

Advanced Tree Care

965 East San Carlos Ave, San Carlos, CA 94070

250 Bonita Rd, Portola Valley

June 9, 2020

Sanjeet Dutta
250 Bonita Rd
Portola Valley, CA 94028

Site: 250 Bonita Rd., Portola Valley

Dear Sanjeet,

At your request I visited the above site for the purpose of inspecting and commenting on the regulated trees around the property. A new landscape is planned, prompting the need for this tree protection report.

Method:

San Mateo County regulates Significant Trees whereby a "SIGNIFICANT TREE" shall mean any live woody plant rising above the ground with a single stem or trunk of a circumference of 38" (Diameter 12.1") or more measured at 4 1/2' vertically above the ground or immediately below the lowest branch, whichever is lower, and having the inherent capacity of naturally producing one main axis continuing to grow more vigorously than the lateral axes.

The location of the Significant trees on this site can be found on the plan provided by you. Each tree is given an identification number. The trees are measured at 54 inches above ground level (DBH or Diameter at Breast Height). A condition rating of 1 to 100 is assigned to each tree representing form and vitality on the following scale:

1 to 29	Very Poor
30 to 49	Poor
50 to 69	Fair
70 to 89	Good
90 to 100	Excellent

The height and spread of each tree is estimated. A Comments section is provided for any significant observations affecting the condition rating of the tree.

A Summary and Tree Protection Plan are at the end of the survey providing recommendations for maintaining the health and condition of the trees during and after construction.

If you have any questions, please don't hesitate to call.

Sincerely



Robert Weatherill
Certified Arborist WE 1936A

Tree Survey

Tree#	Species	DBH	Ht/Sp	Con Rating	Comments
1	California bay <i>Umbellularia californica</i>	30.3"	90/40	60	Good health, fair condition, pockets of decay @base, Significant
2	California bay <i>Umbellularia californica</i>	37.5"	70/50	70	Good health and condition Significant
3	Black oak <i>Quercus kelloggii</i>	20.2"	50/30	65	Good health and condition, some large deadwood, Significant
4	Madrone <i>Arbutus menziesii</i>	17.3"	30/20	10	Almost dead, significant lean Significant
5	Black oak <i>Quercus kelloggii</i>	18.2"	40/25	50	Fair health and condition, significant lean Significant
6	California bay <i>Umbellularia californica</i>	18.0"	50/25	50	Good health, fair condition, topped and resprouted @35', significant lean, Significant
7	California bay <i>Umbellularia californica</i>	14.8"	15/18	40	Good health, poor condition, topped and resprouted @10', Significant
8	California bay <i>Umbellularia californica</i>	16.5"	50/20	50	Good health, fair condition, leaning towards house, Significant
9	Black oak <i>Quercus kelloggii</i>	22.7"	80/40	65	Good health and condition, one sided canopy. Significant
10	Black oak <i>Quercus kelloggii</i>	13.1/8.2"	40/20	50	Fair health and condition, significant lean Significant
11	Black oak <i>Quercus kelloggii</i>	12.2/12.9/18.6"	40/60	40	Good health, poor form, multi trunk @grade, Significant
12	California bay <i>Umbellularia californica</i>	24.1"	40/20	50	Fair health and condition Significant
13	California bay <i>Umbellularia californica</i>	14.5"	40/20	50	Fair health and condition, leaning Significant
14	California bay <i>Umbellularia californica</i>	14.5"	40/40	50	Fair health and condition, leaning Significant
15	California bay <i>Umbellularia californica</i>	30.3"	70/20	70	Good health and condition, neighbors, cavities, Significant
16	Black oak <i>Quercus kelloggii</i>	16.1"	25/20	25	Poor health and condition, neighbors Significant
17	Black oak <i>Quercus kelloggii</i>	15.9"	20/5	0	Dead Significant
18	Madrone <i>Arbutus menziesii</i>	18.2/10.6/14.0/12.4/5"	60/50	40	Poor health and condition, trunk failures Significant

