



Preliminary Arborist Report

**1501 Lucas Valley Road
San Rafael, CA**

PREPARED FOR:
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1501 Lucas Valley Road
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Preliminary Arborist Report

1501 Lucas Valley Road
San Rafael, CA

Introduction and Overview

Lucas Valley Road, LLC is planning to re-develop the subject property located at 1501 Lucas Valley Road in San Rafael. HortScience | Bartlett Consulting, Divisions of The F.A. Bartlett Tree Expert Company, was asked to prepare an **Arborist Report** for the project for submittal to the County of Marin.

This report provides the following information:

1. An assessment of the health, structural condition, and suitability for preservation of the trees located on and adjacent to the proposed project.
2. An assessment of the trees that would be preserved and removed based on preliminary development plans.
3. Preliminary guidelines for tree preservation during the design, construction, and maintenance phases of development.

Tree Assessment Methods

Trees were assessed on November 8, 2023. The assessment included all trees measuring 4 inches and larger in diameter located within and adjacent to the project area. The assessment procedure was a visual assessment from the ground, consisting of the following steps:

1. Identifying the tree species.
2. Attaching a numerically coded metal tag to the trunk of each tree.
3. Recording the tree's location on a map.
4. Measuring the trunk diameter at a point 54 inches (4.5 feet) above grade.
5. 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, or 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 epicormic shoots (secondary shoots that arise along the trunk and branches); extensive structural defects that cannot be abated.
6. 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

One hundred sixty-eight (168) trees representing eight species were evaluated (Table 1). Tree tags numbers were #101 – 268. Most species were native to the area and may be indigenous to the site. Overall, just over half of the population (87 trees, or 52%) were in poor condition. Sixty-eight (68, or 40%) trees were fair and 12 trees were good. Coast live oak #121 was dead. Descriptions of each tree are found in the **Tree Assessment**, and approximate locations are plotted on the **Tree Assessment Map** (see Exhibits).

**Table 1. Species present and tree condition.
1501 Lucas Valley Road. San Rafael, CA.**

Common Name	Scientific Name	Condition				Total
		Dead (0)	Poor (1-2)	Fair (3)	Good (4-5)	
California buckeye	<i>Aesculus californica</i>	-	18	3	-	21
Mulberry	<i>Morus</i> sp.	-	-	1	-	1
Nichol's willowleafed peppermint	<i>Eucalyptus nicholii</i>	-	-	-	1	1
Coast live oak	<i>Quercus agrifolia</i>	1	15	35	10	61
Blue oak	<i>Quercus douglasii</i>	-	-	1	-	1
Valley oak	<i>Quercus lobata</i>	-	12	7	-	19
Elderberry	<i>Sambucus</i> sp.	-	1	-	-	1
California bay	<i>Umbellularia californica</i>	-	41	21	1	63
Total		1	87	68	12	168

The site sloped up from Lucas Valley Road to steep ridges on three sides of the project area. The Nunes Fire Road starts at the existing gate and winds up the hill, and there was an abandoned horse stable structure at the northern end of the property. All trees were growing near the perimeter, with California bay and coast live oak together representing 74% of the population. California bay was the most frequently occurring species, with 63 trees. Condition was mostly poor (41 trees). Twenty-one trees were in fair condition and bay #254 was in good condition. Trees in poor condition were crowded together or decayed at the base with hollow stems. The bays were young to mature in development, with stem diameters ranging from 5 to 26 inches with an average of approximately 11 inches. Most trees were growing in dense stands (Photo 1, next page).

Among 61 coast live oaks, overall condition was either fair (35 trees, or 57%) or poor (15 trees, or 25%). Ten (10) trees were in good condition (Photo 2, next page), and oak #121 was dead. Diameters ranged from 4 to 46 inches. Many were growing among bay trees, and a few had trunks entwined with these trees.

Photo 1 (right). Most California bays were growing together in stands on the hillside.

Photo 2 (below). Coast live oak #232 was in good condition and was growing near Lucas Valley Road.



Eighteen (18) of 21 California buckeyes were in poor or very poor condition, with basal decay and multiple attachments at the base. Buckeyes #264, 265 and 266 were in fair condition. Most trees were growing on a steep slope down to Lucas Valley Road on the east edge of the site (Photo 3). Diameters ranged from 7 to 18 inches, with an average of 10 inches.



Photo 3. Most California buckeyes were growing on a slope at the east edge of the site.

Nineteen (19) Valley oaks were in poor (12 trees) or fair condition (7 trees). Development ranged from young (9 inches) to over-mature (50 inches). Older trees had very wide spreading crowns typical of the species.

The remaining four species were each represented by a single tree:

- Mulberry #102 had a diameter of 26 inches and codominant stems at 5 feet. It was in fair condition.
- Nichol's willow-leaved peppermint #146 was the largest tree assessed, with a diameter of 61 inches (Photo 4). It was in good condition with multiple attachments at approximately 15 feet. Crown was vigorous and wide spreading.
- Blue oak #179 had a diameter of 25 inches and was in fair condition. It had codominant stems at 7 feet and some branch dieback.
- Elderberry #214 was failing down a slope and in very poor condition with extensive dieback. It had two main stems of 15 and 10 inches.

Photo 4. Nichol's willow-leaved peppermint #146 was the largest tree assessed.



Protected Trees in Marin County

Marin County (Ordinance No. 3342, Chapter 22.75 Native Tree Preservation and Protection, Attachment 1) defines Protected trees of several California native species at varying trunk sizes, measured at 54 inches above grade (4.5 feet). Trees in poor condition are exempted from the Prohibition on Removal of a Protected Tree [22.75.050 (B)]. Native trees of Protected size in poor condition have been noted with an asterisk next to Protected status in the **Tree Assessment**. Based on these criteria, 66 trees are considered Protected; trees in poor condition were not included. On an "improved parcel" in Marin County, defined as a parcel which is occupied with a building(s) or structure(s), the removal of more than five Protected trees within any 12-month period requires a permit. The subject site meets the criteria of an "improved parcel" by this definition. Replacement tree planting and a management plan designating areas of the property for preservation of young stands of trees or saplings may be required for removal of Protected trees on large properties.

