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**THE NEIGHBORHOOD AT LOS GAMOS
DEVELOPMENT PROJECT
ARBORIST REPORT**

**SAN RAFAEL, CALIFORNIA
PROJECT # 20211976.001A**

November 2020

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**THE NEIGHBORHOOD AT LOS GAMOS
DEVELOPMENT PROJECT
ARBORIST REPORT**

SAN RAFAEL, CA

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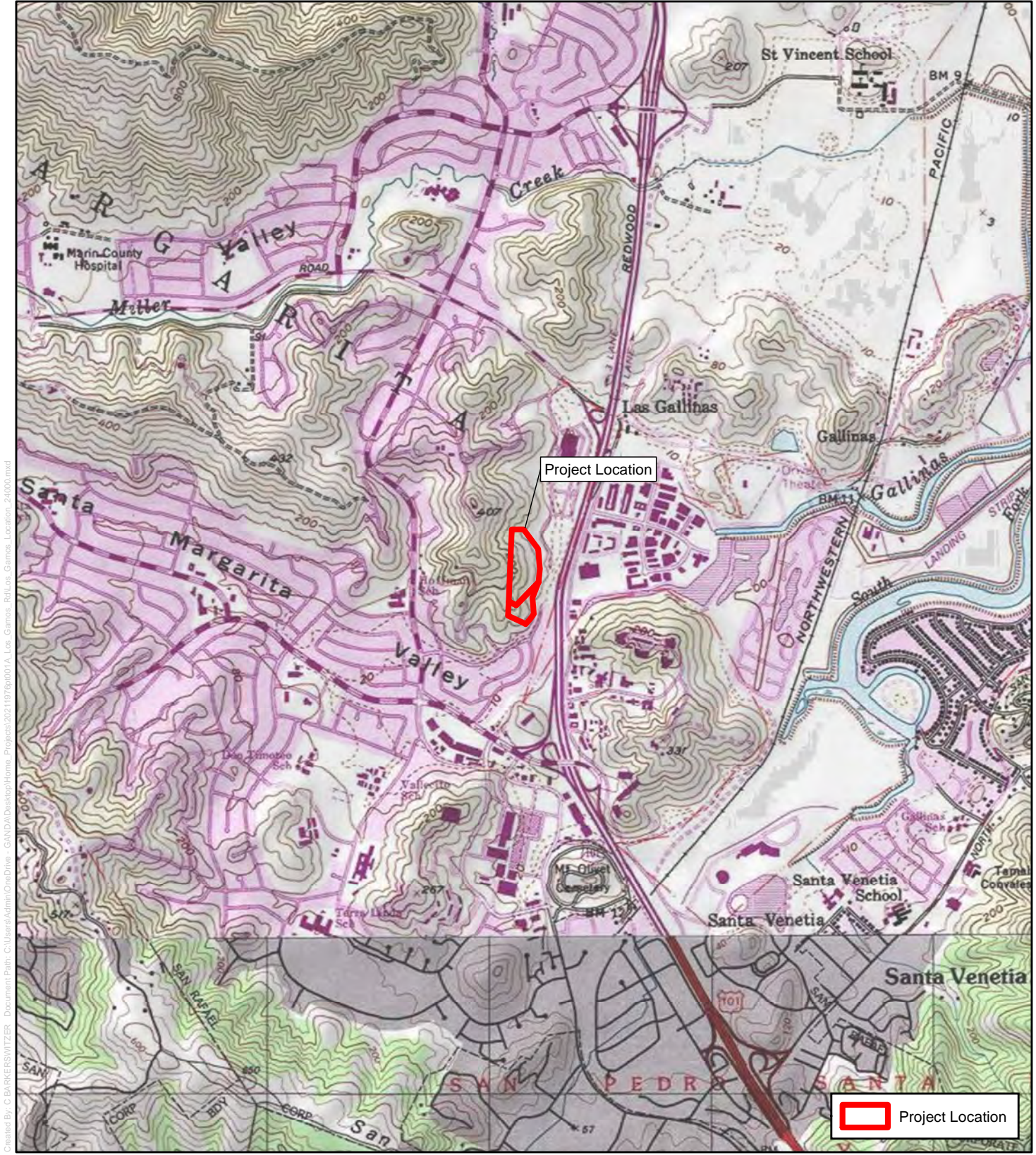
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1 INTRODUCTION

Kleinfelder/Garcia and Associates (GANDA) conducted a tree survey and prepared this arborist report for the proposed Neighborhood at Los Gamos Development project. The proposed project entails the construction of approximately 192 apartments on two undeveloped parcels near the intersection of Los Gamos Road and Oleander Drive in the City of San Rafael, California (Figure 1). The apartments are intended to be affordable for workers in the local area, and include a community center with a publicly accessible marketplace, and a community room for use by residents of the apartment complex. An adjacent outdoor recreation area is also included in the development.

This purpose of this report is to present the results of a tree survey conducted within the approximately 11.52-acre Project Location that includes assessor's parcels numbered 165-220-06 (2.48-acres) and 165-220-07 (8.8-acres). The Project Location encompasses the approximately 1.2-acre footprint of the proposed project along the western side of Los Gamos Road. This report includes details about the location, size (measured as diameter-at-breast height [diameter at 4.5 above grade] [DBH]), species identification, and health of each tree documented within the Project Location.



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USGS 7.5' Quad: NOVATO (1980)
 Legal Description: SAN PEDRO SANTA MARGARITA
 Y LAS GALLINAS Land Grant

0 1,000 2,000 Feet
 0 300 600 Meters

N
 Scale 1:24,000
 1 Inch = 2,000 Feet

Figure 1. Project Location Map
 Los Gamos Road Site Surveys
 Marin County, California

2 METHODS

The survey was conducted on September 15, 2020 by Kleinfelder/GANDA botanists Shane Hanofee and Steven Serkanic. All trees within the Project Location were mapped using GPS-capable Apple iPad Minis equipped with 1-meter-accurate GPS receivers running ESRI *Collector for ArcGIS* version 18.0.2 software. Tree identification was based on taxonomically informative characters useful for species level identification among dominant tree species represented in the California flora (JFP 2020). Each tree was assigned a qualitative health rating (e.g., poor, fair, good) based on overall vigor, structural integrity, signs of herbivory or disease, and dead or dying tissue. The location of each tree was categorized as being within the project footprint, within 12-foot firebreak, or within the parcel and outside the firebreak. The size of each tree was measured using diameter tape and recorded as the DBH. Photographs were taken throughout the Project Location, sufficient in number and direction in order to capture the extent of each section of the site. Areas with extensive poison oak (*Toxicodendron diversilobum*) occurring on the ground or on tree trunks were avoided, and tree size was estimated in these cases. All tree evaluations were basic, and advanced assessment techniques were not used during the survey. Tree removal information for the proposed development was provided by Michael Tarnoff, Project Engineer (Michael Tarnoff, personal communication, November 16, 2020).

Tree health ratings followed the general guidelines below:

- Good:** Trees showing vigor, no major dieback or discoloration of foliage, and no signs of insects, disease, decay, or significant structural defects.
- Fair:** Trees with 10 to 30 percent foliar dieback, poor foliage coloration, dead wood, or showing some signs of disease and decay and minor structural defects.
- Poor:** Trees with more than 30 percent foliar dieback, dead wood, severe decay or insect activity or structural problems.

3 RESULTS

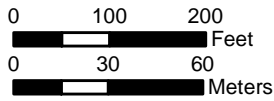
A total of 285 trees were mapped inside the Project Location (Figure 2). The project footprint intersects 55 trees that are targeted for removal. An additional 10 trees are located within the 12-foot firebreak surrounding the apartment project footprint, which may be trimmed or encroached upon to reduce fuels in this area (Table 3-1).

Trees were mapped among several plant communities across three aquatic drainages (Figure 3). Observed communities include California bay forest and woodland, coyote brush scrub, mixed oak forest and woodland, and wild oats and annual brome grassland (CNPS 2020 – Figure 3). The Project Location is an east facing slope with moderate steepness and is currently undeveloped. A total of eight species were mapped, including Australian blackwood (*Acacia melanoxylon*), buckeye (*Aesculus californica*), California bay laurel (*Umbellularia californica*), California black oak (*Quercus kelloggii*), coast live oak (*Q. agrifolia*), valley oak (*Q. lobata*) and stone pine (*Pinus pinea*). One large diameter toyon (*Heteromeles arbutifolia*) was observed, which is a species that most often assumes a shrub-like size and stature.

The median tree size recorded within the Project Location was 20 inches DBH. The largest tree was a multi-stemmed coast live oak measuring 120 inches DBH. Of the 285 trees mapped within the Project Location, 38 trees had a DBH of 10 inches or smaller, and 34 trees were at least 40 inches DBH or greater in size. The remaining 213 trees ranged in size between 11 and 39 inches DBH.