Tree#	Species	DBH	Ht/Sp	Con Rating	Comments
19	California bay <i>Umbellularia californica</i>	21.1"	70/30	45	Fair health, poor condition, Decay at base, Significant
20	California bay <i>Umbellularia californica</i>	21.7"	70/30	55	Fair health and condition Decay at base Significant
21	Black oak <i>Quercus kelloggii</i>	16.9"	60/20	10	Very poor health and condition, Decay at base Significant
22	California bay <i>Umbellularia californica</i>	15.3"	60/25	55	Fair health and condition, thinning canopy Significant
23	California bay <i>Umbellularia californica</i>	19.6"	65/30	60	Fair health and condition, leaning, Significant
24	California bay <i>Umbellularia californica</i>	15.3/10.7"	55/30	60	Fair health and condition, leaning Significant

Summary:

The trees on the site are a variety of natives in varying health and condition

Tree #s 1 and 2 are large bays in good health and condition. There are pockets of decay at the base of Tree #1. Both trees should be reduced and thinned to prevent future failure. Both trees should be protected during construction.

Tree # 4 is a madrone in very poor health and condition and should be removed.

Tree # 6 is a bay in good health but fair condition. The tree has previously been topped at 35 feet and the new growth is all sucker growth. The tree leans precariously towards the house. I recommend this tree be removed.

Tree #s 12, 13 and 14 are smaller bays in fair health and condition. They are located in the location of the proposed new construction and have been requested for removal.

Tree #s 15 and 16 are on the property line and should be protected during construction.

Tree #s 17, 18, 19 and 21 are all in poor condition with significant decay and should be removed.

Tree #s 3, 5, 7, 8, 9, 10, 11, 20, 22, 23 and 24 all require some maintenance to prevent failure. All should be protected during construction.

Tree Protection Plan

1. The Tree Protection Zone (TPZ) should be defined with protective fencing. This should be cyclone or chain link fencing on 1 1/2" or 2" posts driven at least 2 feet in to the ground standing at least 6 feet tall. Normally a TPZ is defined by the dripline of the tree. I recommend the TPZ's as follows, they are marked in a dotted red line on the drawing:-

Tree #s 7 and 16: TPZ should be at 10 feet from the trunk closing on the fence line in accordance with Type I Tree Protection as outlined and illustrated in image 2.15-1 and 2 ⁽⁶⁾ .

Tree #s 3, 5, 8, 9, 10, 11, 20, 22, 23 and 24: TPZ should be at 15 feet from the trunk closing on the fence line in accordance with Type I Tree Protection as outlined and illustrated in image 2.15-1 and 2 ⁽⁶⁾ .

Tree #s 1, 2 and 15: TPZ should be at 20 feet from the trunk closing on the fence line in accordance with Type I Tree Protection as outlined and illustrated in image 2.15-1 and 2 ⁽⁶⁾ .

If the fencing were installed, the new landscape improvements would be unbuildable. The solid red line on the drawing shows a possible location of the fencing and areas shaded in blue where construction would be in conflict with the TPZs.

A pathway is proposed within the TPZs of 1 and 2. The pathway will consist of compacted crushed gravel. Excavation depth should not exceed 6" in depth. If roots greater than 2" in diameter are encountered, they should be worked around and not cut. All recommendations should be followed when working in areas shaded in blue.

The proposed leach field lines are highlighted in yellow on the first drawing. The lines weave through the TPZs of Tree #s 3 and 5, 7 and 8, 9 and 10, 11 and 24, 20, 22 and 23. The leach field lines are located as best possible through the trees. The lines will be dug with small machinery going through the TPZs. The pathway for the small machinery is marked on the second drawing in purple. Machinery should not track any closer than 3 feet from the trunks of the trees. The machinery should track on plywood and wood chip to the location of excavation to avoid compaction of the roots within the TPZs. If the TPZ fencing is to be removed to access the trenching, trees close to the pathway for small machinery should be wrapped with 4 layers of snow fencing and wooden slats as shown in the photograph for Type III tree protection fencing. This will prevent any accidental damage to the trunks of the trees.