Suitability for Preservation

Trees that are preserved on sites where development or other improvements are planned, must be carefully selected to make sure that they may survive construction 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. 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. Defects such as codominant or multiple stems, lean and other deviations from the vertical, heavy branches and decay are problematic and may increase the potential for a tree to fail. For example, coast live oak #124 had a failed stem and was extremely suppressed by a nearby tree. I do not recommend this tree for preservation.
- **Species response**
There is a wide variation in the response of individual species to construction impacts and changes in the environment. For instance, coast live oak is tolerant of some root severance but sensitive to addition of fill soil around base of trunk, as is California bay. California buckeye is also well tolerant of construction impacts, and valley oak is moderately tolerant of impacts. Nichol's willow-leafed peppermint is intolerant of root impacts.
- **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. The California Invasive Plant Inventory Database (www.cal-ipc.org) lists species identified as being invasive. San Rafael is part of the Central West Floristic Province. None of the species assessed are listed as 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 2, below).

**Table 2. Tree suitability for preservation.
1501 Lucas Valley Road. San Rafael, CA.**

High	Trees with good health and structural stability that have the potential for longevity at the site. Ten (10) trees were rated as having high suitability for preservation, including nine coast live oaks and California bay #254.
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Moderate	Trees in fair health and/or possessing 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. Fifty-six (56) trees were rated as having moderate suitability for preservation: 33 coast live oaks, 11 California
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bays, six valley oaks, three California buckeyes, mulberry #102, Nichol's willowleafed peppermint #146, and blue oak #179.

Low Trees in poor health or possessing 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. One hundred and one (101) trees were rated as having low suitability for preservation: 51 California bays, 18 California buckeyes, 18 coast live oaks, 13 valley oaks, and elderberry #214.

Note: Table does not include coast live oak #121. This tree was dead.

We consider trees with high suitability for preservation to be the best candidates for preservation during development. We do not generally recommend retention of trees with low suitability for preservation in areas where people or property will be present. Retention of trees with moderate suitability for preservation depends upon the intensity of proposed site changes.

Preliminary Evaluation of Impacts and Recommendations for Action

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 was the reference point for tree condition and quality. Impacts from the proposed project were assessed using the 1501 Lucas Valley Road Grading Aerial (CSW, 8/21/2023). The plan showed an aerial image of the site with civil overlay, but did not indicate surveyed trunk locations or tree canopy. This report is preliminary because no site layout, final grading, utility, landscape or other construction plans were reviewed.

The plan proposes demolishing the existing building, grading the site and constructing a housing development. Some trees along the perimeter of grading may be preserved, but impacts to trees in the center of the site and hillsides to the north and west will be significant to severe.

Based on my assessment of the proposed plan and evaluation of the trees, I recommend the potential preservation of 55 trees and removal of 113 trees, forty-five of them Protected (Table 3, page 7). Nichol's willowleafed peppermint #146 can potentially be preserved if the grading plan can be revised. One of the trees recommended for removal is dead. Impacts to trees and recommendations for action are directly associated with proximity to areas proposed for grading and construction, and range from minor to severe.

Successful retention of the trees to be preserved will require adherence to the **Preliminary Tree Preservation Guidelines** (see page 14).

**Table 3. Preliminary tree disposition.
1501 Lucas Valley Road. San Rafael, CA.**

Tree No.	Species	Trunk Diameter (in.)	Protected Tree? (*poor condition)	Condition 0=dead 5=excellent	Proposed Action	Notes
101	Coast live oak	8,8	Yes	3	Potentially preserve	At edge of project area
102	Mulberry	26	No	3	Remove	At edge of grading
103	Coast live oak	6	Yes	4	Remove	Within grading
104	California bay	6	No	2	Remove	Within grading
105	Coast live oak	8	Yes	3	Remove	At edge of grading
106	California bay	5	No	1	Remove	Within grading
107	California bay	7	No	2	Remove	Within grading
108	California bay	18	Yes	3	Remove	At edge of grading
109	California bay	22	Yes	3	Potentially preserve	At edge of project area
110	California bay	21	No*	2	Potentially preserve	At edge of project area
111	California bay	11	No*	1	Potentially preserve	At edge of project area
112	Coast live oak	41	Yes	3	Potentially preserve	At edge of project area
113	California bay	7	No	2	Potentially preserve	At edge of project area
114	California bay	6,4,2	No	2	Remove	At edge of grading
115	Coast live oak	46	Yes	4	Potentially preserve	At edge of project area
116	Valley oak	19	Yes	3	Potentially preserve	At edge of project area
117	Valley oak	17	Yes	3	Potentially preserve	At edge of project area
118	Valley oak	15	Yes	3	Potentially preserve	At edge of project area
119	Coast live oak	24	Yes	3	Potentially preserve	At edge of project area
120	Valley oak	20	Yes	2	Remove	At edge of grading
121	Coast live oak	28	-	0	Remove	Dead; within grading
122	Coast live oak	37	Yes	3	Remove	Within grading
123	Coast live oak	36	Yes	3	Remove	Within grading
124	Coast live oak	26	No*	1	Remove	Within grading

