

HORTICULTURAL *Associates*

Consultants in Horticulture and Arboriculture

TREE PRESERVATION AND MITIGATION REPORT

RED'S CORNER
COTATI, CA

Prepared for:

Monahan Pacific Corporation
1101 Fifth Avenue, Suite #300
San Rafael, CA 94901

Prepared by:

John C. Meserve
Consulting Arborist and Horticulturist
American Society of Consulting Arborists
ISA Certified Arborist, WE #0478A
ISA Tree Risk Assessment Qualified

May 17, 2016

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Mr. Robin Miller
Monahan Pacific Corporation
1101 Fifth Avenue, Suite #300
San Rafael, CA 94901

Re: Completed *Tree Preservation and Mitigation Report*, Red's Corner, Cotati, CA

Robin,

Attached you will find our completed *Tree Preservation and Mitigation Report* for the above noted project site. A total of 56 trees were evaluated based on their trunk diameters of 4 inches or larger. This inventory includes all trees of this size found at the project site.

Each tree in this report was documented and evaluated for species, trunk diameter, health, and structural condition. We have also provided our estimate of the development impact expected on each tree, as well as specific recommendations for preservation or removal. The *Tree Location Plan* shows the location and numbering sequence of all evaluated trees. Also included are *Tree Preservation Guidelines*, *Pruning Standards*, and a *Tree Fencing Detail* as reference to working around trees that will be preserved.

This report is intended to be a basic inventory of trees present at this site, which includes a general review of tree health and structural condition. No in-depth evaluation has occurred, and assessment has included only external visual examination without probing, drilling, coring, root collar examination, root excavation, or dissecting any tree part. Failures, deficiencies, and problems may occur in these trees in the future, and this inventory in no way guarantees or provides a warranty for their condition.

EXISTING SITE CONDITION SUMMARY

The project site consists of an infill parcel with a three abandoned residences, an abandoned tavern site, and various other outbuildings that appear to have been businesses in the past. Evidence of other uses are found scattered around the project site.

EXISTING TREE SUMMARY

Native species present at the project site include predominantly Valley Oak (*Quercus lobata*), but also Coast Live Oak (*Quercus agrifolia*), Black Oak (*Quercus kelloggii*), Black Walnut (*Juglans nigra*), and Western Cottonwood (*Populus fremontii*).

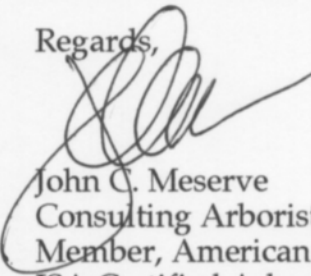
Non-native species include Silver Maple (*Acer saccharinum*), Mexican Fan Palm (*Washingtonia robusta*), Black Acacia (*Acacia melanoxylon*), Coast Redwood (*Sequoia sempervirens*), and Arborvitae (*Thuja* species).

CONSTRUCTION IMPACT SUMMARY

Our evaluation indicates that 22 trees will require removal due to their locations within proposed areas to be improved. Five of these are already in poor health or have unstable structure. A total of 34 other trees are preservable in the proposed development configuration. Many of these trees are located in perimeter areas along the property lines and may or may not be on actual project property.

The attached *Tree Location and Numbering Plan* illustrates the location and numbering sequence of all tree included in this report. Please feel free to contact me if you have questions, or if further discussion about any tree or vegetation issue is required.

