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From:

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Date:

May 10, 2019 (updated)

Arcadis Project No.:

RV009362.0003

Subject:

Certified Arborist Report: 4224 Highway 12, Santa Rosa, Ca

A certified arborist tree survey was completed at 4224 Highway 12, Santa Rosa, California on June 8th, 2018 by ISA Certified Arborist Joshua Tallis (#WE-11583A). This report and associated attachments documents the findings of this survey.

Site Description

The site at 4224 Highway 12, Santa Rosa, California contains a single-family home and several outbuildings on a flat weedy lot. The southeast end of the parcel contains a fence which separates the disturbed northwestern portion ("onsite") from a southeast facing slope with dense native vegetation ("offsite"; Attachment 1), however both areas are located on the parcel. Further southeast the parcel contains a public pedestrian walkway which is mowed on either side and does not contain trees. This survey does not include trees east of the pedestrian walkway.

Methodology

1. Identify each tree species.
2. Mark the general location of each tree species subject to permitting on a site map.
3. Measure each trunk circumference at 4.5 feet above surrounding grade using a diameter at breast height (dbh) tape.
4. Evaluate the health and structure of each tree.

Summary of Findings

On June 8th, 2018 Joshua Tallis conducted a survey of 60 trees that are classified as protected or heritage trees and could require permits to remove or disturb under the City of Santa Rosa Tree Ordinance, Chapter 17-24. These trees included one Big Leaf Maple (*Acer macrophyllum*), four California Bay (*Umbellularia californica*), 52 Coast Live Oak (*Quercus agrifolia*), one Northern California Black Walnut (*Juglans hindsii*), and two Valley Oak (*Quercus lobata*). Only native trees greater than four inches diameter at breast height were recorded (Tables 1-5).

Tree species that are exempt from permit requirements under Santa Rosa's tree removal and preservation ordinance were not assessed but locations were documented on Attachment 1. The exempt species observed included Ligustrums, Monterey pine (*Pinus radiata*), Black Elderberry (*Sambucus nigra*; generally a shrub), Western Sycamore (*Platanus racemosa*), and fruit and nut trees (excluding northern California black walnut).

Proposed Impacts to Native Trees

It is proposed that all but two (Table 1 Trees #24 and #25) native trees at 4224 Highway 12 will be removed and will require replacement.

Replacement Requirements

All approved native trees removed for development must be replaced at the following calculations based on the Santa Rosa City code Chapter 17-24 and verbal communications with Santa Rosa City Planner Susie Murray.

For every 6-inches dbh of native tree removed there must be two 15-gallon native trees of the same genus planted elsewhere on the site. For heritage trees removed a heritage tree species must be replaced. Based on the species observed at the site it is recommended that all native trees removed be replaced with coast live oak (*Quercus agrifolia*) because it is the predominant tree species growing throughout the site and is expected to have the best survival rate. The diameter of protected tree species with multiple trunks are calculated as the sum of the trunk diameters at breast height.

In addition:

- For every three 15-gallon replacement container tree there can alternatively be one 24-inch box container; or,
- For every five 15-gallon replacement container tree there can alternatively be one 36-inch box container.

To determine the total number of native replacement trees the sum calculated is shown on Table 5 and as calculated below:

The sum of the diameters of all native trees to be removed = 689 inches

$689 \text{ inches} / 6 \text{ inches} = 114.8 \text{ inches} * 2 = \mathbf{230 \text{ 15-gallon trees}}$

Associated documents

Table 1: Arborist Report Tree Findings

Table 2. Tree Quantity by Species

Table 3. Tree Quantity by Size

Table 4. Heritage Trees

Table 5. Total Diameter of Native Trees

Attachment 1: Tree Location Map

Table 1
Arborist Report Tree Findings
4424 CA-12, Santa Rosa, CA 95409
Revised May 10, 2019