The most abundant species within the Project Location were coast live oak (121 trees), valley oak (74 trees), and California black oak (61 trees). There were fewer California bay laurels (21 trees), and a small number of buckeyes scattered across the Project Location. Non-native stone pine and Australian blackwood trees were scattered in annual grassland habitat or planted near the existing office structure located to the east of the Project Location boundary.

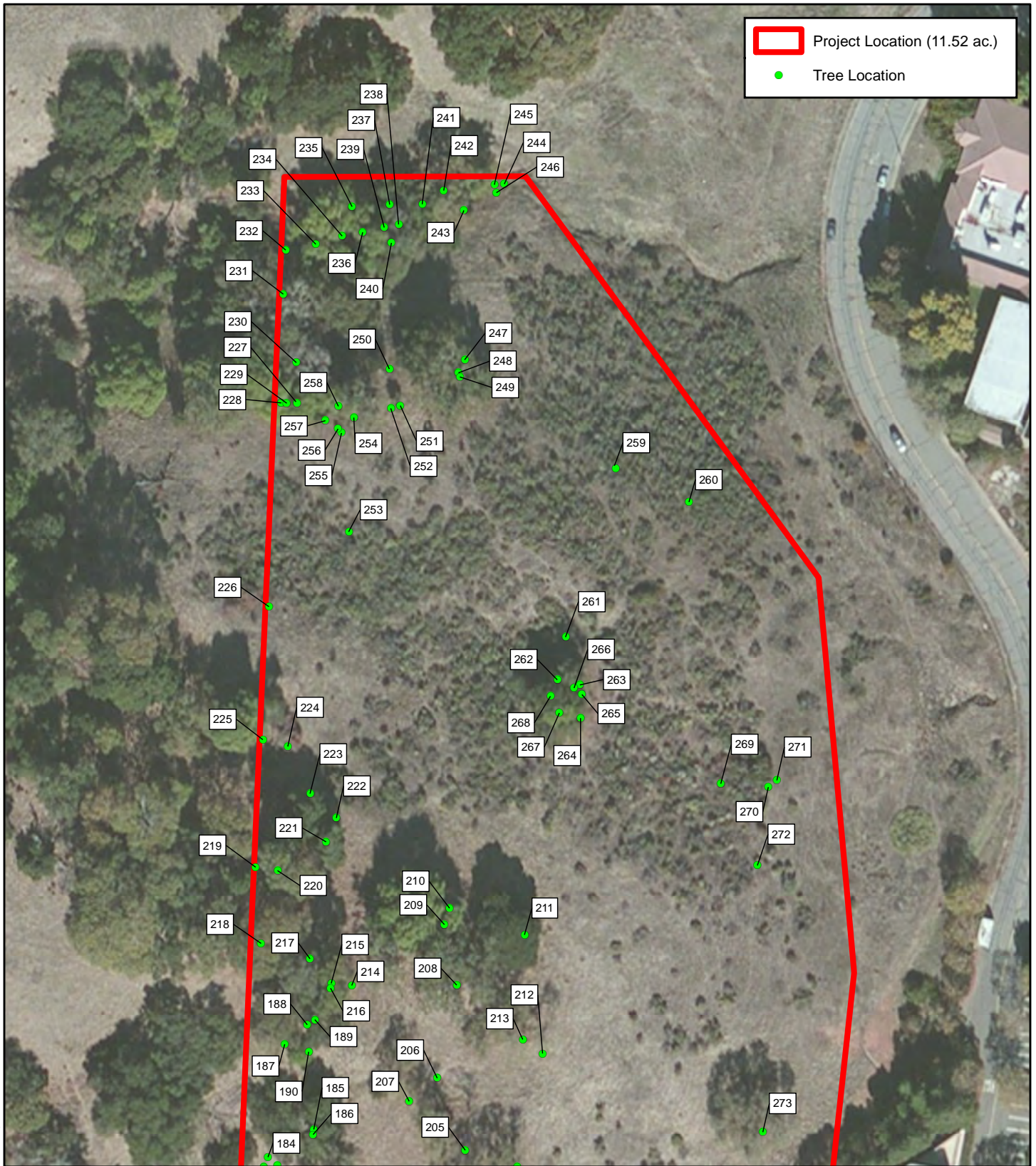
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N
Scale 1:2,400
1 Inch = 200 Feet

Figure 2. Tree Location Map Overview
Los Gamos Road Site Surveys
Marin County, California





 Project Location (11.52 ac.)

 Tree Location

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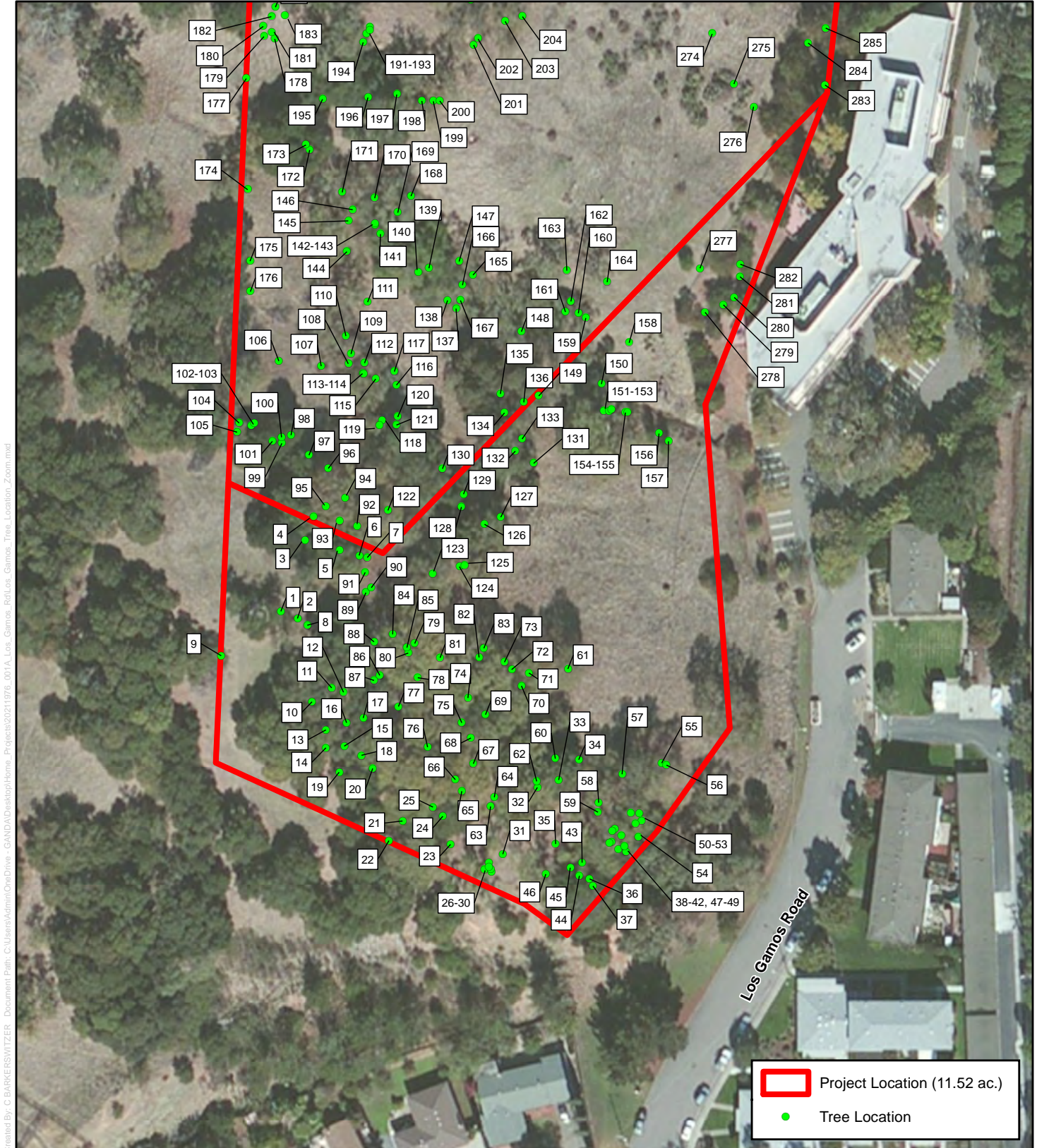


N


Scale 1:1,200
1 Inch = 100 Feet


Figure 2a. Tree Location Map
Los Gamos Road Site Surveys
Marin County, California

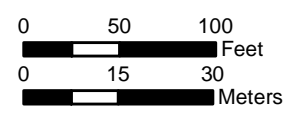




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 Project Location (11.52 ac.)