**Table 3, cont'd. Preliminary tree disposition.
1501 Lucas Valley Road. San Rafael, CA.**

Tree No.	Species	Trunk Diameter (in.)	Protected Tree? (*poor condition)	Condition 0=dead 5=excellent	Proposed Action	Notes
125	Coast live oak	24,23	Yes	3	Remove	Within grading
126	Valley oak	17	Yes	3	Remove	Within grading
127	Valley oak	9	Yes	2	Remove	Within grading
128	Valley oak	18,16	Yes	2	Remove	Within grading
129	Coast live oak	32	Yes	3	Remove	Within grading
130	Coast live oak	32	Yes	3	Remove	Within grading
131	Coast live oak	10	No*	2	Potentially preserve	At edge of project area
132	Coast live oak	14,14,13	Yes	3	Potentially preserve	At edge of project area
133	Valley oak	11	No*	2	Potentially preserve	At edge of project area
134	Coast live oak	5	No	3	Potentially preserve	At edge of project area
135	Coast live oak	7	Yes	4	Potentially preserve	At edge of project area
136	Coast live oak	20,15	Yes	3	Potentially preserve	At edge of project area
137	Coast live oak	8	Yes	4	Potentially preserve	At edge of project area
138	Coast live oak	4	No	3	Potentially preserve	At edge of project area
139	Coast live oak	5,3	No	4	Potentially preserve	At edge of project area
140	Coast live oak	6,3	Yes	3	Potentially preserve	At edge of project area
141	Coast live oak	5,4,3	No	3	Potentially preserve	At edge of project area
142	Coast live oak	23	Yes	3	Remove	At edge of grading
143	Coast live oak	25	No*	1	Remove	Within grading
144	Coast live oak	26	No*	1	Remove	Within grading
145	Valley oak	14,10	No*	2	Remove	Within grading
146	Nichol's willowleafed peppermint	61	No	4	Potentially preserve	To preserve, grading plan revision needed
147	Coast live oak	11,9	Yes	3	Remove	Within grading

**Table 3, cont'd. Preliminary tree disposition.
1501 Lucas Valley Road. San Rafael, CA.**

Tree No.	Species	Trunk Diameter (in.)	Protected Tree? (*poor condition)	Condition 0=dead 5=excellent	Proposed Action	Notes
148	Valley oak	28	Yes	3	Potentially preserve	At edge of project area
149	Valley oak	22	No*	2	Remove	Within grading
150	Valley oak	18	No*	2	Remove	Within grading
151	California bay	7	No	3	Remove	Within grading
152	Coast live oak	23	No*	2	Remove	Within grading
153	California bay	4-25" range	Yes	3	Remove	Within grading
154	Coast live oak	23	No*	2	Remove	Within grading
155	Coast live oak	22	No*	2	Remove	Within grading
156	California bay	18	Yes	3	Remove	Within grading
157	California bay	6	No	2	Remove	Within grading
158	Coast live oak	14	No*	1	Remove	Within grading
159	California bay	9	No	2	Remove	Within grading
160	Coast live oak	11,9	No*	2	Remove	Within grading
161	Coast live oak	15,10	No*	2	Remove	Within grading
162	California bay	6	No	2	Remove	Within grading
163	Valley oak	17,15	No*	2	Remove	Within grading
164	Valley oak	14	No*	2	Remove	Within grading
165	California bay	14	Yes	3	Remove	Within grading
166	Coast live oak	6,5,5,4	Yes	3	Remove	Within grading
167	Coast live oak	15	No*	2	Remove	Within grading
168	California bay	13,5	No*	2	Remove	Within grading
169	California bay	25,15	No*	2	Remove	Within grading
170	California bay	6	No	3	Remove	Within grading
171	California bay	16,3,3	No*	2	Remove	Within grading
172	Coast live oak	9	No*	2	Remove	Within grading
173	California bay	7	No	2	Remove	Within grading
174	Coast live oak	9,8	Yes	3	Remove	Within grading
175	California bay	5	No	2	Remove	Within grading
176	California bay	7	No	2	Remove	Within grading
177	California bay	15,14	No*	2	Remove	Within grading
178	California bay	18	No*	2	Remove	Within grading
179	Blue oak	25	Yes	3	Remove	Within grading

**Table 3, cont'd. Preliminary tree disposition.
1501 Lucas Valley Road. San Rafael, CA.**

Tree No.	Species	Trunk Diameter (in.)	Protected Tree? (*poor condition)	Condition 0=dead 5=excellent	Proposed Action	Notes
180	Valley oak	19	No*	2	Remove	Within grading
181	Valley oak	15,9	No*	2	Remove	Within grading
182	Coast live oak	12,12,9,7	Yes	3	Remove	Within grading
183	California bay	16	Yes	3	Remove	Within grading
184	Coast live oak	11	Yes	3	Remove	Within grading
185	Coast live oak	13	Yes	3	Remove	Within grading
186	Coast live oak	8,7	Yes	3	Remove	Within grading
187	Coast live oak	22	Yes	3	Remove	Within grading
188	Coast live oak	8	Yes	4	Remove	Within grading
189	California buckeye	14,9	No*	2	Remove	At edge of grading
190	California bay	12,10	No*	2	Potentially preserve	At edge of project area
191	California bay	7	No	2	Potentially preserve	At edge of project area
192	California bay	13	No*	2	Potentially preserve	At edge of project area
193	California bay	13,12,11, 9,8	No*	1	Potentially preserve	At edge of project area
194	Coast live oak	15	Yes	3	Remove	Within grading
195	Coast live oak	7,6,5	Yes	4	Remove	Within grading
196	Coast live oak	10	Yes	3	Remove	Within grading
197	Coast live oak	7	Yes	3	Remove	Within grading
198	Coast live oak	15	Yes	3	Remove	Within grading
199	Coast live oak	8	Yes	3	Remove	Within grading
200	Coast live oak	11	Yes	3	Remove	Within grading
201	Coast live oak	5	No	3	Remove	Within grading
202	Coast live oak	6	No*	2	Remove	Within grading
203	Coast live oak	9,6	Yes	3	Remove	Within grading
204	Valley oak	22	No*	2	Remove	Within grading
205	Valley oak	20,19,17	Yes	3	Remove	Within grading
206	Coast live oak	11,8	Yes	3	Remove	Within grading
207	Coast live oak	15	Yes	4	Remove	Within grading
208	California buckeye	12,10,7,6, 5,4,4,4	No*	2	Remove	At edge of grading