No roots greater than 2 inches should be cut. All roots should be worked around where possible. If roots are encountered that need to be cut, the Site Arborist should inspect and determine the best approach.

From the Septic Plan (OWTS1) the existing 90 ft septic trench, the pipe will be replaced. The existing trench will be excavated to about 2 ft depth. The excavation will be done by small machine, no roots 2 inches or greater in diameter should be cut or damaged.

From OWTS1 the reserve drain fields will not be constructed now. If, in the future these drains are to be constructed, a new arborist inspection and report will be generated

The proposed leech lines will be of future benefit to the surrounding trees.



IMAGE 2.15-1
Tree Protection Fence at the Dripline



IMAGE 2.15-2
Tree Protection Fence at the Dripline



IMAGE 2.15-4
Trunk Wrap Protection

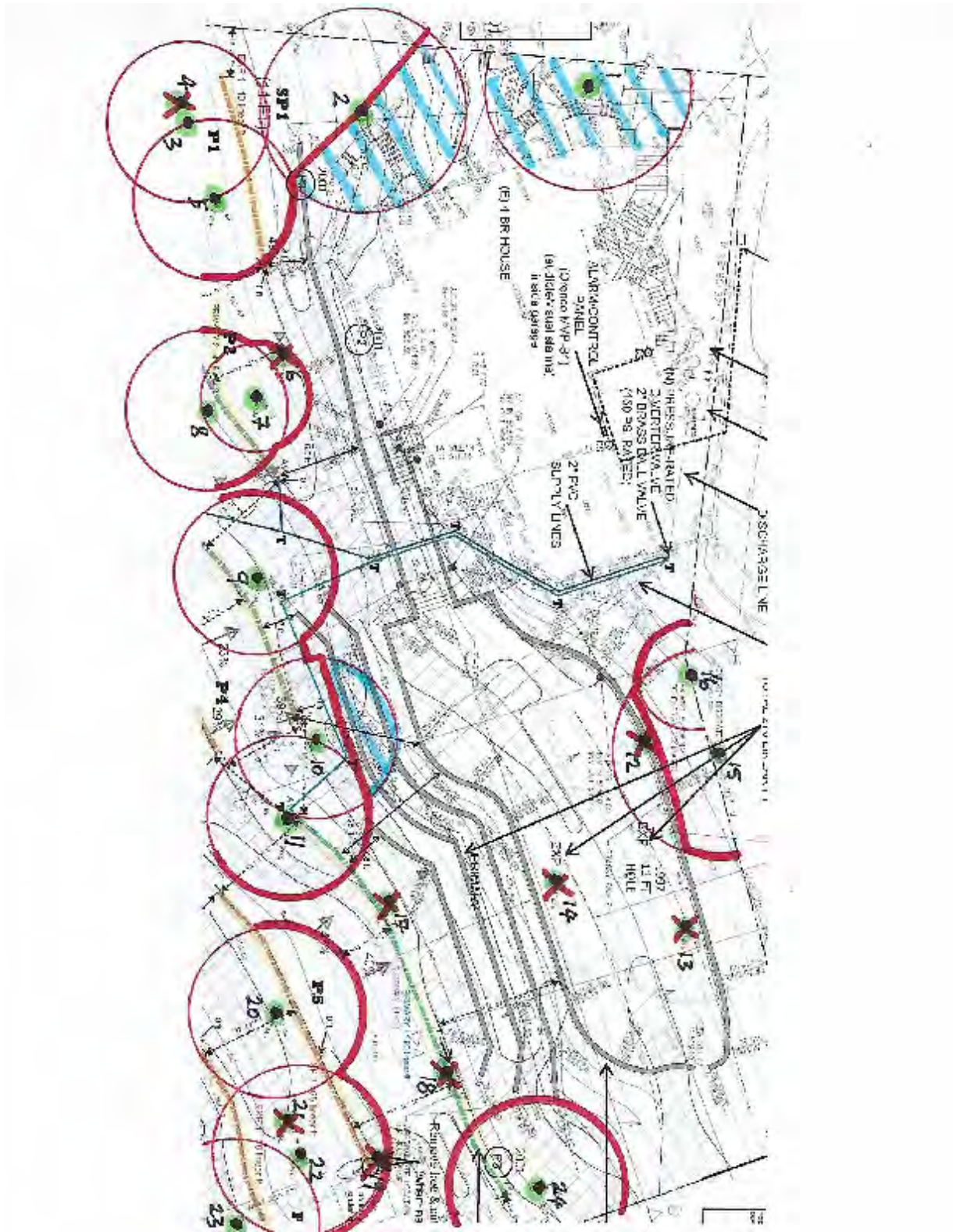
• **Type I Tree Protection**

The fences shall enclose the entire area under the **canopy dripline or TPZ** of the tree(s) to be saved throughout the life of the project, or until final improvement work within the area is required, typically near the end of the project (see *Images 2.15-1 and 2.15-2*). Parking Areas: If the fencing must be located on paving or sidewalk that will not be demolished, the posts may be supported by an appropriate grade level concrete base.

• **Type III Tree Protection**

Trees situated in a small tree well or **sidewalk planter pit**, shall be wrapped with 2-inches of orange plastic fencing as padding from the ground to the first branch with 2-inch thick wooden slats bound securely on the outside. During installation of the wood slats, caution shall be used to avoid damaging any bark or branches. Major scaffold limbs may also require plastic fencing as directed by the *City Arborist*. (see *Image 2.15-4*)

2. Any pruning and maintenance of the trees shall be carried out before construction begins. This should allow for any clearance requirements for both the new structure and any construction machinery. This will eliminate the possibility of damage during construction. **The pruning should be carried out by an arborist, not by construction personnel.** No limbs greater than 4” in diameter shall be removed.
3. Any excavation in ground where there is a potential to damage roots of 1” or more in diameter should be carefully hand dug. Where possible, roots should be dug around rather than cut.⁽²⁾
4. If roots are broken, every effort should be made to remove the damaged area and cut it back to its closest lateral root. A clean cut should be made with a saw or pruners. This will prevent any infection from damaged roots spreading throughout the root system and into the tree.⁽²⁾
