Arborist and not by construction personnel.

**Maintenance of impacted trees**

Preserved trees will experience a physical environment different from that pre-development. As a result, tree health and structural stability should be monitored. Occasional pruning, fertilization, mulch, pest management, replanting and irrigation may be required. In addition, provisions for monitoring both tree health and structural stability following construction must be made a priority. As trees age, the likelihood of failure of branches or entire trees increases. Therefore, annual inspection for hazard potential is recommended.

**HortScience, Inc.**



John Leffingwell  
Board Certified Master Arborist WE-3966B  
Registered Consulting Arborist #442

**Attached:**      *Tree Assessment Form*  
  
                         *Tree Assessment Plan*

# Tree Assessment

28030 Natoma Rd.  
Los Altos, California  
November 2012 and April 2014



TREE No.	SPECIES	SIZE DIAMETER (in inches)	HERITAGE?	CONDITION 1=POOR 5=EXCELLENT	SUITABILITY FOR PRESERVATION	COMMENTS
1	Coast live oak	14,9,9,6	Yes	3	Poor	Multiple attachments at base; topped for overhead utilities.
2	Coast live oak	13	Yes	3	Poor	Topped for overhead utilities; poor form.
3	Coast live oak	13	Yes	4	Moderate	Side pruned for overhead utilities; fair structure.
4	Coast live oak	11	No	3	Poor	Topped for overhead utilities; one sided south.
5	Coast live oak	12,10,10,9,8	Yes	3	Poor	Multiple attachments at base; all but one stem topped for overhead utilities.
6	Coast live oak	8	No	3	Moderate	Suppressed; crown bowed east.
7	Coast live oak	17	Yes	3	Moderate	Side pruned for overhead utilities; one sided S.
8	Coast live oak	8	No	3	Poor	Topped for overhead utilities; lateral south.
9	Coast live oak	13	Yes	3	Poor	Topped for overhead utilities; poor form.
10	Coast live oak	17	Yes	3	Poor	Topped for overhead utilities; poor form.
11	Valley oak	32	Yes	3	Poor	Codominant trunks at 6'; N. stem failed at 10'; S. stem with trunk wound & decay.
12	Coast live oak	12,10	Yes	4	Moderate	Codominant trunks at 3'; multiple girdling ropes on
13	Coast live oak	7	No	3	Moderate	Suppressed form; small crown.
14	Coast live oak	17,9	Yes	3	Moderate	Side pruned for overhead utilities; fair structure.
15	Valley oak	17,17	Yes	4	Moderate	Codominant trunks at 3'; N. stem upright; S. stem topped for overhead utilities.
16	Coast live oak	35	Yes	5	Good	Codominant trunks at 6'; one sided S.; branches to the ground S. & W.
17	Coast live oak	25,22,18	Yes	4	Good	Multiple attachments at 2'; included bark & narrow attachments.
18	Coast live oak	10	No	5	Good	Good young tree; upright form.
19	Valley oak	10	No	3	Moderate	Suppressed form; epicormic shoots; dieback.
20	Valley oak	17,8	Yes	3	Moderate	17" stem upright; epicormic shoots; dieback.
21	Coast live oak	28	Yes	4	Moderate	Multiple attachments at 6'; included bark; twig dieback in upper canopy.