Tree #	Species	Trunk Diameter (In.)	General Condition	Structural Integrity	Recommendations
2	Coast Live Oak/ <i>Quercus agrifolia</i>	5"	Excellent	Excellent	To be removed for construction
3	Coast Live Oak/ <i>Quercus agrifolia</i>	7"	Excellent	Good	To be removed for construction
4	Valley Oak/ <i>Quercus lobata</i>	5"	Excellent	Good. Light competition causes tree to lean.	To be removed for construction
5	Coast Live Oak/ <i>Quercus agrifolia</i>	8.5"	Good	Good. Light competition causes tree to lean.	To be removed for construction
6	Coast Live Oak/ <i>Quercus agrifolia</i>	12"	Good	Good	To be removed for construction
7	Coast Live Oak/ <i>Quercus agrifolia</i>	7.5"	Good	Good	To be removed for construction
8	Coast Live Oak/ <i>Quercus agrifolia</i>	16"	Excellent	Good. Relatively straight trunk.	To be removed for construction
9	Coast Live Oak/ <i>Quercus agrifolia</i>	7.5"	Good	Poor. Leaning due to light competition.	To be removed for construction
10	Coast Live Oak/ <i>Quercus agrifolia</i>	10.5"	Good	Poor. Leaning due to light competition.	To be removed for construction
11	Coast Live Oak/ <i>Quercus agrifolia</i>	9"	Good	Good. Leaning due to light competition.	To be removed for construction
12	Coast Live Oak/ <i>Quercus agrifolia</i>	10"	Good	Good. Leaning due to light competition.	To be removed for construction
13	Big Leaf Maple/ <i>Acer macrophyllum</i>	7"	Poor	Poor. Cracked trunk and leaning due to light competition.	To be removed for construction
14	Coast Live Oak/ <i>Quercus agrifolia</i>	15"	Excellent	Excellent	To be removed for construction
15	Coast Live Oak/ <i>Quercus agrifolia</i>	11"	Good/Excellent	Excellent	To be removed for construction
16	Coast Live Oak/ <i>Quercus agrifolia</i>	30"	Good/Excellent	Excellent	To be removed for construction
17	Coast Live Oak/ <i>Quercus agrifolia</i>	9"/11"/12"	Good	Poor	To be removed for construction
18	Coast Live Oak/ <i>Quercus agrifolia</i>	14"	Good	Good/Poor. Light deprived.	To be removed for construction
19	Coast Live Oak/ <i>Quercus agrifolia</i>	5"/5"/5"/5"/5"	Good	Good	To be removed for construction
20	Coast Live Oak/ <i>Quercus agrifolia</i>	8"	Good/Poor.	Good. Light deprived.	To be removed for construction
21	Coast Live Oak/ <i>Quercus agrifolia</i>	12"/16"/9"/14"	Good	Good	To be removed for construction
23	Coast Live Oak/ <i>Quercus agrifolia</i>	5"	Good	Poor. Leaning.	To be removed for construction
24	Coast Live Oak/ <i>Quercus agrifolia</i>	10"	Good	Good	To be maintain and protected during construction
25	Coast Live Oak/ <i>Quercus agrifolia</i>	12"	Good	Good/Poor. Has some injury.	To be maintain and protected during construction

Table 1
Arborist Report Tree Findings
4424 CA-12, Santa Rosa, CA 95409
Revised May 10, 2019

Tree #	Species	Trunk Diameter (In.)	General Condition	Structural Integrity	Recommendations
26	Coast Live Oak/ <i>Quercus agrifolia</i>	7"	Good	Good	To be removed for construction
27	Coast Live Oak/ <i>Quercus agrifolia</i>	25"	Good	Good	To be removed for construction
28	Coast Live Oak/ <i>Quercus agrifolia</i>	10"	Good	Good	To be removed for construction
29	Coast Live Oak/ <i>Quercus agrifolia</i>	5"	Good	Poor	To be removed for construction
30	Coast Live Oak/ <i>Quercus agrifolia</i>	9"	Good	Good	To be removed for construction
31	Coast Live Oak/ <i>Quercus agrifolia</i>	14"/5"/5"	Good	Good/Poor. One trunk injured and oozing.	To be removed for construction
32	Coast Live Oak/ <i>Quercus agrifolia</i>	5"	Good	Good	To be removed for construction
34	California Bay/ <i>Umbellularia californica</i>	8"	Good	Good	To be removed for construction
35	California Bay/ <i>Umbellularia californica</i>	10"	Good	Good	To be removed for construction
36	California Bay/ <i>Umbellularia californica</i>	7"/7"/7"/5"/10"/7"	Good	Good	To be removed for construction
37	California Bay/ <i>Umbellularia californica</i>	4"	Good	Good	To be removed for construction
38	Coast Live Oak/ <i>Quercus agrifolia</i>	5"	Good	Good	To be removed for construction
39	Coast Live Oak/ <i>Quercus agrifolia</i>	11"	Good	Good	To be removed for construction
43	Coast Live Oak/ <i>Quercus agrifolia</i>	4.5"	Good	Good	To be removed for construction
44	Coast Live Oak/ <i>Quercus agrifolia</i>	4.5"	Good	Good	To be removed for construction
45	Valley Oak/ <i>Quercus lobata</i>	4"	Good	Good	To be removed for construction
46	Coast Live Oak/ <i>Quercus agrifolia</i>	10"	Good	Good	To be removed for construction
48	Coast Live Oak/ <i>Quercus agrifolia</i>	10"	Good/poor	Multi-stem close together.	To be removed for construction
49	Coast Live Oak/ <i>Quercus agrifolia</i>	6"/6"/6"	Good	Good	To be removed for construction
51	Coast Live Oak/ <i>Quercus agrifolia</i>	4"/6"/5"/5"/5"	Good	Good	To be removed for construction
52	Coast Live Oak/ <i>Quercus agrifolia</i>	5"/6"/6"	Good	Good	To be removed for construction
53	Coast Live Oak/ <i>Quercus agrifolia</i>	5"	Good	Good	To be removed for construction