**Table 3, cont'd. Preliminary tree disposition.
1501 Lucas Valley Road. San Rafael, CA.**

Tree No.	Species	Trunk Diameter (in.)	Protected Tree? (*poor condition)	Condition 0=dead 5=excellent	Proposed Action	Notes
209	California buckeye	11,10,5,5	No*	2	Remove	At edge of grading
210	California buckeye	19,12,12, 11	No*	2	Remove	At edge of grading
211	California buckeye	13,13,12, 9	No*	2	Remove	Within grading
212	California buckeye	8	No	1	Remove	Within grading
213	California buckeye	9	No	1	Remove	At edge of grading
214	Elderberry	15,10	No*	1	Remove	Poor condition; at edge of grading
215	California buckeye	18,4,3	No*	2	Remove	At edge of grading
216	Coast live oak	20,15	Yes	3	Remove	Within grading
217	California buckeye	7,4	No	2	Remove	Within grading
218	California buckeye	9,6	No	2	Remove	Within grading
219	California bay	14,12,12	Yes	3	Remove	Within grading
220	California bay	14	No*	2	Remove	Within grading
221	California buckeye	18	No*	1	Potentially preserve	At edge of project area
222	Coast live oak	44	Yes	4	Potentially preserve	At edge of project area
223	California buckeye	8	No	2	Remove	Within grading
224	California bay	17	Yes	3	Potentially preserve	At edge of project area
225	California bay	19,17,7,5	No*	2	Potentially preserve	At edge of project area
226	California bay	17,12	No*	2	Potentially preserve	At edge of project area
227	California bay	12	No*	2	Remove	Within grading
228	California bay	16	No*	2	Potentially preserve	At edge of project area
229	California bay	19	No*	1	Remove	Within grading
230	California bay	15,15,14, 10	No*	1	Potentially preserve	At edge of project area

**Table 3, cont'd. Preliminary tree disposition.
1501 Lucas Valley Road. San Rafael, CA.**

Tree No.	Species	Trunk Diameter (in.)	Protected Tree? (*poor condition)	Condition 0=dead 5=excellent	Proposed Action	Notes
231	Valley oak	50	Yes	3	Potentially preserve	At edge of project area
232	Coast live oak	34	Yes	4	Potentially preserve	At edge of project area
233	California bay	6	No	3	Remove	Within grading
234	California bay	22,20,12	Yes	3	Potentially preserve	At edge of project area
235	California bay	6	No	2	Remove	Within grading
236	California bay	26	Yes	3	Remove	At edge of grading
237	California bay	27,24	No*	2	Potentially preserve	At edge of project area
238	California bay	10,6,5	No*	2	Remove	At edge of grading
239	California bay	13,10	No*	2	Potentially preserve	At edge of project area
240	California bay	7	No	2	Potentially preserve	At edge of project area
241	California bay	11,6	No*	2	Potentially preserve	At edge of project area
242	California bay	11,5	No*	2	Potentially preserve	At edge of project area
243	California bay	8	No	2	Potentially preserve	At edge of project area
244	California bay	18	No*	2	Remove	Within grading
245	California buckeye	9,9	No	2	Remove	Within grading
246	Coast live oak	25,20,19	No*	2	Remove	Within grading
247	California buckeye	13,12	No*	2	Remove	Within grading
248	California buckeye	13,6	No*	2	Remove	Within grading
249	California buckeye	7	No	1	Remove	Within grading
250	California buckeye	15,10,5	No*	2	Remove	Within grading
251	California bay	27,20	Yes	3	Remove	Within grading
252	California bay	20,20,18, 16,16,11	Yes	3	Remove	Within grading
253	California bay	19,18	Yes	3	Remove	Within grading

**Table 3, cont'd. Preliminary tree disposition.
1501 Lucas Valley Road. San Rafael, CA.**

Tree No.	Species	Trunk Diameter (in.)	Protected Tree? (*poor condition)	Condition 0=dead 5=excellent	Proposed Action	Notes
254	California bay	6	No	4	Remove	Within grading
255	California bay	7,6,6,5,5,4,3	No	3	Remove	Within grading
256	California bay	18,15,9	No*	2	Remove	Within grading
257	California bay	18,18,15,9	Yes	3	Remove	Within grading
258	Coast live oak	20,7	Yes	3	Potentially preserve	At edge of project area
259	California bay	8	No	3	Potentially preserve	At edge of project area
260	Coast live oak	12,9	No*	2	Potentially preserve	At edge of project area
261	California bay	7	No	2	Potentially preserve	At edge of project area
262	California bay	16	No*	1	Potentially preserve	At edge of project area
263	California bay	11,10	Yes	3	Potentially preserve	At edge of project area
264	California buckeye	6,4,4	No	3	Potentially preserve	At edge of project area
265	California buckeye	8,5,5	No	3	Potentially preserve	At edge of project area
266	California buckeye	6,5,4,4,3,3	No	3	Potentially preserve	At edge of project area
267	California buckeye	5,4,3,2	No	2	Potentially preserve	At edge of project area
268	California bay	9,9,8,8,7,6,5,4,4	No	3	Potentially preserve	At edge of project area

Preliminary 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 demolition 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. Specific recommendations for tree protection will be prepared when final project plans are available.

Tree Protection Zone

1. **A TREE PROTECTION ZONE** shall be identified for each tree to be preserved on the Tree Protection Plan prepared by the project Consulting Arborist. The **TREE PROTECTION ZONE** shall be the dripline of each tree, with the following specifications:
 - a. Tree protection fences shall be installed to encompass the **TREE PROTECTION ZONE**.
 - b. 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 with posts sunk into the ground or equivalent as approved by the City. Posts may be installed into concrete blocks on pavement where no soil is available.
 - c. Fences must be installed prior to beginning demolition and must remain until construction is complete.
 - d. No grading, excavation, construction or storage or dumping of materials shall occur within the **TREE PROTECTION ZONE**.
 - e. No underground services including utilities, sub-drains, water or sewer shall be placed in the **TREE PROTECTION ZONE**.
 - f. Fences shall be posted with signs stating, "TREE PROTECTION FENCE – DO NOT MOVE OR REMOVE WITHOUT APPROVAL FROM CITY ARBORIST".

Design recommendations

1. Revise the grading plan to preserve Nichol's willowleafed peppermint #146. Hold grading at least XX feet from the tree. (I'll let you fill in the recommended distance!)
2. Establish the horizontal and vertical elevation of all trees recommended for preservation and located within 25-feet of proposed demolition and construction. Include trunk locations and tag numbers on all plans.
3. Allow the Consulting Arborist to review all future project submittals including grading, utility, drainage, irrigation, and landscape plans.
4. Plan for tree preservation by designing adequate space around trees to be preserved. This is the **TREE PROTECTION ZONE**. No grading, excavation, construction or storage of materials should occur within that zone. Route underground services including utilities, sub-drains, water or sewer around the **TREE PROTECTION ZONE**.