 Tree Location



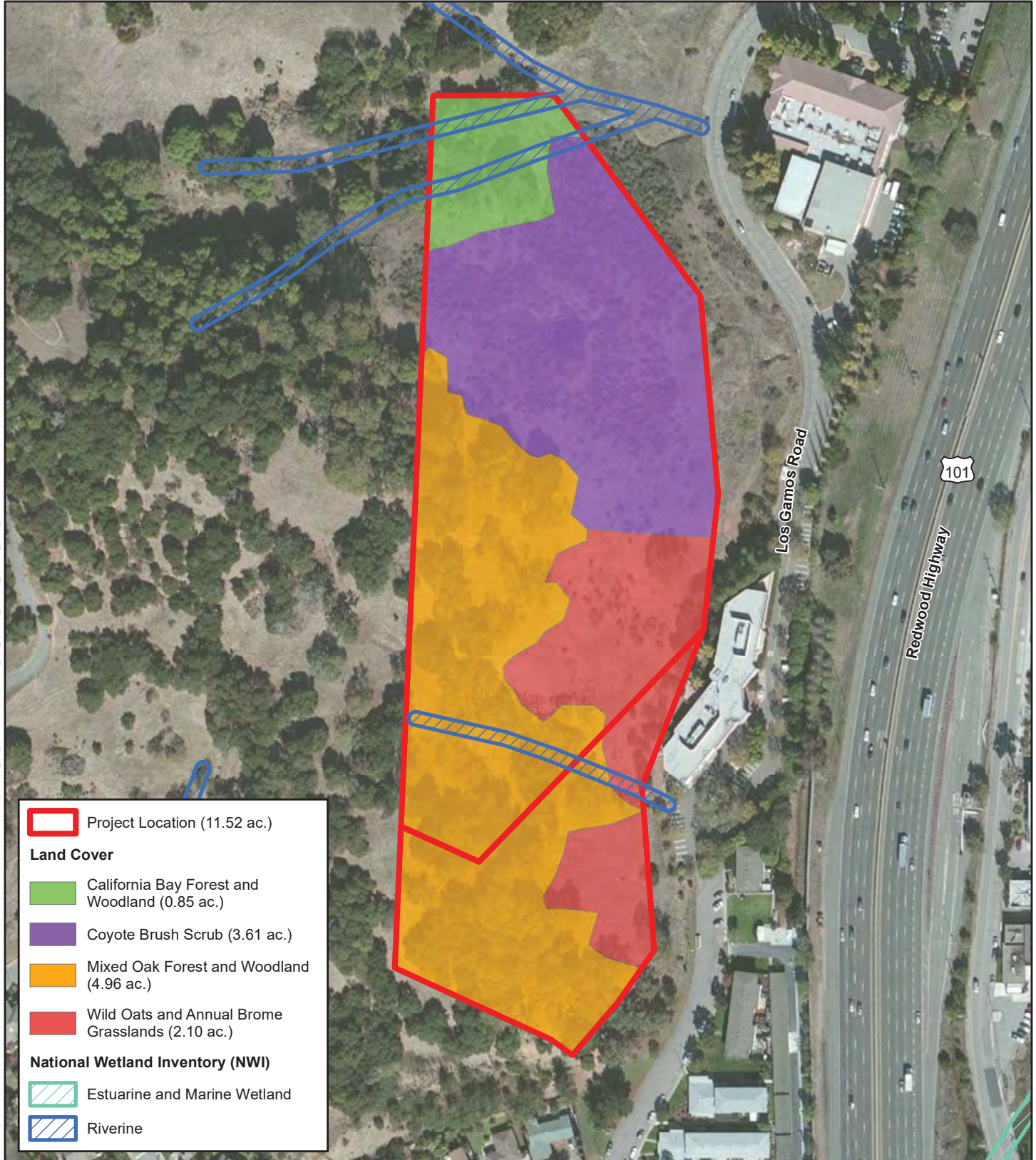
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Scale 1:1,200
1 Inch = 100 Feet

Figure 2b. Tree Location Map
Los Gamos Road Site Surveys
Marin County, California



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Project Location (11.52 ac.)

Land Cover

- California Bay Forest and Woodland (0.85 ac.)
- Coyote Brush Scrub (3.61 ac.)
- Mixed Oak Forest and Woodland (4.96 ac.)
- Wild Oats and Annual Brome Grasslands (2.10 ac.)

National Wetland Inventory (NWI)

- Estuarine and Marine Wetland
- Riverine



Source: USFW National Wetland Inventory (May 2020)

0 100 200 Feet
0 30 60 Meters

N

Scale 1:2,400
1 Inch = 200 Feet

Figure 3. Land Cover
Los Gamos Road Site Surveys
Marin County, California

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**Table 3-1
TREES WITHIN THE PROPOSED PROJECT AREA**

TREE NUMBER	SCIENTIFIC NAME ¹	COMMON NAME	DIAMETER (DBH inches)	HEALTH ²	LOCATION ³	STATUS
1	<i>Quercus agrifolia</i>	Coast live oak	36	Fair	Parcel	Keep
2	<i>Quercus agrifolia</i>	Coast live oak	39	Fair	Parcel	Keep
3	<i>Quercus agrifolia</i>	Coast live oak	67	Good	Parcel	Keep
4	<i>Quercus agrifolia</i>	Coast live oak	45	Good	Parcel	Keep
5	<i>Quercus agrifolia</i>	Coast live oak	22	Good	Parcel	Keep
6	<i>Quercus kelloggii</i>	California black oak	11	Good	Parcel	Keep
7	<i>Quercus kelloggii</i>	California black oak	24	Good	Parcel	Keep
8	<i>Quercus lobata</i>	Valley oak	17	Fair	Parcel	Keep
9	<i>Quercus agrifolia</i>	Coast live oak	63	Fair	Parcel	Keep
10	<i>Quercus agrifolia</i>	Coast live oak	8	Fair	Parcel	Keep
11	<i>Quercus agrifolia</i>	Coast live oak	11	Fair	Parcel	Keep
12	<i>Quercus agrifolia</i>	Coast live oak	65	Good	Parcel	Keep
13	<i>Quercus agrifolia</i>	Coast live oak	91	Good	Parcel	Keep
14	<i>Quercus kelloggii</i>	California black oak	45	Fair	Parcel	Keep
15	<i>Quercus agrifolia</i>	Coast live oak	57	Good	Parcel	Keep
16	<i>Quercus agrifolia</i>	Coast live oak	55	Fair	Parcel	Keep
17	<i>Quercus agrifolia</i>	Coast live oak	17	Good	Footprint	Keep
18	<i>Quercus agrifolia</i>	Coast live oak	6	Poor	Parcel	Keep
19	<i>Quercus agrifolia</i>	Coast live oak	31	Fair	Parcel	Keep
20	<i>Quercus agrifolia</i>	Coast live oak	49	Good	Parcel	Keep
21	<i>Quercus agrifolia</i>	Coast live oak	34	Fair	Parcel	Keep
22	<i>Quercus agrifolia</i>	Coast live oak	29	Fair	Parcel	Keep
23	<i>Quercus kelloggii</i>	California black oak	13	Poor	Parcel	Keep
24	<i>Quercus agrifolia</i>	Coast live oak	29	Fair	Parcel	Keep
25	<i>Quercus kelloggii</i>	California black oak	24	Fair	Parcel	Keep
26	<i>Quercus kelloggii</i>	California black oak	12	Fair	Parcel	Keep
27	<i>Quercus kelloggii</i>	California black oak	12	Fair	Parcel	Keep
28	<i>Quercus kelloggii</i>	California black oak	22	Good	Parcel	Keep
29	<i>Quercus kelloggii</i>	California black oak	18	Fair	Parcel	Keep
30	<i>Quercus kelloggii</i>	California black oak	12	Good	Parcel	Keep
31	<i>Quercus lobata</i>	Valley oak	21	Fair	Parcel	Keep
32	<i>Quercus kelloggii</i>	California black oak	29	Good	Parcel	Keep
33	<i>Quercus agrifolia</i>	Coast live oak	24	Good	Parcel	Keep
34	<i>Quercus agrifolia</i>	Coast live oak	39	Good	Parcel	Keep
35	<i>Quercus lobata</i>	Valley oak	13	Good	Parcel	Keep
36	<i>Quercus agrifolia</i>	Coast live oak	40	Good	Parcel	Keep
37	<i>Quercus lobata</i>	Valley oak	12	Fair	Parcel	Keep
38	<i>Quercus kelloggii</i>	California black oak	12	Fair	Parcel	Keep
39	<i>Quercus kelloggii</i>	California black oak	14	Good	Parcel	Keep