Regards,


John C. Meserve
Consulting Arborist and Horticulturist
Member, American Society of Consulting Arborists
ISA Certified Arborist, WE #0478A
ISA Tree Risk Assessment Qualified



TREE INVENTORY CHART

TREE INVENTORY
Red's Corner
Cotati, CA

May 17, 2016

Tree #	Species	Common Name	Trunk (dbh ± inches)	Height (± feet)	Radius (± feet)	Health 1 - 5	Structure 1 - 4	Dev. Impact	Recommendations
1	<i>Thuja species</i>	Arborvitae	8+5+8	12	8	4	4	3	2
2	<i>Quercus lobata</i>	Valley Oak	4.5+7	21	12	4	4	1	2
3	<i>Quercus kelloggii</i>	Black Oak	7+6	25	14	4	4	1	1, 6, 7, 8, 9
4	<i>Quercus kelloggii</i>	Black Oak	4+6+4.5	18	12	4	4	1	1, 6, 7, 8, 9
5	<i>Quercus lobata</i>	Valley Oak	6+6	18	12	4	4	1	1, 6, 7, 8, 9
6	<i>Quercus kelloggii</i>	Black Oak	4.5+3.5	18	12	4	4	1	1, 6, 7, 8, 9
7	<i>Quercus lobata</i>	Valley Oak	15+15+6	40	30	4	3	1	1, 6, 7, 8, 9
8	<i>Quercus lobata</i>	Valley Oak	8+8	15	18	3	3	1	1, 6, 7, 8, 9
9	<i>Quercus lobata</i>	Valley Oak	9.5+7	25	12	4	4	1	1, 6, 7, 8, 9
10	<i>Quercus lobata</i>	Valley Oak	18	40	20	4	3	1	1, 6, 7, 8, 9
11	<i>Quercus lobata</i>	Valley Oak	14	35	16	4	3	1	1, 6, 7, 8, 9
12	<i>Quercus lobata</i>	Valley Oak	7+5	25	12	5	4	1	1, 6, 7, 8, 9
13	<i>Quercus lobata</i>	Valley Oak	7	20	12	5	4	1	1, 6, 7, 8, 9
14	<i>Quercus lobata</i>	Valley Oak	8	20	12	5	4	1	1, 6, 7, 8, 9
15	<i>Quercus lobata</i>	Valley Oak	5.5	20	12	4	3	1	1, 6, 7, 8, 9
16	<i>Quercus lobata</i>	Valley Oak	5	15	12	4	4	1	1, 6, 7, 8, 9
17	<i>Quercus agrifolia</i>	Coast Live Oak	5	14	10	5	4	1	1, 6, 7, 8, 9
18	<i>Quercus lobata</i>	Valley Oak	4+4	14	12	5	4	1	1, 6, 7, 8, 9
19	<i>Quercus lobata</i>	Valley Oak	8	18	12	5	4	1	1, 6, 7, 8, 9

HORTICULTURAL ASSOCIATES
P.O. Box 1261, Glen Ellen, CA 95442
707.935.3911

TREE INVENTORY
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Tree #	Species	Common Name	Trunk (dbh ± inches)	Height (± feet)	Radius (± feet)	Health 1 - 5	Structure 1 - 4	Dev. Impact	Recommendations
20	<i>Quercus lobata</i>	Valley Oak	19+15+11+8+9	40	21	4	5	1	1, 6, 7, 8, 9
21	<i>Quercus lobata</i>	Valley Oak	10	25	16	4	3	1	1, 6, 7, 8, 9
22	<i>Quercus lobata</i>	Valley Oak	19.5	40	25	4	3	1	1, 6, 7, 8, 9
23	<i>Quercus lobata</i>	Valley Oak	12.5	35	18	4	3	1	1, 6, 7, 8, 9
24	<i>Quercus lobata</i>	Valley Oak	10+6	25	15	3	4	1	1, 6, 7, 8, 9
25	<i>Quercus lobata</i>	Valley Oak	8	30	15	4	4	1	1, 6, 7, 8, 9
26	<i>Quercus lobata</i>	Valley Oak	5.5	14	14	3	4	1	1, 6, 7, 8, 9
27	<i>Quercus lobata</i>	Valley Oak	10+8+3	35	18	4	3	1	1, 6, 7, 8, 9
28	<i>Quercus lobata</i>	Valley Oak	11.5	35	18	4	3	1	1, 6, 7, 8, 9
29	<i>Quercus lobata</i>	Valley Oak	5	24	12	4	3	1	1, 6, 7, 8, 9
30	<i>Quercus lobata</i>	Valley Oak	8+4	21	15	4	3	3	2
31	<i>Quercus lobata</i>	Valley Oak	5+4+3	18	12	4	3	3	2
32	<i>Quercus lobata</i>	Valley Oak	12+11.5	40	22	4	3	1	1, 6, 7, 8, 9
33	<i>Quercus lobata</i>	Valley Oak	5+10+3	30	15	4	3	1	1, 6, 7, 8, 9
34	<i>Quercus lobata</i>	Valley Oak	22	45	26	4	3	3	2
35	<i>Quercus lobata</i>	Valley Oak	11.5	35	18	4	3	1	1, 6, 7, 8, 9
36	<i>Quercus lobata</i>	Valley Oak	9	35	18	3	3	1	1, 6, 7, 8, 9
37	<i>Quercus lobata</i>	Valley Oak	2x5+3x4+3	15	14	4	2	3	2
38	<i>Quercus lobata</i>	Valley Oak	4+4	18	12	4	4	2	1, 6, 7, 8, 9