Table 1
Arborist Report Tree Findings
4424 CA-12, Santa Rosa, CA 95409
Revised May 10, 2019

Tree #	Species	Trunk Diameter (In.)	General Condition	Structural Integrity	Recommendations
54	Coast Live Oak/ <i>Quercus agrifolia</i>	8"	Good	Good	To be removed for construction
55	Coast Live Oak/ <i>Quercus agrifolia</i>	4"	Good	Good	To be removed for construction
57	Coast Live Oak/ <i>Quercus agrifolia</i>	10"	Poor	Poor. Tree is fallen but alive. Portions have been cut off. Tree should be removed.	To be removed for construction
58	Northern California Black Walnut/ <i>Juglans hindsii</i>	5"	Good	Good	To be removed for construction
59	Coast Live Oak/ <i>Quercus agrifolia</i>	6"	Excellent	Good	To be removed for construction
60	Coast Live Oak/ <i>Quercus agrifolia</i>	4"	Excellent	Good	To be removed for construction
61	Coast Live Oak/ <i>Quercus agrifolia</i>	5"	Good	Good	To be removed for construction
62	Coast Live Oak/ <i>Quercus agrifolia</i>	4"	Good	Good	To be removed for construction
63	Coast Live Oak/ <i>Quercus agrifolia</i>	7"/11"	Good	Good	To be removed for construction
64	Coast Live Oak/ <i>Quercus agrifolia</i>	14"	Good	Good	To be removed for construction
65	Coast Live Oak/ <i>Quercus agrifolia</i>	20"	Good	Good, but can't access tree well to assess health.	To be removed for construction
66	Coast Live Oak/ <i>Quercus agrifolia</i>	8"	Good	Good/Poor. Leaning due to light competition.	To be removed for construction
67	Coast Live Oak/ <i>Quercus agrifolia</i>	7"	Good	Good	To be removed for construction
68	Coast Live Oak/ <i>Quercus agrifolia</i>	9"/11"	Good	Good	To be removed for construction
69	Coast Live Oak/ <i>Quercus agrifolia</i>	6"/3"	Good	Good	To be removed for construction

Table 2. Tree Quantity by Species	
Species	Quantity
Big Leaf Maple/ <i>Acer macrophyllum</i>	1
California Bay/ <i>Umbellularia californica</i>	4
Coast Live Oak/ <i>Quercus agrifolia</i>	52
Northern California Black Walnut/ <i>Juglans hindsii</i>	1
Valley Oak/ <i>Quercus lobata</i>	2
Total	60

Table 3. Tree Quantity by Size*	
DBH	Quantity
4 to <6"	16
6 to <12"	25
12 to <18"	7
18+"	12
Total	60

*Multi-trunk trees based on sum of trunk diameters

Table 4. Heritage Trees	
Species	Diameter at Breast Height
Coast Live Oak/ <i>Quercus agrifolia</i>	30
Coast Live Oak/ <i>Quercus agrifolia</i>	25
Coast Live Oak/ <i>Quercus agrifolia</i>	20

Table 5. Total Diameter of Native Trees	
Species	Sum of Diameters at Breast Height (Inches)
Single Trunk Trees	367
Multi-Trunk Trees (all trunk diameters)	269
Heritage Trees	75
Total:	711

Google Maps 4224 California 12, Santa Rosa, CA



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