TREE NUMBER	SCIENTIFIC NAME ¹	COMMON NAME	DIAMETER (DBH inches)	HEALTH ²	LOCATION ³	STATUS
40	<i>Quercus kelloggii</i>	California black oak	14	Fair	Parcel	Keep
41	<i>Quercus lobata</i>	Valley oak	11	Fair	Parcel	Keep
42	<i>Quercus lobata</i>	Valley oak	13	Good	Parcel	Keep
43	<i>Quercus lobata</i>	Valley oak	10	Fair	Parcel	Keep
44	<i>Quercus kelloggii</i>	California black oak	10	Fair	Parcel	Keep
45	<i>Quercus lobata</i>	Valley oak	13	Poor	Parcel	Keep
46	<i>Quercus lobata</i>	Valley oak	11	Fair	Parcel	Keep
47	<i>Quercus lobata</i>	Valley oak	13	Good	Parcel	Keep
48	<i>Quercus kelloggii</i>	California black oak	10	Fair	Parcel	Keep
49	<i>Quercus agrifolia</i>	Coast live oak	19	Good	Parcel	Keep
50	<i>Quercus lobata</i>	Valley oak	22	Good	Parcel	Keep
51	<i>Quercus lobata</i>	Valley oak	11	Good	Parcel	Keep
52	<i>Quercus kelloggii</i>	California black oak	15	Good	Parcel	Keep
53	<i>Quercus kelloggii</i>	California black oak	8	Fair	Parcel	Keep
54	<i>Quercus agrifolia</i>	Coast live oak	20	Good	Parcel	Keep
55	<i>Quercus kelloggii</i>	California black oak	23	Fair	Parcel	Keep
56	<i>Quercus kelloggii</i>	California black oak	27	Fair	Parcel	Keep
57	<i>Quercus lobata</i>	Valley oak	16	Fair	Parcel	Keep
58	<i>Quercus lobata</i>	Valley oak	12	Poor	Parcel	Keep
59	<i>Quercus lobata</i>	Valley oak	12	Fair	Parcel	Keep
60	<i>Quercus kelloggii</i>	California black oak	30	Fair	Parcel	Keep
61	<i>Quercus kelloggii</i>	California black oak	20	Good	Parcel	Keep
62	<i>Quercus agrifolia</i>	Coast live oak	20	Good	Parcel	Keep
63	<i>Quercus agrifolia</i>	Coast live oak	37	Good	Parcel	Keep
64	<i>Quercus kelloggii</i>	California black oak	24	Poor	Parcel	Keep
65	<i>Quercus kelloggii</i>	California black oak	25	Good	Parcel	Keep
66	<i>Quercus agrifolia</i>	Coast live oak	30	Good	Parcel	Keep
67	<i>Quercus kelloggii</i>	California black oak	23	Fair	Parcel	Keep
68	<i>Quercus kelloggii</i>	California black oak	25	Fair	Parcel	Keep
69	<i>Quercus agrifolia</i>	Coast live oak	20	Fair	Parcel	Keep
70	<i>Quercus kelloggii</i>	California black oak	20	Fair	Parcel	Keep
71	<i>Quercus kelloggii</i>	California black oak	23	Good	Parcel	Keep
72	<i>Quercus kelloggii</i>	California black oak	24	Good	Parcel	Keep
73	<i>Quercus kelloggii</i>	California black oak	14	Good	Parcel	Keep
74	<i>Quercus kelloggii</i>	California black oak	15	Good	Parcel	Keep
75	<i>Quercus kelloggii</i>	California black oak	31	Fair	Parcel	Keep
76	<i>Quercus kelloggii</i>	California black oak	53	Good	Parcel	Keep
77	<i>Quercus kelloggii</i>	California black oak	75	Good	Parcel	Keep
78	<i>Quercus kelloggii</i>	California black oak	40	Fair	Parcel	Keep
79	<i>Quercus agrifolia</i>	Coast live oak	8	Good	Footprint	Remove
80	<i>Quercus kelloggii</i>	California black oak	13	Fair	Footprint	Remove
81	<i>Quercus kelloggii</i>	California black oak	26	Good	Footprint	Remove

TREE NUMBER	SCIENTIFIC NAME ¹	COMMON NAME	DIAMETER (DBH inches)	HEALTH ²	LOCATION ³	STATUS
82	<i>Quercus kelloggii</i>	California black oak	21	Poor	Firebreak	Encroachment
83	<i>Quercus kelloggii</i>	California black oak	10	Fair	Firebreak	Encroachment
84	<i>Quercus kelloggii</i>	California black oak	27	Fair	Footprint	Remove
85	<i>Quercus agrifolia</i>	Coast live oak	8	Fair	Footprint	Remove
86	<i>Quercus kelloggii</i>	California black oak	9	Poor	Footprint	Remove
87	<i>Quercus agrifolia</i>	Coast live oak	32	Fair	Footprint	Remove
88	<i>Quercus agrifolia</i>	Coast live oak	39	Good	Footprint	Remove
89	<i>Quercus kelloggii</i>	California black oak	29	Fair	Parcel	Keep
90	<i>Quercus agrifolia</i>	Coast live oak	11	Good	Parcel	Keep
91	<i>Quercus agrifolia</i>	Coast live oak	17	Good	Parcel	Keep
92	<i>Quercus kelloggii</i>	California black oak	31	Fair	Parcel	Keep
93	<i>Quercus kelloggii</i>	California black oak	20	Fair	Parcel	Keep
94	<i>Quercus kelloggii</i>	California black oak	26	Fair	Parcel	Keep
95	<i>Quercus agrifolia</i>	Coast live oak	45	Good	Parcel	Keep
96	<i>Quercus agrifolia</i>	Coast live oak	54	Good	Parcel	Keep
97	<i>Quercus agrifolia</i>	Coast live oak	26	Fair	Parcel	Keep
98	<i>Quercus agrifolia</i>	Coast live oak	37	Good	Parcel	Keep
99	<i>Quercus agrifolia</i>	Coast live oak	12	Fair	Parcel	Keep
100	<i>Quercus agrifolia</i>	Coast live oak	21	Fair	Parcel	Keep
101	<i>Quercus agrifolia</i>	Coast live oak	21	Fair	Parcel	Keep
102	<i>Quercus agrifolia</i>	Coast live oak	21	Good	Parcel	Keep
103	<i>Quercus lobata</i>	Valley oak	17	Fair	Parcel	Keep
104	<i>Quercus agrifolia</i>	Coast live oak	27	Fair	Parcel	Keep
105	<i>Quercus agrifolia</i>	Coast live oak	12	Good	Parcel	Keep
106	<i>Quercus lobata</i>	Valley oak	23	Fair	Parcel	Keep
107	<i>Aesculus californica</i>	California buckeye	14	Good	Parcel	Keep
108	<i>Aesculus californica</i>	Buckeye	9	Fair	Parcel	Keep
109	<i>Aesculus californica</i>	Buckeye	41	Good	Parcel	Keep
110	<i>Quercus lobata</i>	Valley oak	18	Fair	Parcel	Keep
111	<i>Quercus lobata</i>	Valley oak	21	Fair	Parcel	Keep
112	<i>Aesculus californica</i>	Buckeye	14	Good	Parcel	Keep
113	<i>Quercus kelloggii</i>	California black oak	21	Good	Parcel	Keep
114	<i>Quercus kelloggii</i>	California black oak	14	Fair	Parcel	Keep
115	<i>Quercus kelloggii</i>	California black oak	14	Good	Parcel	Keep
116	<i>Quercus lobata</i>	Valley oak	12	Fair	Parcel	Keep
117	<i>Quercus lobata</i>	Valley oak	9	Fair	Parcel	Keep
118	<i>Quercus kelloggii</i>	California black oak	17	Fair	Parcel	Keep
119	<i>Quercus lobata</i>	Valley oak	9	Good	Parcel	Keep
120	<i>Quercus agrifolia</i>	Coast live oak	40	Good	Parcel	Keep
121	<i>Quercus kelloggii</i>	California black oak	22	Good	Parcel	Keep
122	<i>Quercus kelloggii</i>	California black oak	28	Good	Parcel	Keep
123	<i>Quercus kelloggii</i>	California black oak	36	Fair	Parcel	Keep