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Los Altos, California  
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TREE No.	SPECIES	SIZE DIAMETER (in inches)	HERITAGE?	CONDITION 1=POOR 5=EXCELLENT	SUITABILITY FOR PRESERVATION	COMMENTS
22	Coast live oak	21,18	Yes	4	Good	Codominant trunks at 2'; included bark; one sided E.
23	Coast live oak	12,10	Yes	3	Moderate	Codominant trunks at 2'; basal wound with decay; asymmetric crown.
24	Coast live oak	18	Yes	3	Moderate	Codominant trunks at 6'; lateral N.; fair structure.
25	Coast live oak	18,16	Yes	4	Moderate	Codominant trunks at 2'; very one sided S.
26	Coast live oak	20	Yes	3	Moderate	Lateral W. at 6'; one sided S.; thin canopy.
27	Coast live oak	16,12,11	Yes	4	Moderate	Multiple attachments at 3'; seam in attachment; thin canopy.
28	Coast live oak	20	Yes	4	Good	Codominant trunks at 12'; upright form.
29	Coast live oak	18,17	Yes	4	Moderate	Codominant trunks at 4'; one stem upright; one stem extends SW.; dieback.
30	Coast live oak	29	Yes	4	Moderate	Codominant trunks at 6'; good form and structure; thin canopy.
31	Coast live oak	40	Yes	4	Moderate	Multiple attachments at 12'; leans SE.; thin canopy; cabled.
32	Coast live oak	46	Yes	4	Moderate	Multiple attachments at 7'; crown one sided SW.; thin canopy; adding wood on large branches.
33	Coast live oak	8	No	4	Good	Good young tree; slight lean W.
34	Valley oak	16	Yes	5	Good	Upright form.
35	Coast live oak	12	Yes	4	Moderate	Leans E.; small crown.
36	Coast live oak	11,10	Yes	4	Moderate	Codominant trunks at 2'; stems kiss at 6'; one stem upright.
37	Coast live oak	8,8	Yes	3	Moderate	Codominant trunks at 2'; suppressed; one sided NE.
38	Valley oak	14	Yes	5	Good	Upright form.
39	Coast live oak	12	Yes	5	Good	Good young tree.
40	Coast live oak	8	No	4	Moderate	Slight crook at base; crowded & one sided N.

# Tree Assessment

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Los Altos, California  
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TREE No.	SPECIES	SIZE DIAMETER (in inches)	HERITAGE?	CONDITION 1=POOR 5=EXCELLENT	SUITABILITY FOR PRESERVATION	COMMENTS
41	Coast live oak	20	Yes	4	Good	Trunk sweeps at 3-4'; one sided S.
42	Coast live oak	9	No	3	Poor	Suppressed form; Leans S.; small crown.
43	Coast live oak	14	Yes	4	Moderate	One sided & leaning E.
44	Coast live oak	8,8	Yes	3	Poor	Codominant trunks at 4'; suppressed; leans W.; small crown.
45	Coast live oak	17	Yes	4	Good	Upright form; a little thin in upper canopy.
46	Coast live oak	20	Yes	3	Moderate	Leans E.; twig dieback.
47	Coast live oak	18	Yes	4	Moderate	One sided N.; twig dieback.
48	Coast live oak	25	Yes	4	Moderate	Codominant trunks at 5'; included bark; rodent damage.
49	Coast live oak	42	Yes	4	Moderate	Multiple attachments at 18'; basal cavity W.; twig dieback.
50	Valley oak	32	Yes	3	Poor	Codominant trunks at 10'; E. stem with trunk wound & decay; lateral S.
51	Coast live oak	42	Yes	2	Poor	Hollow with extensive trunk decay; lost several main leaders.
52	Coast live oak	29	Yes	3	Moderate	Very one sided S.; long laterals S. to the ground.
53	Valley oak	28	Yes	4	Good	Multiple attachments at 10'; fair branch structure; twig dieback.
54	Coast live oak	28	Yes	4	Good	Multiple attachments at 5'; spreading form; heavy lateral limbs.
55	Valley oak	20	Yes	4	Moderate	Multiple attachments at 7'; twig and branch dieback.
56	Valley oak	30	Yes	5	Good	Upright; good form an structure; lateral S.; engulfed in poison oak.
57	Valley oak	28	Yes	4	Moderate	One sided S.; lost upright limb; engulfed in poison oak.
58	Valley oak	23	Yes	5	Good	Multiple attachments at 12'; good form and structure.