5. Consider the vertical clearance requirements near trees during design. Avoid designs that would require pruning more than 20% of a tree's canopy.
6. Irrigation systems must be designed so that no trenching severs roots larger than 2 inches in diameter within the **TREE PROTECTION ZONE**.
7. **Tree Preservation Guidelines** prepared by the Consulting Arborist, which include specifications for tree protection during demolition and construction, should be included on all plans.
8. Any herbicides placed under paving materials must be safe for use around trees and labeled for that use.
9. 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.
10. Ensure adequate but not excessive water is supplied to trees; in most cases occasional irrigation will be required. Supplemental irrigation is required for these trees before construction begins. Avoid directing runoff toward trees.
11. Make all efforts to ensure that roots no larger than 2 inches in diameter are not severed.

Pre-demolition and pre-construction treatments and recommendations

1. The demolition and construction superintendents shall meet with the Consulting Arborist before beginning work to review all work procedures, access routes, storage areas, and tree protection measures.
2. Prune trees to be preserved to clean the crown of dead branches 1 inch. and larger in diameter, raise canopies as needed for construction activities.
 - a. 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).
 - b. The Consulting Arborist will provide pruning specifications prior to site demolition.
 - c. Branches extending into the work area that can remain following demolition shall be tied back and protected from damage.
3. 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.

Recommendations for tree protection during construction

1. Any approved grading, construction, demolition or other work within the **TREE PROTECTION ZONE** should be monitored by the Consulting Arborist.
2. All contractors shall conduct operations in a manner that will prevent damage to trees to be preserved.

3. Where demolition must occur close to trees, install temporary trunk protection devices such as winding silt sock wattle or wood planks with 2 inches of orange plastic fencing as padding around trunks. Any low branches that are within the work zone should also be protected. Remove trunk protection after demolition is completed and install protective fencing at the limits of the tree protection zone. Do not retain wattling around tree trunks for more than 2-3 months to avoid damaging trunks from excess moisture.
4. Tree protection devices are to remain until all site work has been completed within the work area. Fences or other protection devices may not be relocated or removed without permission of the Consulting Arborist.
5. Construction trailers, traffic and storage areas must remain outside **TREE PROTECTION ZONE** at all times.
6. Any root pruning required for construction purposes shall receive the prior approval of and be supervised by the Consulting Arborist. Roots should be cut with a saw to provide a flat and smooth cut. Removal of roots larger than 2 inches in diameter should be avoided.
7. If roots 2 inches and greater in diameter are encountered during site work and must be cut to complete the construction, the Consulting Arborist must be consulted to evaluate effects on the health and stability of the tree and recommend treatment.
8. Trees to be removed shall be felled so as to fall away from **TREE PROTECTION ZONE** and avoid pulling and breaking of roots of trees to remain. If roots are entwined, the Consulting Arborist may require first severing the major woody root mass before extracting the trees, or grinding the stump below ground.
9. Prior to grading or 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.
10. Spoil from trench, footing, utility or other excavation shall not be placed within the **TREE PROTECTION ZONE**, neither temporarily nor permanently.
11. All grading within the dripline of trees shall be done using the smallest equipment possible. The equipment shall operate perpendicular to the tree and operate from outside the **TREE PROTECTION ZONE**. Any modifications must be approved and monitored by the Consulting Arborist.
12. All trees shall be irrigated on a schedule to be determined by the Consulting Arborist (every 3 to 6 weeks is typical). Each irrigation shall wet the soil within the **TREE PROTECTION ZONE** to a depth of 30 inches
13. 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.
14. No excess soil, chemicals, debris, equipment or other materials shall be dumped or stored within the **TREE PROTECTION ZONE**.
15. 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, and replanting may be required. Supplemental irrigation for the preserved coast redwoods is required post-construction. In addition, provisions for monitoring both tree health and structural stability following construction must be made a priority.

Our inspections represent the condition of the tree at the time of inspection. As trees age, the likelihood of failure of branches or entire trees increases. Annual tree inspections are recommended to identify changes to tree health and structure. In addition, trees should be inspected after storms of unusual severity to evaluate damage and structural changes. Initiating these inspections is the responsibility of the client and/or tree owner.

If you have any questions about my observations or recommendations, please contact me.

HortScience | Bartlett Consulting



Pam Nagle
Consulting Arborist and Urban Forester
Certified Arborist #WE-9617A
Registered Consulting Arborist #805
ISA Tree Risk Assessment Qualified



Exhibits

Tree Assessment Form

Tree Assessment Map



Tree Assessment

1501 Lucas Valley Road
San Rafael, CA
November 2023



Tree No.	Species	Trunk Diameter (in.)	Protected Tree? (*poor condition)	Condition 0=dead 5=excellent	Suitability for Preservation	Comments
101	Coast live oak	8,8	Yes	3	Moderate	1' from fence; codominant stems at 2'; sinuous form; wide rounded crown.
102	Mulberry	26	No	3	Moderate	Lost stem w. decay N.; codominant stems at 5'; crown weighted W.
103	Coast live oak	6	Yes	4	Moderate	At fence; multiple attachments at 7'; slight lean N.; good young tree.
104	California bay	6	No	2	Low	Extensive dieback; sparse crown.
105	Coast live oak	8	Yes	3	Moderate	1-sided to S.; crowded.
106	California bay	5	No	1	Low	Extensive branch dieback; extremely crowded.
107	California bay	7	No	2	Low	1-sided to S.; crowded.
108	California bay	18	Yes	3	Moderate	Codominant stems at 8'; slightly sparse.
109	California bay	22	Yes	3	Moderate	Multiple attachments at 8'; upright form; crowded by #110.
110	California bay	21	No*	2	Low	Enlarged base + roots at base; leans N.; codominant stems at 7'; crowded by #109.
111	California bay	11	No*	1	Low	Enlarged base; leans N.; sparse; crowded.
112	Coast live oak	41	Yes	3	Moderate	1' from fence; multiple attachments at 5'; wide spreading crown; slightly thin.
113	California bay	7	No	2	Low	Leans S.W.; extremely suppressed.
114	California bay	6,4,2	No	2	Low	Multiple attachments arise from base; thin crown.
115	Coast live oak	46	Yes	4	Moderate	Multiple attachments at 4'; palm growing in attachment; very wide spreading crown; slightly sparse.
116	Valley oak	19	Yes	3	Moderate	Leans N ; codominant stems at 7'; crowded.
117	Valley oak	17	Yes	3	Moderate	Codominant stems at 9'; sinuous trunk; suppressed by #118.
118	Valley oak	15	Yes	3	Moderate	Trunk entwined with #119; leans W. and corrects; wide crown.
119	Coast live oak	24	Yes	3	Moderate	Trunk entwined with #118; bows S.E. and corrects; both very crowded.