TREE NUMBER	SCIENTIFIC NAME ¹	COMMON NAME	DIAMETER (DBH inches)	HEALTH ²	LOCATION ³	STATUS
124	<i>Quercus kelloggii</i>	California black oak	34	Good	Parcel	Keep
125	<i>Quercus kelloggii</i>	California black oak	26	Good	Parcel	Keep
126	<i>Quercus agrifolia</i>	Coast live oak	16	Good	Parcel	Keep
127	<i>Quercus kelloggii</i>	California black oak	40	Good	Footprint	Keep
128	<i>Quercus lobata</i>	Valley oak	12	Good	Parcel	Keep
129	<i>Quercus agrifolia</i>	Coast live oak	36	Fair	Parcel	Keep
130	<i>Quercus agrifolia</i>	Coast live oak	38	Good	Parcel	Keep
131	<i>Quercus agrifolia</i>	Coast live oak	26	Good	Footprint	Remove
132	<i>Quercus agrifolia</i>	Coast live oak	39	Fair	Footprint	Remove
133	<i>Quercus lobata</i>	Valley oak	30	Good	Footprint	Remove
134	<i>Quercus agrifolia</i>	Coast live oak	17	Fair	Footprint	Remove
135	<i>Quercus agrifolia</i>	Coast live oak	37	Fair	Footprint	Remove
136	<i>Quercus kelloggii</i>	California black oak	29	Poor	Footprint	Remove
137	<i>Pinus pinea</i>	Stone pine	7	Good	Parcel	Keep
138	<i>Quercus agrifolia</i>	Coast live oak	24	Fair	Parcel	Keep
139	<i>Quercus lobata</i>	Valley oak	18	Good	Parcel	Keep
140	<i>Umbellularia californica</i>	California bay	72	Good	Parcel	Keep
141	<i>Quercus lobata</i>	Valley oak	15	Good	Parcel	Keep
142	<i>Quercus lobata</i>	Valley oak	11	Fair	Parcel	Keep
143	<i>Quercus kelloggii</i>	California black oak	21	Fair	Parcel	Keep
144	<i>Quercus lobata</i>	Valley oak	15	Good	Parcel	Keep
145	<i>Quercus lobata</i>	Valley oak	30	Fair	Parcel	Keep
146	<i>Quercus kelloggii</i>	California black oak	17	Fair	Parcel	Keep
147	<i>Quercus lobata</i>	Valley oak	18	Fair	Parcel	Keep
148	<i>Quercus lobata</i>	Valley oak	18	Fair	Parcel	Keep
149	<i>Quercus lobata</i>	Valley oak	23	Good	Footprint	Remove
150	<i>Quercus lobata</i>	Valley oak	21	Fair	Parcel	Keep
151	<i>Quercus lobata</i>	Valley oak	25	Good	Parcel	Keep
152	<i>Quercus lobata</i>	Valley oak	22	Fair	Parcel	Keep
153	<i>Quercus lobata</i>	Valley oak	36	Good	Parcel	Keep
154	<i>Quercus lobata</i>	Valley oak	12	Fair	Parcel	Keep
155	<i>Quercus lobata</i>	Valley oak	7	Fair	Parcel	Keep
156	<i>Pinus pinea</i>	Stone pine	10	Fair	Parcel	Keep
157	<i>Pinus pinea</i>	Stone pine	21	Fair	Parcel	Keep
158	<i>Pinus pinea</i>	Stone pine	6	Good	Parcel	Keep
159	<i>Quercus lobata</i>	Valley oak	17	Good	Parcel	Keep
160	<i>Quercus lobata</i>	Valley oak	17	Fair	Parcel	Keep
161	<i>Quercus agrifolia</i>	Coast live oak	28	Good	Parcel	Keep
162	<i>Quercus lobata</i>	Valley oak	14	Fair	Parcel	Keep
163	<i>Quercus lobata</i>	Valley oak	19	Good	Footprint	Remove
164	<i>Quercus lobata</i>	Valley oak	24	Fair	Footprint	Remove
165	<i>Quercus lobata</i>	Valley oak	14	Fair	Parcel	Keep

TREE NUMBER	SCIENTIFIC NAME ¹	COMMON NAME	DIAMETER (DBH inches)	HEALTH ²	LOCATION ³	STATUS
166	<i>Quercus lobata</i>	Valley oak	15	Good	Parcel	Keep
167	<i>Quercus lobata</i>	Valley oak	16	Good	Parcel	Keep
168	<i>Quercus lobata</i>	Valley oak	37	Good	Footprint	Remove
169	<i>Quercus lobata</i>	Valley oak	16	Good	Parcel	Keep
170	<i>Quercus lobata</i>	Valley oak	19	Good	Parcel	Keep
171	<i>Quercus lobata</i>	Valley oak	16	Good	Parcel	Keep
172	<i>Quercus agrifolia</i>	Coast live oak	40	Fair	Parcel	Keep
173	<i>Quercus kelloggii</i>	California black oak	24	Fair	Parcel	Keep
174	<i>Quercus lobata</i>	Valley oak	23	Fair	Parcel	Keep
175	<i>Quercus agrifolia</i>	Coast live oak	39	Good	Parcel	Keep
176	<i>Quercus agrifolia</i>	Coast live oak	44	Fair	Parcel	Keep
177	<i>Quercus agrifolia</i>	Coast live oak	9	Good	Parcel	Keep
178	<i>Quercus agrifolia</i>	Coast live oak	11	Good	Parcel	Keep
179	<i>Quercus agrifolia</i>	Coast live oak	8	Good	Parcel	Keep
180	<i>Quercus agrifolia</i>	Coast live oak	16	Good	Parcel	Keep
181	<i>Quercus agrifolia</i>	Coast live oak	10	Good	Parcel	Keep
182	<i>Quercus agrifolia</i>	Coast live oak	7	Fair	Parcel	Keep
183	<i>Quercus agrifolia</i>	Coast live oak	11	Good	Parcel	Keep
184	<i>Quercus agrifolia</i>	Coast live oak	9	Good	Parcel	Keep
185	<i>Quercus agrifolia</i>	Coast live oak	60	Fair	Parcel	Keep
186	<i>Heteromeles arbutifolia</i>	Toyon	20	Good	Parcel	Keep
187	<i>Quercus lobata</i>	Valley oak	16	Fair	Parcel	Keep
188	<i>Quercus lobata</i>	Valley oak	47	Good	Parcel	Keep
189	<i>Quercus agrifolia</i>	Coast live oak	36	Good	Parcel	Keep
190	<i>Umbellularia californica</i>	California bay	24	Good	Parcel	Keep
191	<i>Quercus lobata</i>	Valley oak	20	Good	Parcel	Keep
192	<i>Quercus lobata</i>	Valley oak	25	Good	Parcel	Keep
193	<i>Umbellularia californica</i>	California bay	12	Fair	Parcel	Keep
194	<i>Quercus agrifolia</i>	Coast live oak	81	Good	Parcel	Keep
195	<i>Quercus agrifolia</i>	Coast live oak	8	Good	Parcel	Keep
196	<i>Quercus agrifolia</i>	Coast live oak	92	Good	Parcel	Keep
197	<i>Quercus lobata</i>	Valley oak	19	Good	Parcel	Keep
198	<i>Quercus lobata</i>	Valley oak	19	Fair	Firebreak	Remove
199	<i>Quercus lobata</i>	Valley oak	16	Fair	Firebreak	Remove
200	<i>Quercus lobata</i>	Valley oak	25	Good	Footprint	Remove
201	<i>Quercus lobata</i>	Valley oak	16	Good	Footprint	Remove
202	<i>Quercus lobata</i>	Valley oak	23	Good	Footprint	Remove
203	<i>Quercus lobata</i>	Valley oak	20	Good	Footprint	Remove
204	<i>Quercus lobata</i>	Valley oak	20	Good	Footprint	Remove
205	<i>Quercus lobata</i>	Valley oak	30	Good	Footprint	Remove
206	<i>Quercus agrifolia</i>	Coast live oak	30	Good	Parcel	Keep

TREE NUMBER	SCIENTIFIC NAME ¹	COMMON NAME	DIAMETER (DBH inches)	HEALTH ²	LOCATION ³	STATUS
207	<i>Quercus agrifolia</i>	Coast live oak	24	Good	Parcel	Keep
208	<i>Quercus lobata</i>	Valley oak	111	Fair	Firebreak	Encroachment
209	<i>Umbellularia californica</i>	California bay	46	Good	Firebreak	Encroachment
210	<i>Quercus agrifolia</i>	Coast live oak	12	Fair	Firebreak	Encroachment
211	<i>Quercus agrifolia</i>	Coast live oak	120	Good	Footprint	Remove
212	<i>Quercus lobata</i>	Valley oak	26	Good	Footprint	Remove
213	<i>Quercus lobata</i>	Valley oak	27	Good	Footprint	Remove
214	<i>Quercus lobata</i>	Valley oak	13	Fair	Parcel	Keep
215	<i>Quercus kelloggii</i>	California black oak	30	Good	Parcel	Keep
216	<i>Quercus lobata</i>	Valley oak	35	Good	Parcel	Keep
217	<i>Quercus agrifolia</i>	Coast live oak	16	Fair	Parcel	Keep
218	<i>Quercus agrifolia</i>	Coast live oak	29	Fair	Parcel	Keep
219	<i>Quercus kelloggii</i>	California black oak	28	Good	Parcel	Keep
220	<i>Quercus agrifolia</i>	Coast live oak	27	Fair	Parcel	Keep
221	<i>Quercus agrifolia</i>	Coast live oak	38	Fair	Parcel	Keep
222	<i>Quercus agrifolia</i>	Coast live oak	16	Fair	Parcel	Keep
223	<i>Quercus agrifolia</i>	Coast live oak	11	Fair	Parcel	Keep
224	<i>Quercus agrifolia</i>	Coast live oak	36	Fair	Parcel	Keep
225	<i>Umbellularia</i>	California bay	26	Good	Parcel	Keep
226	<i>Quercus agrifolia</i>	Coast live oak	6	Poor	Parcel	Keep
227	<i>Umbellularia californica</i>	California bay	14	Good	Parcel	Keep
228	<i>Umbellularia californica</i>	California bay	24	Good	Parcel	Keep
229	<i>Umbellularia californica</i>	California bay	18	Fair	Parcel	Keep
230	<i>Quercus lobata</i>	Valley oak	24	Fair	Parcel	Keep
231	<i>Quercus lobata</i>	Valley oak	24	Fair	Parcel	Keep
232	<i>Umbellularia californica</i>	California bay	21	Fair	Parcel	Keep
233	<i>Umbellularia californica</i>	California bay	75	Good	Parcel	Keep
234	<i>Umbellularia californica</i>	California bay	55	Fair	Parcel	Keep
235	<i>Umbellularia californica</i>	California bay	36	Fair	Parcel	Keep
236	<i>Umbellularia californica</i>	California bay	20	Fair	Parcel	Keep
237	<i>Umbellularia californica</i>	California bay	70	Good	Parcel	Keep
238	<i>Umbellularia californica</i>	California bay	30	Fair	Parcel	Keep
239	<i>Umbellularia californica</i>	California bay	7	Fair	Parcel	Keep
240	<i>Quercus lobata</i>	Valley oak	16	Fair	Parcel	Keep
241	<i>Umbellularia californica</i>	California bay	57	Good	Parcel	Keep