# Tree Assessment

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Los Altos, California  
November 2012 and April 2014



TREE No.	SPECIES	SIZE DIAMETER (in inches)	HERITAGE?	CONDITION 1=POOR 5=EXCELLENT	SUITABILITY FOR PRESERVATION	COMMENTS
59	Valley oak	16	Yes	5	Good	Multiple attachments at 7'; good form and structure; laterals.
60	Valley oak	23	Yes	5	Good	Multiple attachments at 7'; good form and structure; branches to the ground.
61	Valley oak	38	Yes	4	Moderate	Multiple attachments at 12'; narrow attachments; one sided with branches to the ground S.
62	Valley oak	26	Yes	4	Moderate	Codominant trunks at 8'; one stem upright; one stem bowed W. to horizontal.
63	Valley oak	28	Yes	3	Moderate	Codominant trunks at 8'; suppressed; crown bowed W. to horizontal.
64	Valley oak	44	Yes	3	Poor	Codominant trunks at 7'; large trunk wound/cavity N.; lost limb W.
65	Valley oak	44	Yes	4	Good	Codominant trunks at 6'; spreading form; branches to ground S.
66	Valley oak	36	Yes	4	Moderate	History of branch failure; lateral N.; engulfed in poison oak.
67	Coast live oak	20,18,18	Yes	5	Good	Multiple attachments at 4'; good form; included bark.
68	Coast live oak	40	Yes	4	Moderate	Multiple attachments at 10'; narrow attachments; fair structure; engulfed in poison oak.
69	Coast live oak	19,19	Yes	4	Good	Codominant trunks at 3'; seam in attachment.
70	Coast live oak	7,5	Yes	5	Good	Codominant trunks at 3'; good young tree.
71	Coast live oak	8	No	4	Moderate	Crowded; fair structure.
72	Coast live oak	9	No	5	Good	Crowded; one sided W.
73	Coast live oak	35	Yes	4	Good	Multiple attachments at 20'; lateral W. to ground; thin canopy/oak moth damage.
74	Coast live oak	18,18,15	Yes	5	Good	Multiple attachments at 3'; good form; included bark/seam.
75	Coast live oak	16	Yes	3	Moderate	One sided W.; poison oak.

# Tree Assessment

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TREE No.	SPECIES	SIZE DIAMETER (in inches)	HERITAGE?	CONDITION 1=POOR 5=EXCELLENT	SUITABILITY FOR PRESERVATION	COMMENTS
76	Coast live oak	10,10	Yes	2	Low	Suppressed; crown bowed W. to horizontal.
77	Coast live oak	14	Yes	3	Low	Suppressed; one sided SE.
78	Coast live oak	17	Yes	3	Moderate	Sparse canopy; one sided E.
79	Coast live oak	8	No	5	High	Slight lean N.; good young tree.
80	Coast live oak	9	No	5	High	Good young tree.
81	Coast live oak	12	Yes	3	Low	Trunk sweeps S.; crook at 3'; poor form and structure.
82	Coast live oak	20	Yes	4	Moderate	Multiple attachments at 7'; crowded & one sided N.
83	Coast live oak	20	Yes	4	Moderate	Crowded; high crown; lateral S.
84	Coast live oak	14	Yes	3	Moderate	Trunk leans NW.; one sided W.
85	Coast live oak	26	Yes	4	Moderate	Crowded & one sided S.; fair branch structure.
86	Coast live oak	6	No	3	Moderate	Suppressed; branch wounds.
87	Coast live oak	32	Yes	4	High	Slight lean N.; good form and structure; dead wood.
88	Coast live oak	17	Yes	3	Low	Leans W.; trunk wound at 15'.
89	Coast live oak	11	No	3	Moderate	Suppressed; crown bowed E.
90	Coast live oak	9	No	3	Moderate	Leans W.; small crown.
91	Coast live oak	14	Yes	3	Low	Leans S.; embedded barbed wire.
92	Coast live oak	9	No	5	High	Good young tree.
93	Coast live oak	9,4,4	Yes	5	High	Good young tree.
94	Valley oak	17	Yes	3	Low	Codominant trunks at 6'; narrow crown; dieback.
95	Coast live oak	33	Yes	4	Moderate	Multiple attachments at 5'; one sided E.; laterals & dead wood.
96	Coast live oak	10	No	3	Low	Suppressed; small, high crown.
97	Coast live oak	13,11	Yes	3	Moderate	Codominant trunks at 3'; high crown.
98	Coast live oak	16	Yes	3	Moderate	Codominant trunks at 10'; leaning & one sided S.; cavity E.