5. Compaction of the soil within the dripline shall be kept to a minimum.⁽²⁾ If access is required to go through the TPZ of a protected tree, the area within the TPZ should be protected from compaction either with steel plates or with 4” of wood chip overlaid with plywood.
6. **Do Not:**⁽⁴⁾
 - a. Allow run off or spillage of damaging materials into the area below any tree canopy.
 - b. Store materials, stockpile soil, park or drive vehicles within the TPZ of the tree.
 - c. Cut, break, skin or bruise roots, branches or trunk without first obtaining permission from the city arborist.
 - d. Allow fires under any adjacent trees.
 - e. Discharge exhaust into foliage.
 - f. Secure cable, chain or rope to trees or shrubs.
 - g. Apply soil sterilants under pavement near existing trees.
7. Where roots are exposed, they should be kept covered with the native soil or four layers of wetted, untreated burlap. Roots will dry out and die if left exposed to the air for too long.⁽⁴⁾
8. Route pipes into alternate locations to avoid conflict with roots.⁽⁴⁾
9. Where it is not possible to reroute pipes or trenches, the contractor is to bore beneath the dripline of the tree. The boring shall take place no less than 3 feet below the surface of the soil in order to avoid encountering “feeder” roots.⁽⁴⁾
10. Any damage due to construction activities shall be reported to the project arborist or city arborist within 6 hours so that remedial action can be taken.
11. Ensure upon completion of the project that the original ground level is restored



Location of proposed new landscape, protected trees and their Tree Protection Zones



Proposed location for small machinery to track within the TPZs

Glossary

Canopy	The part of the crown composed of leaves and small twigs. ⁽²⁾
Cavities	An open wound, characterized by the presence of extensive decay and resulting in a hollow. ⁽¹⁾
Decay	Process of degradation of woody tissues by fungi and bacteria through the decomposition of cellulose and lignin ⁽¹⁾
Dripline	The width of the crown as measured by the lateral extent of the foliage. ⁽¹⁾
Genus	A classification of plants showing similar characteristics.
Root crown	The point at which the trunk flares out at the base of the tree to become the root system.
Species	A Classification that identifies a particular plant.
Standard height	Height at which the girth of the tree is measured. Typically 4 1/2 feet above ground level

References

(1) Matheny, N.P., and Clark, J.P. Evaluation of Hazard Trees in Urban Areas. International Society of Arboriculture, 1994.