TREE NUMBER	SCIENTIFIC NAME ¹	COMMON NAME	DIAMETER (DBH inches)	HEALTH ²	LOCATION ³	STATUS
242	<i>Quercus agrifolia</i>	Coast live oak	7	Fair	Parcel	Keep
243	<i>Quercus agrifolia</i>	Coast live oak	36	Good	Parcel	Keep
244	<i>Quercus lobata</i>	Valley oak	26	Fair	Parcel	Keep
245	<i>Umbellularia californica</i>	California bay	12	Fair	Parcel	Keep
246	<i>Quercus agrifolia</i>	Coast live oak	12	Fair	Parcel	Keep
247	<i>Quercus agrifolia</i>	Coast live oak	32	Good	Footprint	Remove
248	<i>Quercus agrifolia</i>	Coast live oak	38	Fair	Footprint	Remove
249	<i>Quercus agrifolia</i>	Coast live oak	36	Fair	Footprint	Remove
250	<i>Quercus agrifolia</i>	Coast live oak	12	Good	Parcel	Keep
251	<i>Quercus agrifolia</i>	Coast live oak	15	Fair	Firebreak	Encroachment
252	<i>Quercus agrifolia</i>	Coast live oak	6	Fair	Firebreak	Remove
253	<i>Quercus lobata</i>	Valley oak	38	Good	Parcel	Keep
254	<i>Umbellularia californica</i>	California bay	14	Good	Firebreak	Remove
255	<i>Quercus agrifolia</i>	Coast live oak	6	Fair	Parcel	Keep
256	<i>Quercus agrifolia</i>	Coast live oak	18	Good	Parcel	Keep
257	<i>Umbellularia californica</i>	California bay	18	Good	Parcel	Keep
258	<i>Umbellularia californica</i>	California bay	24	Good	Parcel	Keep
259	<i>Quercus agrifolia</i>	Coast live oak	16	Good	Footprint	Remove
260	<i>Pinus pinea</i>	Stone pine	12	Good	Footprint	Remove
261	<i>Quercus agrifolia</i>	Coast live oak	13	Fair	Footprint	Remove
262	<i>Quercus agrifolia</i>	Coast live oak	22	Good	Footprint	Remove
263	<i>Quercus agrifolia</i>	Coast live oak	12	Fair	Footprint	Remove
264	<i>Quercus agrifolia</i>	Coast live oak	60	Fair	Footprint	Remove
265	<i>Quercus agrifolia</i>	Coast live oak	29	Fair	Footprint	Remove
266	<i>Quercus agrifolia</i>	Coast live oak	8	Fair	Footprint	Remove
267	<i>Quercus agrifolia</i>	Coast live oak	8	Fair	Footprint	Remove
268	<i>Quercus agrifolia</i>	Coast live oak	7	Good	Footprint	Remove
269	<i>Quercus agrifolia</i>	Coast live oak	9	Good	Footprint	Remove
270	<i>Quercus agrifolia</i>	Coast live oak	10	Good	Footprint	Remove
271	<i>Quercus agrifolia</i>	Coast live oak	13	Fair	Footprint	Remove
272	<i>Quercus agrifolia</i>	Coast live oak	6	Fair	Footprint	Remove
273	<i>Quercus lobata</i>	Valley oak	40	Good	Footprint	Remove
274	<i>Quercus agrifolia</i>	Coast live oak	6	Good	Footprint	Remove
275	<i>Quercus agrifolia</i>	Coast live oak	13	Good	Footprint	Remove
276	<i>Quercus agrifolia</i>	Coast live oak	12	Good	Footprint	Remove
277	<i>Pinus pinea</i>	Stone pine	24	Good	Footprint	Remove
278	<i>Quercus agrifolia</i>	Coast live oak	9	Fair	Parcel	Keep
279	<i>Quercus agrifolia</i>	Coast live oak	10	Good	Parcel	Keep
280	<i>Quercus agrifolia</i>	Coast live oak	11	Good	Parcel	Keep
281	<i>Quercus agrifolia</i>	Coast live oak	24	Good	Parcel	Keep

TREE NUMBER	SCIENTIFIC NAME ¹	COMMON NAME	DIAMETER (DBH inches)	HEALTH ²	LOCATION ³	STATUS
282	<i>Quercus agrifolia</i>	Coast live oak	12	Good	Parcel	Keep
283	<i>Quercus agrifolia</i>	Coast live oak	14	Fair	Parcel	Keep
284	<i>Quercus agrifolia</i>	Coast live oak	7	Fair	Footprint	Remove
285	<i>Acacia melanoxydon</i>	Australian blackwood	28	Good	Footprint	Remove

¹Scientific names are consistent with binomial nomenclature used in the *Jepson eFlora* (JFP 2020)

²Health is a qualitative assessment made by the botanist at the time of survey based on the overall condition of each tree, with each tree falling in to one of three categories:

Good: Trees showing vigor, no major dieback or discoloration of foliage, and no signs of insects, disease, decay, or significant structural defects

Fair: Trees with 10 to 30 percent foliar dieback, poor foliage coloration, dead wood, or showing some signs of disease and decay and minor structural defects.

Poor: Trees with more than 30 percent foliar dieback, dead wood, severe decay or insect activity or structural problems.

³Location categories of each tree unit with respect to the Project Footprint

Footprint: Tree is rooted within the Project Footprint.

Firebreak: Tree is rooted within the 12' firebreak surrounding the Project Footprint

Parcel: Tree is rooted within a project parcel, outside the Project Footprint and 12' firebreak

4 DISCUSSION

A majority of mapped trees were determined to be in fair to good condition. There were several trees that were determined to be in poor condition due to encroachment from surrounding vegetation, resulting in dieback of older limbs and branches. The majority of trees are mature and have well developed canopies that support open understory conditions. Spacing among individuals is even across the oak woodland along the western and southern sections of the Project Location. The eastern and northern sections of the Project Location support fewer trees, which are scattered individually or in clusters among annual grassland and coyote brush scrub. The northern section of the proposed project area supports a stand of California bay laurel trees, which are distributed along an aquatic drainage.

REFERENCES

CNPS (2020). *A Manual of California Vegetation*, Online Edition.

<http://www.cnps.org/cnps/vegetation/>; searched on [September 23, 2020]. California Native Plant Society, Sacramento, CA.

Jepson Flora Project (JFP). 2020. *Jepson eFlora*, <https://ucjeps.berkeley.edu/eflora/> [accessed on Sep 8, 2020].

Michael Tarnoff, personal communication. 2020. Information regarding tree removal within the Project Location. November 16, 2020.

APPENDIX A

REPRESENTATIVE PHOTOGRAPHS

Date & Time: Tue, Sep 15, 2020, 10:14:32 PDT
 Position: +038.013382° / -122.544357° (±26.5ft)
 Altitude: 145ft (±65.7ft)
 Datum: WGS-84
 Azimuth/Bearing: 148° S32E 263ft True (±12°)
 Elevation Angle: -05.3°
 Horizon Angle: -00.4°
 Zoom: 1.0X



PHOTO POINT 1: Facing southeast (September 15, 2020).