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Tree No.	Species	Trunk Diameter (in.)	Protected Tree? (*poor condition)	Condition 0=dead 5=excellent	Suitability for Preservation	Comments
120	Valley oak	20	Yes	2	Low	Dead 8" stem w/ decay at attachment N.; codominant stems at 6'; sparse; suppressed.
121	Coast live oak	28	-	0	-	Dead.
122	Coast live oak	37	Yes	3	Low	Codominant stems at 5'; wide crown weighted S.; crowded; thin crown.
123	Coast live oak	36	Yes	3	Moderate	Multiple attachments at 7'; some dieback.
124	Coast live oak	26	No*	1	Low	Failed stem S.; extremely suppressed by #125.
125	Coast live oak	24,23	Yes	3	Moderate	Codominant stems trunks arise from base; some stem decay and dieback; separated crown.
126	Valley oak	17	Yes	3	Low	Trunk bows S.E. and corrects; sinuous form; dieback.
127	Valley oak	9	Yes	2	Low	Trunk bows S and corrects; codominant stems at 4'; sparse; crowded.
128	Valley oak	18,16	Yes	2	Low	Large basal cavity w/ decay W.; codominant stems arise from base; separated crown; crowded.
129	Coast live oak	32	Yes	3	Moderate	Basal crack N.W.; codominant stems at 5'; slightly sparse; crowded.
130	Coast live oak	32	Yes	3	Moderate	Leans W. uphill; multiple attachments at 4'; suppressed by #129.
131	Coast live oak	10	No*	2	Low	Leans and 1-sided to E.; sparse; extremely crowded.
132	Coast live oak	14,14,13	Yes	3	Moderate	Trunk divides at 1 + 3'; slightly thin.
133	Valley oak	11	No*	2	Low	Leans W. uphill; extremely sparse.
134	Coast live oak	5	No	3	Moderate	Codominant stems at 3'; suppressed by #133.
135	Coast live oak	7	Yes	4	High	Codominant stems at 5'; vigorous; good young tree.
136	Coast live oak	20,15	Yes	3	Moderate	Codominant stems arise from base; wide spreading crown; some dieback.
137	Coast live oak	8	Yes	4	High	At top of culvert; multiple attachments at 6'; sinuous trunk; crowded by #136; good young tree.

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Tree No.	Species	Trunk Diameter (in.)	Protected Tree? (*poor condition)	Condition 0=dead 5=excellent	Suitability for Preservation	Comments
138	Coast live oak	4	No	3	Moderate	At side edge of culvert; thin foliage; crowded by #137.
139	Coast live oak	5,3	No	4	High	Codominant stems at 3'; corrected bow W.; good young tree.
140	Coast live oak	6,3	Yes	3	Moderate	At rock outcrop; buried root crown; codominant stems at 3'; sinuous trunk.
141	Coast live oak	5,4,3	No	3	Moderate	Growing out of rock outcrop; multiple attachments arise from base; some witches' broom.
142	Coast live oak	23	Yes	3	Low	Dead codominant stem N.; stems lean to ground S.W.; vigorous.
143	Coast live oak	25	No*	1	Low	Failed S.; some dieback.
144	Coast live oak	26	No*	1	Low	Failed S.; some dieback.
145	Valley oak	14,10	No*	2	Low	Multiple attachments at 2'; strong lean W.; branches nearly to ground.
146	Nichol's willowleafed peppermint	61	No	4	Moderate	Previous stem failure S.E.; multiple attachments at ~15'; large vigorous spreading crown.
147	Coast live oak	11,9	Yes	3	Moderate	Codominant stems at 1' w/ seam to base; fence embedded in attachment; vigorous.
148	Valley oak	28	Yes	3	Moderate	Leans S.W. and corrects; dieback.
149	Valley oak	22	No*	2	Low	Leans W.; basal and stem decay; multiple attachments at 8'; dieback.
150	Valley oak	18	No*	2	Low	Bleeding from cavity S.W.; history of limb removal; slightly sparse.
151	California bay	7	No	3	Moderate	Codominant stems at 4'; crowded by #152.
152	Coast live oak	23	No*	2	Low	1' from #151; leans E.; basal decay N.E.
153	California bay	4-25" range	Yes	3	Low	17 stems from massive stump sprout; on top of rock outcrop; dieback high in crown.
154	Coast live oak	23	No*	2	Low	Leans S.W.; extensive decay; suppressed by #153.