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Tree #	Species	Common Name	Trunk (dbh ± inches)	Height (± feet)	Radius (± feet)	Health 1 - 5	Structure 1 - 4	Dev. Impact	Recommendations
39	<i>Quercus lobata</i>	Valley Oak	49	40	30	4	2.5	3	2
40	<i>Quercus lobata</i>	Valley Oak	43	35	30	1	1	3	4
41	<i>Quercus lobata</i>	Valley Oak	5x4+3x5	20	18	4	2.5	3	2
42	<i>Populus fremontii</i>	Western Cottonwood	6+5+5+3	21	14	4	3	3	2
43	<i>Quercus lobata</i>	Valley Oak	20	40	22	4	3	3	2
44	<i>Sequoia sempervirens</i>	Coast Redwood	32	50	15	2	2	3	4
45	<i>Acacia melanoxylon</i>	Black Acacia	13	45	22	4	2	3	4
46	<i>Acacia melanoxylon</i>	Black Acacia	28	45	30	4	2	3	4
47	<i>Acacia melanoxylon</i>	Black Acacia	14	45	15	4	3	3	2
48	<i>Quercus lobata</i>	Valley Oak	4+3	12	10	4	3	2	1, 6, 7, 8, 9
49	<i>Quercus lobata</i>	Valley Oak	3x4+3+10	20	15	4	3	3	2
50	<i>Quercus lobata</i>	Valley Oak	7+6+4+3+3	20	15	1	3	3	4
51	<i>Quercus lobata</i>	Valley Oak	34	35	30	2	3	3	2
52	<i>Juglans nigra</i>	Black Walnut	6x3+4	18	16	4	2	3	2
53	<i>Sequoia sempervirens</i>	Coast Redwood	38+38	70	18	3	3	3	2
54	<i>Washingtonia robusta</i>	Mexican Fan Palm	17	30	12	4	3	1	1, 6, 7, 8, 9
55	<i>Acer saccharinum</i>	Silver Maple	30	45	30	2.5	2	3	2
56	<i>Quercus lobata</i>	Valley Oak	8+12	30	16	4	3	3	2

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KEY TO TREE
INVENTORY CHART

KEY TO TREE INVENTORY CHART

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Cotati, California

Tree Number

Each tree has been identified in the field with an aluminum tag and reference number. Tags are attached to the trunk at approximately eye level and the *Tree Location Plan* illustrates the location of each numbered tree that is outside the creek setback area. Trees in the creek setback area have been tagged and numbered, but only their approximate locations have been illustrated.

Species

Each tree has been identified by genus, species and common name. Many species have more than one common name.

Trunk

Each trunk has been measured, to the nearest one half inch, to document its diameter at 4 feet above adjacent grade. Trunk diameter is a good indicator of age, and is commonly used to determine mitigation replacement requirements.