Date & Time: Tue, Sep 15, 2020, 10:45:57 PDT
 Position: +038.012913° / -122.544000° (±37.3ft)
 Altitude: 113ft (±95.6ft)
 Datum: WGS-84
 Azimuth/Bearing: 173° S07E 307ft True (±12°)
 Elevation Angle: +19.0°
 Horizon Angle: +01.4°
 Zoom: 1.0X



PHOTO POINT 2: Facing south (September 15, 2020).

Date & Time: Tue, Sep 15, 2020, 11:25:39 PDT
Position: +038.012669° / -122.543644° (±27.1ft)
Altitude: 65ft (±57.6ft)
Datum: WGS-84
Azimuth/Bearing: 308° N52W, 5476mits True (±12°)
Elevation Angle: +23.9°
Horizon Angle: +00.9°
Zoom: 1.0X



PHOTO POINT 3: Facing northwest (September, 15 2020).

Date & Time: Tue, Sep 15, 2020, 12:16:40 PDT
Position: +038.012943° / -122.543517° (±55.0ft)
Altitude: 61ft (±57.7ft)
Datum: WGS-84
Azimuth/Bearing: 292° N68W, 5191mits True (±12°)
Elevation Angle: +24.6°
Horizon Angle: +00.5°
Zoom: 1.0X



PHOTO POINT 4: Facing northwest (September 15, 2020).



Date & Time: Tue, Sep 15, 2020, 13:11:35 PDT
Position: +038.013087° / -122.543289° (±21.2ft)
Altitude: 48ft (±37.5ft)
Datum: WGS-84
Azimuth/Bearing: 204° S24W 3627mils True (±12°)
Elevation Angle: +06.6°
Horizon Angle: +00.0°
Zoom: 1.0X

PHOTO POINT 5: Facing southeast (September 15, 2020).



Date & Time: Tue, Sep 15, 2020, 13:51:43 PDT
Position: +038.013398° / -122.543906° (±61.1ft)
Altitude: 120ft (±120.6ft)
Datum: WGS-84
Azimuth/Bearing: 146° S34E 2596mils True (±12°)
Elevation Angle: -00.1°
Horizon Angle: +00.8°
Zoom: 1.0X

PHOTO POINT 6: Facing southeast (September 15, 2020).



PHOTO POINT 7: Facing southeast (September 15, 2020).



PHOTO POINT 8: Facing southwest (September 15, 2020).



Date & Time: Tue, Sep 15, 2020, 14:28:00 PDT
 Position: +038.014654° / -122.544069° (±39.3ft)
 Altitude: 175ft (±66.5ft)
 Datum: WGS-84
 Azimuth/Bearing: 025° N25E 0444mils True (±12°)
 Elevation Angle: -06.1°
 Horizon Angle: -03.4°
 Zoom: 1.0X

PHOTO POINT 9: Facing north (September 15, 2020).



Date & Time: Tue, Sep 15, 2020, 14:30:34 PDT
 Position: +038.014379° / -122.544154° (±14.2ft)
 Altitude: 190ft (±28.0ft)
 Datum: WGS-84
 Azimuth/Bearing: 177° S03E 3147mils True (±12°)
 Elevation Angle: -10.3°
 Horizon Angle: +01.0°
 Zoom: 1.0X

PHOTO POINT 10: Facing southeast (September 15, 2020).

Date & Time: Tue, Sep 15, 2020, 16:42:51 PDT
Position: +038.014180° / -122.543806° (±29.8ft)
Altitude: 114ft (±50.4ft)
Datum: WGS-84
Azimuth/Bearing: 169° S11E 3004mils True (±12°)
Elevation Angle: -11.3°
Horizon Angle: +00.0°
Zoom: 1.0X



PHOTO POINT 11: Facing southeast (September 15, 2020).

Date & Time: Tue, Sep 15, 2020, 17:19:55 PDT
Position: +038.015693° / -122.544098° (±22.0ft)
Altitude: 156ft (±50.6ft)
Datum: WGS-84
Azimuth/Bearing: 027° N27E 0480mils True (±12°)
Elevation Angle: -04.6°
Horizon Angle: -00.0°
Zoom: 1.0X



PHOTO POINT 12: Facing northeast (September 15, 2020).

Date & Time: Tue, Sep 15, 2020, 17:22:32 PDT
Position: +038.015755° / -122.544018° (±33.3ft)
Altitude: 118ft (±57.5ft)
Datum: WGS-84
Azimuth/Bearing: 134° S46E 2382mils True (±12°)
Elevation Angle: -05.4°
Horizon Angle: +00.4°
Zoom: 1.0X



PHOTO POINT 13: Facing southeast (September 15, 2020).

Date & Time: Tue, Sep 15, 2020, 17:43:58 PDT
Position: +038.016310° / -122.543648° (±21.2ft)
Altitude: 73ft (±39.1ft)
Datum: WGS-84
Azimuth/Bearing: 251° S71W 4462mils True (±12°)
Elevation Angle: +20.2°
Horizon Angle: -01.4°
Zoom: 1.0X



PHOTO POINT 14: Facing west (September 15, 2020).

Date & Time: Tue, Sep 15, 2020, 18:16:20 PDT
 Position: +038.015213° / -122.542882° (±43.7ft)
 Altitude: 47ft (±44.4ft)
 Datum: WGS-84
 Azimuth/Bearing: 322° N38W 5724mils True (±12°)
 Elevation Angle: +05.6°
 Horizon Angle: -02.4°
 Zoom: 1.0X

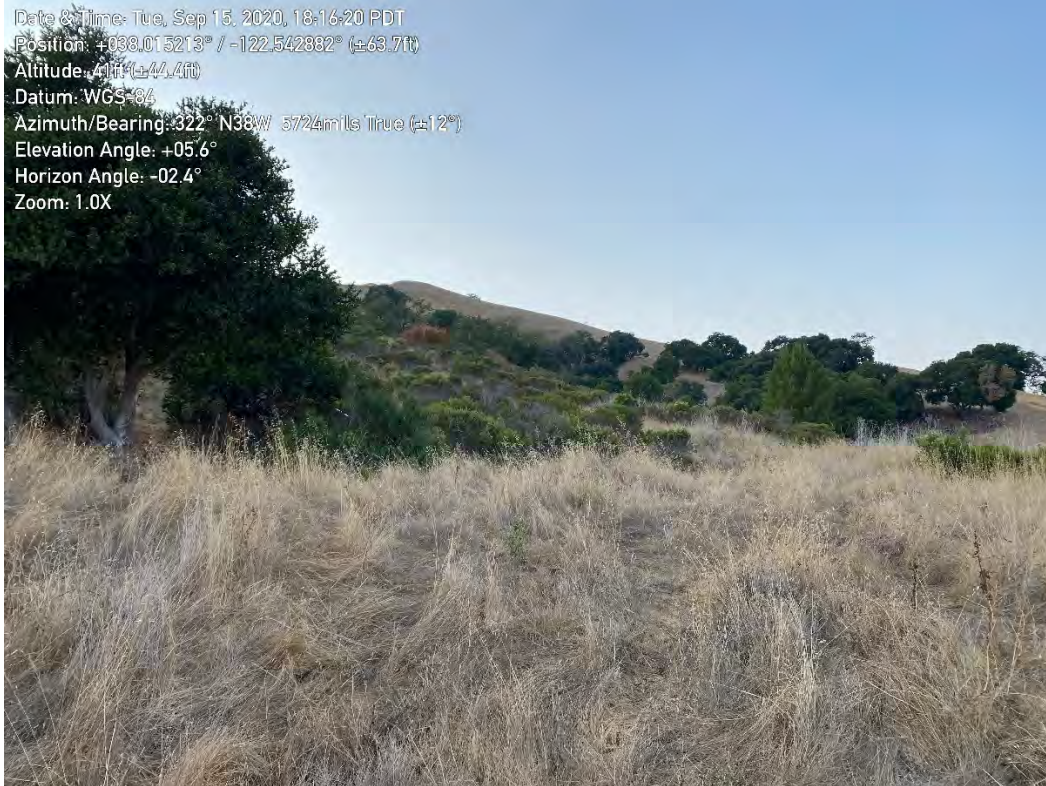


PHOTO POINT 15: Facing northwest (September 15, 2020).