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Tree No.	Species	Trunk Diameter (in.)	Protected Tree? (*poor condition)	Condition 0=dead 5=excellent	Suitability for Preservation	Comments
155	Coast live oak	22	No*	2	Low	Leans S.W.; suppressed by #156.
156	California bay	18	Yes	3	Low	Enlarged base; leans S.; crowded by #153; multiple attachments at 8'.
157	California bay	6	No	2	Low	Base at #158; crowded by bays #153 and 156.
158	Coast live oak	14	No*	1	Low	Base at #157; trunk cracked w/ decay; leans S.
159	California bay	9	No	2	Low	Base at #160; stems intertwined; crowded.
160	Coast live oak	11,9	No*	2	Low	Base at #159; codominant stems at 3'; crowded.
161	Coast live oak	15,10	No*	2	Low	Base at #162; codominant stems at 3'; leans W.; crowded.
162	California bay	6	No	2	Low	Base at #161; leans S.E.; crowded.
163	Valley oak	17,15	No*	2	Low	Codominant stems arise at base; crown weighted S.W.; sparse.
164	Valley oak	14	No*	2	Low	Leans S.; sparse.
165	California bay	14	Yes	3	Low	Growing out of rock outcrop; leans S.W. ; crowded.
166	Coast live oak	6,5,5,4	Yes	3	Low	Stump sprout; vigorous.
167	Coast live oak	15	No*	2	Low	Leans S E.; codominant stems at 4'; extremely crowded.
168	California bay	13,5	No*	2	Low	Leans E.; codominant stems arise from at base; extremely suppressed.
169	California bay	25,15	No*	2	Low	Extensive enlarged base; codominant fused stems at 3'; crowded.
170	California bay	6	No	3	Low	Enlarged base; codominant stems at 4'; suppressed.
171	California bay	16,3,3	No*	2	Low	2 stems 2' apart; extensive enlarged base; separated crown; dieback.
172	Coast live oak	9	No*	2	Low	Leans W.; wire cage around trunk; extensive dieback.
173	California bay	7	No	2	Low	Enlarged base at dead stump; leans S.E.; vigorous; suppressed.

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Tree No.	Species	Trunk Diameter (in.)	Protected Tree? (*poor condition)	Condition 0=dead 5=excellent	Suitability for Preservation	Comments
174	Coast live oak	9,8	Yes	3	Moderate	Codominant stems at 2' w/ narrow attachment; some stem decay; crowded.
175	California bay	5	No	2	Low	Leans E.; suppressed and crowded.
176	California bay	7	No	2	Low	Leans N.E.; enlarged base; crowded.
177	California bay	15,14	No*	2	Low	Extensive enlarged base; multiple attachments at 4;5'; leans E.; dieback.
178	California bay	18	No*	2	Low	Leans N.E.; epicormic sprouting; codominant stems at 9'; dieback.
179	Blue oak	25	Yes	3	Moderate	Codominant stems at 7'; dieback; under power lines.
180	Valley oak	19	No*	2	Low	At massive bay stump; leans W.; decayed trunk; stems; sparse.
181	Valley oak	15,9	No*	2	Low	At another massive bay stump; codominant stems at 3'; sparse separated crown.
182	Coast live oak	12,12,9,7	Yes	3	High	Multiple attachments at 3'; wide low-branching crown.
183	California bay	16	Yes	3	Moderate	Codominant stems at 5'; raised vigorous crown.
184	Coast live oak	11	Yes	3	Moderate	Multiple attachments at 3'; slightly crowded by #185.
185	Coast live oak	13	Yes	3	Moderate	Codominant stems at 7'; crowded by #184 and 186.
186	Coast live oak	8,7	Yes	3	Moderate	Codominant stems at 2'; high crown; crowded by last.
187	Coast live oak	22	Yes	3	Moderate	Trunk wound W. and hollow w/ decay; multiple attachments at 6'; some dieback.
188	Coast live oak	8	Yes	4	High	Multiple attachments at 5'; vigorous dense crown.
189	California buckeye	14,9	No*	2	Low	2 stems 2' apart; extensive stem decay; leans S.
190	California bay	12,10	No*	2	Low	2 stems 2' apart; leans S.; dieback; crowded.
191	California bay	7	No	2	Low	Leans S.; dieback.
192	California bay	13	No*	2	Low	Leans S.W.; dieback.

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Tree No.	Species	Trunk Diameter (in.)	Protected Tree? (*poor condition)	Condition 0=dead 5=excellent	Suitability for Preservation	Comments
193	California bay	13,12,11,9,8	No*	1	Low	Multiple attachments arise from base; half dead.
194	Coast live oak	15	Yes	3	Moderate	Leans N.; codominant stems at 4' w/ narrow attachment; some dieback.
195	Coast live oak	7,6,5	Yes	4	High	Multiple attachments at 3'; slightly crowded; good young tree.
196	Coast live oak	10	Yes	3	Moderate	Codominant stems at 5'; slight lean W.
197	Coast live oak	7	Yes	3	Moderate	Codominant stems at 4'; vigorous; crowded.
198	Coast live oak	15	Yes	3	Moderate	Codominant stems at 4'; crowded.
199	Coast live oak	8	Yes	3	Moderate	Sinuus trunk; multiple attachments at 5'; crowded.
200	Coast live oak	11	Yes	3	Moderate	Sinuus trunk; multiple attachments at 6'; crowded.
201	Coast live oak	5	No	3	Moderate	Trunk wound E.; sinuous form. crowded.
202	Coast live oak	6	No*	2	Low	Sinuus form; fused trunks; sparse; crowded.
203	Coast live oak	9,6	Yes	3	Moderate	Codominant stems at 3' w/ seam; vigorous; crowded.
204	Valley oak	22	No*	2	Low	Multiple attachments at 8'; wide crown w/ extensive dieback and epicormic sprouting; crowded.
205	Valley oak	20,19,17	Yes	3	Moderate	Leans S.E.; multiple attachments at 3'; dieback; crowded.
206	Coast live oak	11,8	Yes	3	Moderate	Codominant stems at 4'; sparse.
207	Coast live oak	15	Yes	4	High	Multiple attachments at 4'; raised crown; vigorous.
208	California buckeye	12,10,7,6,5,4,4,4	No*	2	Low	Stump sprouts from decayed base; wide spreading crown.
209	California buckeye	11,10,5,5	No*	2	Low	Enlarged base; multiple attachments arise from base; stem decay; spreading crown.
210	California buckeye	19,12,12,11	No*	2	Low	Massive hollowed decay base; wide spreading crown.
211	California buckeye	13,13,12,9	No*	2	Low	Multiple attachments arise from base; wide crown.