# Tree Assessment

28030 Natoma Rd.  
Los Altos, California  
November 2012 and April 2014



TREE No.	SPECIES	SIZE DIAMETER (in inches)	HERITAGE?	CONDITION 1=POOR 5=EXCELLENT	SUITABILITY FOR PRESERVATION	COMMENTS
99	Coast live oak	14,10	Yes	3	Low	Codominant trunks at 1'; crown bowed S. to horizontal.
100	Coast live oak	18	Yes	3	Moderate	Codominant trunks at 10'; fair structure; high crown.
101	Coast live oak	22,21	Yes	4	Moderate	Codominant trunks at 3'; one sided E.; laterals & dead wood.
102	Coast live oak	21,20	Yes	4	Moderate	Codominant trunks at 3'; good form; large pruning wounds.
103	Valley oak	9	No	3	Low	Codominant trunks at 5'; suppressed; crown bowed E. to horizontal.
104	Coast live oak	15	Yes	3	Moderate	High crown; sunscald S.
105	Coast live oak	27	Yes	4	Moderate	Crowded; crown bowed W.
106	Coast live oak	24,22,19,17,12	Yes	2	Low	Multiple attachments at 3'; history of stem failure E.; ganoderma at base W.
107	Coast live oak	17,14,12,6	Yes	2	Low	Failed at base; laying on ground.
108	Coast live oak	21,19	Yes	3	Moderate	Overtopped; crown bowed W.
109	Coast live oak	33,8	Yes	3	Moderate	Codominant trunks at 10'; overtopped; crown bowed W.
110	Coast live oak	25	Yes	3	Moderate	Overtopped; crown bowed W. to horizontal.
111	Coast live oak	22	Yes	3	Low	Crowded; one sided S.
112	Coast live oak	21,20	Yes	3	Moderate	Codominant trunks at 3'; W. stems bowed W.
113	Coast live oak	33,13	Yes	4	Moderate	One sided N.; dominant tree.
114	Valley oak	10,6	Yes	3	Low	Codominant trunks at 2'; suppressed; poor form.
115	Coast live oak	23,22,13,12,9	Yes	3	Moderate	Multiple attachments at 3'; some stems upright; some stems bowed N.
116	Coast live oak	12	Yes	2	Low	Small crown; dieback.
117	Valley oak	11	No	3	Low	Codominant at base w/ #116; high crown; dieback.
118	Valley oak	16,9	Yes	3	Moderate	Codominant at 2'; high crown; deadwood