Date & Time: Tue, Sep 15, 2020, 18:21:45 PDT
 Position: +038.014622° / -122.543079° (±43.7ft)
 Altitude: 47ft (±31.2ft)
 Datum: WGS-84
 Azimuth/Bearing: 276° N84W 4907mils True (±12°)
 Elevation Angle: +24.1°
 Horizon Angle: +01.4°
 Zoom: 1.0X

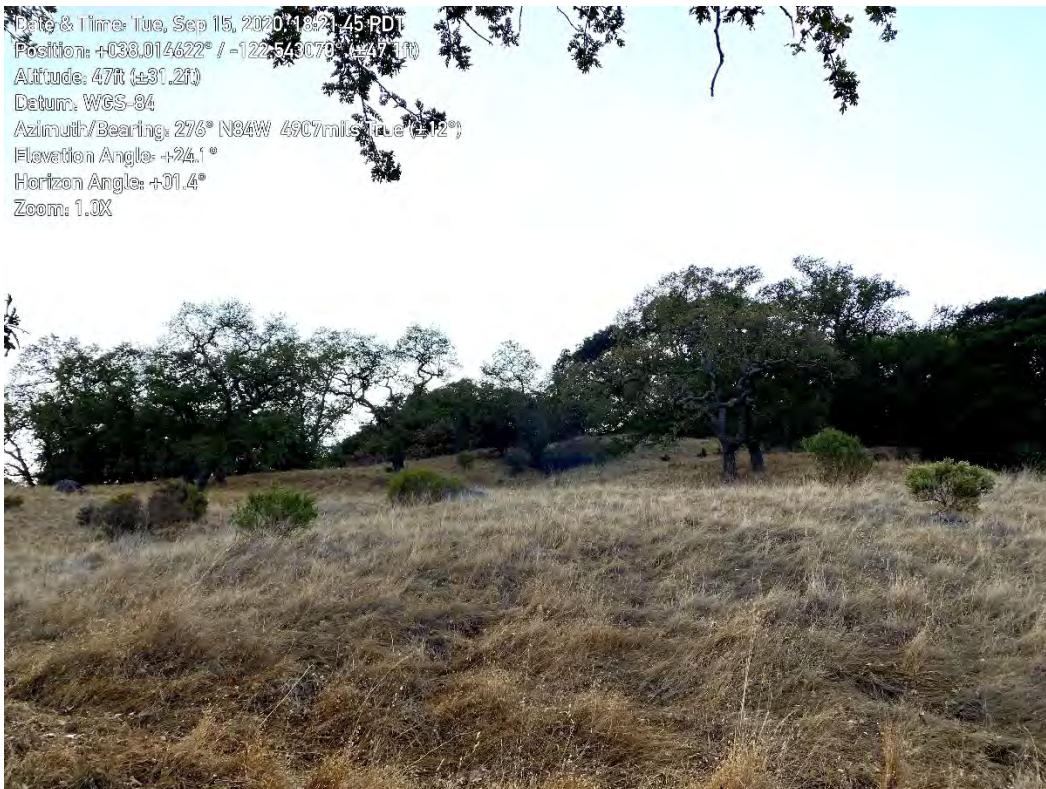
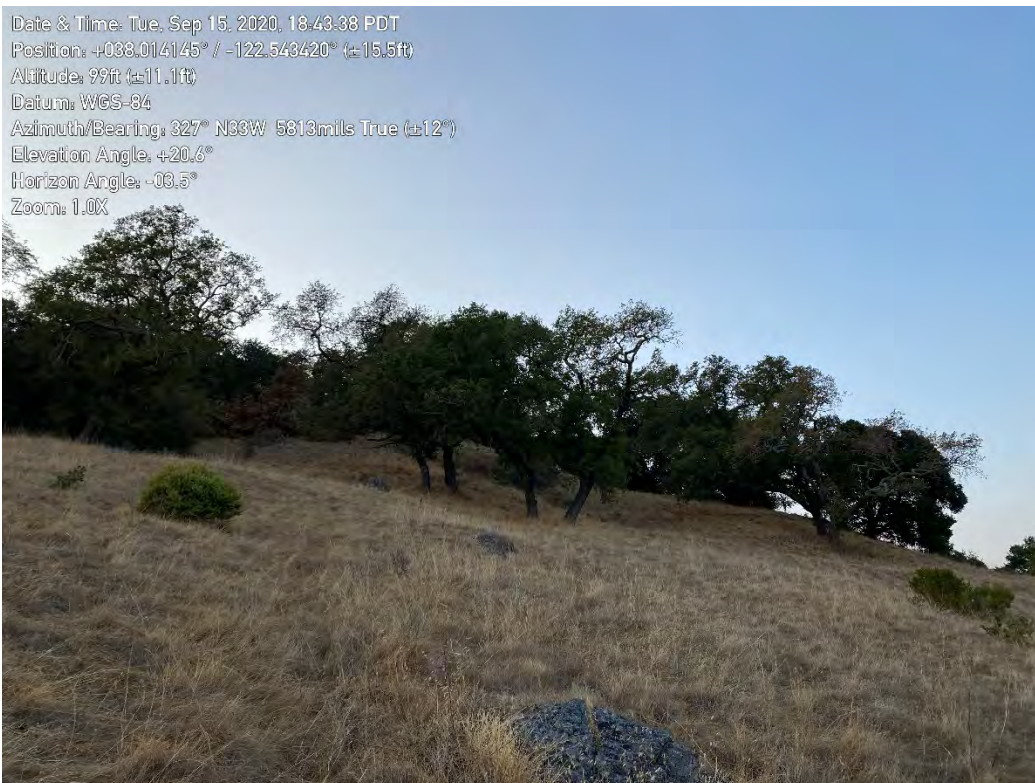


PHOTO POINT 16: Facing west (September 15, 2020).



Date & Time: Tue, Sep 15, 2020, 18:40:31 PDT
Position: +038.014138° / -122.543595° (±25.7ft)
Altitude: 89ft (±45.4ft)
Datum: WGS-84
Azimuth/Bearing: 205° S25W 3644mils True (±12°)
Elevation Angle: +01.6°
Horizon Angle: +01.1°
Zoom: 1.0X

PHOTO POINT 17: Facing south (September 15, 2020).



Date & Time: Tue, Sep 15, 2020, 18:43:38 PDT
Position: +038.014145° / -122.543420° (±15.5ft)
Altitude: 99ft (±11.1ft)
Datum: WGS-84
Azimuth/Bearing: 327° N33W 5813mils True (±12°)
Elevation Angle: +20.6°
Horizon Angle: -03.5°
Zoom: 1.0X

PHOTO POINT 18: Facing north (September 15, 2020).

Date & Time: Tue, Sep 15, 2020, 16:46:05 PDT
Position: +038.014142° / -122.543260° (±17.9ft)
Altitude: 68ft (±27.9ft)
Datum: WGS-84
Azimuth/Bearing: 050° N50E 0889mils True (±12°)
Elevation Angle: -05.4°
Horizon Angle: -00.6°
Zoom: 1.0X

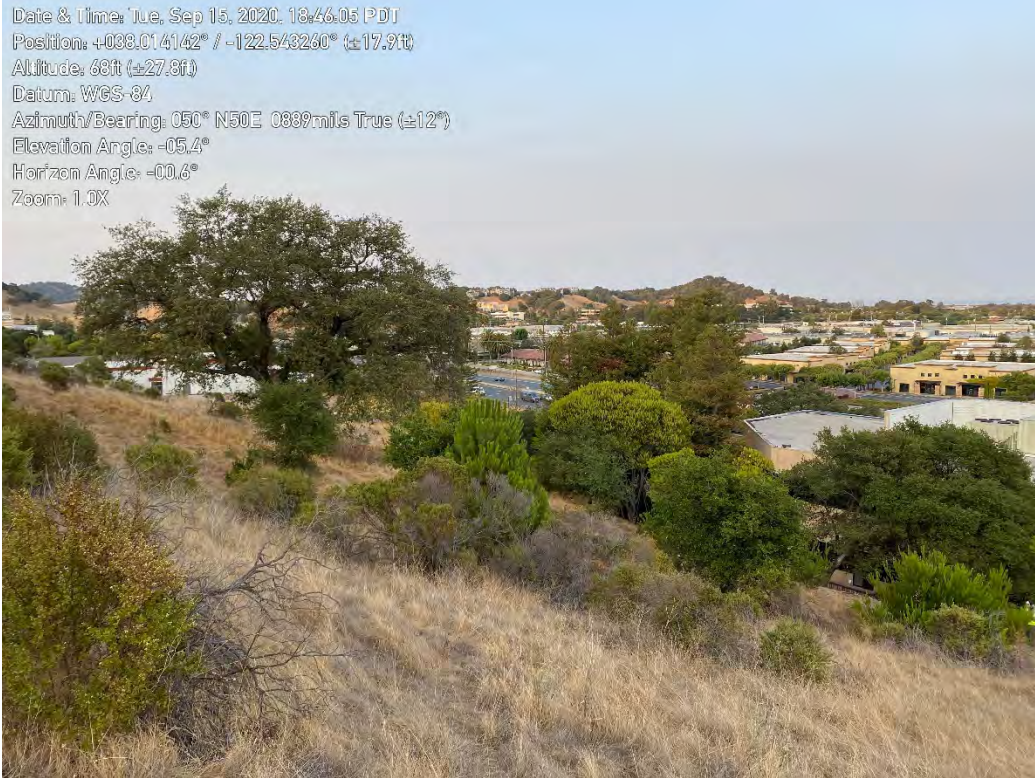


PHOTO POINT 19: Facing northeast (September 15, 2020).