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Tree No.	Species	Trunk Diameter (in.)	Protected Tree? (*poor condition)	Condition 0=dead 5=excellent	Suitability for Preservation	Comments
212	California buckeye	8	No	1	Low	Failing E. down slope; dead failed tree to S.
213	California buckeye	9	No	1	Low	Failing E. down slope; extensive basal decay; sinuous form.
214	Elderberry	15,10	No*	1	Low	Failing E. down slope; extensive dieback.
215	California buckeye	18,4,3	No*	2	Low	Multiple attachments arise from large base; suppressed by oak.
216	Coast live oak	20,15	Yes	3	Moderate	Codominant stems arise from large base; dieback; wide crown.
217	California buckeye	7,4	No	2	Low	Codominant stems arise from base; suppressed; crowded.
218	California buckeye	9,6	No	2	Low	Codominant stems arise from base; crowded.
219	California bay	14,12,12	Yes	3	Moderate	Enlarged base; multiple attachments at base; wide spreading crown.
220	California bay	14	No*	2	Low	Sinuous trunk; extremely suppressed.
221	California buckeye	18	No*	1	Low	Leans S.E. down slope; extremely suppressed.
222	Coast live oak	44	Yes	4	High	Multiple attachments at 3'; large spreading crown.
223	California buckeye	8	No	2	Low	Enlarged base; leans E. down slope; dieback.
224	California bay	17	Yes	3	Low	Removed stem S.; crown weighted S.; some dieback.
225	California bay	19,17,7,5	No*	2	Low	Multiple attachments at base; leans S; suppressed.
226	California bay	17,12	No*	2	Low	Codominant stems at base; vase form; crowded.
227	California bay	12	No*	2	Low	Leans S.; crowded.
228	California bay	16	No*	2	Low	Leans S.; crowded.
229	California bay	19	No*	1	Low	Leans S.W.; dying from top down.
230	California bay	15,15,14,10	No*	1	Low	Dead stems N.; leans S.
231	Valley oak	50	Yes	3	Moderate	Multiple attachments at ~8 and 12'; wide spreading crown w/ dieback.

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Tree No.	Species	Trunk Diameter (in.)	Protected Tree? (*poor condition)	Condition 0=dead 5=excellent	Suitability for Preservation	Comments
232	Coast live oak	34	Yes	4	High	Mechanical wound E.; buried root crown; codominant stems at 10'; slight lean W.; wide spreading crown.
233	California bay	6	No	3	Moderate	Leans E.; slight; some dieback.
234	California bay	22,20,12	Yes	3	Low	Removed stems S.; multiple attachments at 3'; leans S.E ; dieback; crowded.
235	California bay	6	No	2	Low	Leans N.W.; sparse.
236	California bay	26	Yes	3	Moderate	Codominant stems at 6'; tall narrow crown.
237	California bay	27,24	No*	2	Low	Codominant stems at 3'; basal decay; crowded.
238	California bay	10,6,5	No*	2	Low	3 stems arise from base; sparse; crowded.
239	California bay	13,10	No*	2	Low	Leans E. down slope; crowded.
240	California bay	7	No	2	Low	Leans E. down slope; crowded.
241	California bay	11,6	No*	2	Low	Leans E. down slope; crowded.
242	California bay	11,5	No*	2	Low	Leans E. down slope; dieback; crowded.
243	California bay	8	No	2	Low	Leans E. down slope; dieback; crowded.
244	California bay	18	No*	2	Low	Leans W.; topped; vigorous.
245	California buckeye	9,9	No	2	Low	Codominant stems arise from base; leans N.E.
246	Coast live oak	25,20,19	No*	2	Low	Leans S.; basal decay; sparse.
247	California buckeye	13,12	No*	2	Low	Codominant stems arise from base; removed stem N.; rangy form.
248	California buckeye	13,6	No*	2	Low	Codominant stems arise from base; correcting lean E.
249	California buckeye	7	No	1	Low	Strong lean N.E.; suppressed.
250	California buckeye	15,10,5	No*	2	Low	Multiple attachments at base; corrected lean E.; some stem decay.
251	California bay	27,20	Yes	3	Moderate	Codominant stems at 3'; corrected lean S.E.; vigorous.
252	California bay	20,20,18,16,16,11	Yes	3	Moderate	Multiple attachments at 3'; some stem decay.

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253	California bay	19,18	Yes	3	Moderate	Codominant stems at 3'; extensive dieback.
254	California bay	6	No	4	High	Slightly sinuous trunk; good form and structure.
255	California bay	7,6,6,5,5,4,3	No	3	Moderate	Group of stems; vigorous.
256	California bay	18,15,9	No*	2	Low	Multiple attachments arise from base; stem decay; dieback.
257	California bay	18,18,15,9	Yes	3	Low	Multiple attachments at base and 3'; vase form; crowded.
258	Coast live oak	20,7	Yes	3	Moderate	Codominant stems at base; sinuous main trunk; vigorous.
259	California bay	8	No	3	Low	Enlarged base; sinuous trunk; crowded.
260	Coast live oak	12,9	No*	2	Low	Codominant stems at base; entwined around bay; leans N.E.; suppressed.
261	California bay	7	No	2	Low	Vigorous; extremely crowded.
262	California bay	16	No*	1	Low	Basal decay; codominant stems at 7'; sparse.
263	California bay	11,10	Yes	3	Low	Removed stems S.; codominant stems at 4'; slightly sparse.
264	California buckeye	6,4,4	No	3	Moderate	Multiple attachments at enlarged base; vase form.
265	California buckeye	8,5,5	No	3	Moderate	Multiple attachments at enlarged base; vase form; crowded by #264.
266	California buckeye	6,5,4,4,3,3	No	3	Moderate	Multiple attachments at enlarged base; spreading vase form; crowded.
267	California buckeye	5,4,3,2	No	2	Low	Multiple attachments at enlarged base; extremely suppressed.
268	California bay	9,9,8,8,7,6,5,4,4	No	3	Low	Multiple attachments at massive base; wide spreading crown.

Tree Assessment Map

1501 Lucas Valley Road
San Rafael, CA

Prepared for:
Lucas Valley Road, LLC
Saline, MI

November 2023



No Scale

Notes:

Base map provided by:
CSW | ST2
Novato, CA

Numbered tree locations are approximate.



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