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TREE No.	SPECIES	SIZE DIAMETER (in inches)	HERITAGE?	CONDITION 1=POOR 5=EXCELLENT	SUITABILITY FOR PRESERVATION	COMMENTS
119	Coast live oak	29	Yes	3	Moderate	Leans E. to horizontal
120	Valley oak	25	Yes	4	Moderate	High crown; one sided S.
121	Coast live oak	19	Yes	2	Low	Leans E. to horizontal; bark checking; trunk wounds.
122	Valley oak	35	Yes	3	Moderate	Multiple attachments at 6'; sparse crown; spreading form.
123	Coast live oak	6	No	5	High	Good young tree.
124	Coast live oak	18	Yes	4	High	Multiple attachments at 8'; good form and structure.
125	Valley oak	28	Yes	4	High	Multiple attachments at 10'; good form; recently pruned.
126	Coast live oak	15,14,8	Yes	3	Moderate	Suppressed; one sided SE.
127	Valley oak	14	Yes	3	Moderate	Pruned N.; one sided S.
128	Coast live oak	22,14,10	Yes	4	Moderate	Multiple attachments at 3'; one sided S.
129	Coast live oak	35,19	Yes	4	Moderate	Multiple attachments at 5'; wide attachment; 19" stem is low lateral W.
130	Valley oak	18	Yes	3	Moderate	Upright form; dieback; powdery mildew.
131	Valley oak	14	Yes	3	Low	Leans N.; asymmetric crown; embedded barbed wire; dieback to 4".
132	Coast live oak	18	Yes	4	Moderate	Codominant trunks at 6'; included bark; sap flow at attachment.
133	Coast live oak	28,10	Yes	4	Moderate	Multiple attachments at 8'; beetle activity along trunk; 10" stem is low lateral.
134	Coast live oak	30	Yes	4	Moderate	Multiple attachments at 5'; heavy lateral E.
135	Coast live oak	29	Yes	4	Moderate	Multiple attachments at 8'; low lateral S.
136	Valley oak	8,4	Yes	3	Moderate	One sided E.; twig dieback.
137	Valley oak	11	No	3	Moderate	Crowded; crown bowed NW.
138	Valley oak	9	No	3	Moderate	Crowded; slight lean W.
139	Valley oak	12	Yes	3	Moderate	Crowded; leans N. to horizontal then turns upright.

# Tree Assessment

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TREE No.	SPECIES	SIZE DIAMETER (in inches)	HERITAGE?	CONDITION 1=POOR 5=EXCELLENT	SUITABILITY FOR PRESERVATION	COMMENTS
140	Coast live oak	19	Yes	3	Moderate	Crowded; reaching through the canopy of #142.
141	Coast live oak	12	Yes	3	Low	Crowded; leans E. to horizontal over fence.
142	Valley oak	29	Yes	4	High	Multiple attachments at 10'; dominant tree; laterals W.
143	Valley oak	21	Yes	3	Moderate	Codominant trunks at 5'; asymmetric crown.
144	Coast live oak	9	No	3	Moderate	Crowded; growing through canopy of #142.
145	Coast live oak	22	Yes	4	High	Upright form; high canopy.
146	Coast live oak	26	Yes	3	Moderate	Codominant trunks at 4'; one sided S.
147	Valley oak	8	No	2	Low	Suppressed; crown formed by epicormics.
148	Valley oak	15	Yes	2	Low	One sided S.; dieback; crown formed by epicormics.
149	Coast live oak	10,9,8	Yes	4	Moderate	Multiple attachments at 2'; narrow attachments.
150	Coast live oak	17	Yes	3	Moderate	Crowded; high crown bowed SW.
151	Coast live oak	20	Yes	3	Moderate	Crowded; asymmetric crown.
152	Coast live oak	29,23,19,10	Yes	4	High	Multiple attachments at 3'; dominant tree; beetle activity at base.
153	Coast live oak	23	Yes	4	Moderate	Codominant trunks at 15'; upright; one sided W.
154	Coast live oak	16,11	Yes	3	Moderate	Codominant trunks at 3'; wide attachment; crown bowed S.
155	Valley oak	18	Yes	3	Moderate	Multiple attachments at 10'; good form; thin canopy.
156	Coast live oak	22	Yes	3	Moderate	Codominant trunks at 5'; asymmetric crown.
157	Blue oak	9	No	4	Moderate	Good young tree; lower branches covers in lichen.
158	Valley oak	16	Yes	3	Moderate	One sided S.; twig dieback; wires attached to trunk at 10'.

# Tree Assessment Plan

28030 Natoma Road  
Los Altos Hills, CA

Prepared for:  
Top Elegant Investment LLC  
New York, NY

December 2012  
Updated April 2014

No Scale

Notes:  
Base map provided by:  
Wilsey Ham  
San Mateo, CA

Numbered tree locations  
are approximate.

Trees that have no point were approximately located.



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