Height

Height is estimated in feet, using visual assessment.

Radius

Radius is estimated in feet, using visual assessment. Since many canopies are asymmetrical, it is not uncommon for a radius estimate to be an average of the canopy size.

Health

The following descriptions are used to rate the health of a tree. Trees with a rating of 4 or 5 are very good candidates for preservation and will tolerate more construction impacts than trees in poorer condition. Trees with a rating of 3 may or may not be good candidates for preservation, depending on the species and expected construction impacts. Trees with a rating of 1 or 2 are generally poor candidates for preservation.

- (5) Excellent - health and vigor are exceptional, no pest, disease, or distress symptoms.
- (4) Good - health and vigor are average, no significant or specific distress symptoms, no significant pest or disease.
- (3) Fair - health and vigor are somewhat compromised, distress is visible, pest or disease may be present and affecting health, problems are generally correctable.
- (2) Marginal - health and vigor are significantly compromised, distress is highly visible and present to the degree that survivability is in question.
- (1) Poor - decline has progressed beyond the point of being able to return to a healthy condition again. Long-term survival is not expected. This designation includes dead trees.

Structure

The following descriptions are used to rate the structural integrity of a tree. Trees with a rating of 3 or 4 are generally stable, sound trees which do not require significant pruning, although cleaning, thinning, or raising the canopy might be desirable. Trees with a rating of 2 are generally poor candidates for preservation unless they are preserved well away from improvements or active use areas. Significant time and effort would be required to reconstruct the canopy and improve structural integrity. Trees with a rating of 1 are hazardous and should be removed.

- (4) Good structure - minor structural problems may be present which do not require corrective action.
- (3) Moderate structure - normal, typical structural issues which can be corrected with pruning.
- (2) Marginal structure - serious structural problems are present which may or may not be correctable with pruning, cabling, bracing, etc.
- (1) Poor structure - hazardous structural condition which cannot be effectively corrected with pruning or other measures, may require removal depending on location and the presence of targets.

Development Impacts

Considering the proximity of construction activities, type of activities, tree species, and tree condition - the following ratings are used to estimate the amount of impact on tree health and stability. Most trees will tolerate a (1) rating, many trees could tolerate a (2) rating with careful consideration and mitigation, but trees with a (3) rating are poor candidates for preservation due to their very close proximity to construction or because they are located within the footprint of construction and cannot be preserved.

- (3) A significant impact on long term tree integrity can be expected as a result of proposed development.
- (2) A moderate impact on long term tree integrity can be expected as a result of proposed development.
- (1) A very minor or no impact on long term tree integrity can be expected as a result of proposed development.
- (0) No impact is expected

Recommendations

Recommendations are provided for removal or preservation. For those being preserved, protection measures and mitigation procedures to offset impacts and improve tree health are provided.

- (1) Preservation appears to be possible.
- (2) Removal is required due to significant development impacts.

- (3) Removal is recommended due to poor health or hazardous structure.
- (4) Removal is required due to significant development impacts and poor existing condition.
- (5) Removal is recommended due to poor species characteristics.
- (6) Install temporary protective fencing at the edge of the dripline, or edge of approved construction, prior to beginning grading or construction. Maintain fencing in place for duration of all construction activity in the area.
- (7) Maintain existing grade within the fenced portion of the dripline. Route drainage swales and all underground work outside the dripline.
- (8) Place a 4" layer of chipped bark mulch over the soil surface within the fenced dripline prior to installing temporary fencing. Maintain this layer of mulch throughout construction.
- (9) Prune to clean, raise, or provide necessary clearance, per International Society of Arboriculture Pruning Standards. Pruning to occur by, or under the supervision of, an Arborist certified by the International Society of Arboriculture. Pruning Standards are attached to this report.

TREE LOCATION PLAN



TREE LOCATION AND
 NUMBERING PLAN
 RED'S CORNER
 COTATI, CA



TREE LOCATION AND
NUMBERING PLAN
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