(2) Harris, R.W., Matheny, N.P. and Clark, J.R.. Arboriculture: Integrated Management of Landscape Trees, Shrubs and Vines. Prentice Hall, 1999.

(3) Carlson, Russell E. Paulownia on The Green: An Assessment of Tree Health and Structural Condition. Tree Tech Consulting, 1998.

(4) Extracted from a copy of Tree Protection guidelines. Anon

(5) T. D. Sydnor, Arboricultural Glossary. School of Natural Resources, 2000

(6) D Dockter, Tree Technical Manual. City of Palo Alto, June, 2001

Certification of Performance⁽³⁾

I, Robert Weatherill certify:

- * That I have personally inspected the tree(s) and/or the property referred to in this report, and have stated my findings accurately. The extent of the evaluation and appraisal is stated in the attached report and the Terms and Conditions;
- * That I have no current or prospective interest in the vegetation or the property that is the subject of this report, and I have no personal interest or bias with respect to the parties involved;
- * That the analysis, opinions and conclusions stated herein are my own, and are based on current scientific procedures and facts;
- * That my compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party, nor upon the results of the assessment, the attainment of stipulated results, or the occurrence of any subsequent events;
- * That my analysis, opinions, and conclusions were developed and this report has been prepared according to commonly accepted Arboricultural practices;
- * That no one provided significant professional assistance to the consultant, except as indicated within the report.

I further certify that I am a member of the International Society of Arboriculture and a Certified Arborist. I have been involved in the practice of arboriculture and the care and study of trees for over 20 years.

Signed



Robert Weatherill
Certified Arborist WE 1936a
Date: 6/9/20

Terms and Conditions(3)

The following terms and conditions apply to all oral and written reports and correspondence pertaining to consultations, inspections and activities of Advanced Tree Care :

1. All property lines and ownership of property, trees, and landscape plants and fixtures are assumed to be accurate and reliable as presented and described to the consultant, either verbally or in writing. The consultant assumes no responsibility for verification of ownership or locations of property lines, or for results of any actions or recommendations based on inaccurate information.
2. It is assumed that any property referred to in any report or in conjunction with any services performed by Advanced Tree Care, is not in violation of any applicable codes, ordinances, statutes, or other governmental regulations, and that any titles and ownership to any property are assumed to be good and marketable. Any existing liens and encumbrances have been disregarded.
3. All reports and other correspondence are confidential, and are the property of Advanced Tree Care and it's named clients and their assignees or agents. Possession of this report or a copy thereof does not imply any right of publication or use for any purpose, without the express permission of the consultant and the client to whom the report was issued. Loss, removal or alteration of any part of a report invalidates the entire appraisal/evaluation.
4. The scope of any report or other correspondence is limited to the trees and conditions specifically mentioned in those reports and correspondence. Advanced Tree Care and the consultant assume no liability for the failure of trees or parts of trees, either inspected or otherwise. The consultant assumes no responsibility to report on the condition of any tree or landscape feature not specifically requested by the named client.
5. All inspections are limited to visual examination of accessible parts, without dissection, excavation, probing, boring or other invasive procedures, unless otherwise noted in the report. No warrantee or guarantee is made, expressed or implied, that problems or deficiencies of the plants or the property will not occur in the future, from any cause. The consultant shall not be responsible for damages caused by any tree defects, and assumes no responsibility for the correction of defects or tree related problems.
6. The consultant shall not be required to provide further documentation, give testimony, be deposed, or attend court by reason of this appraisal/report unless subsequent contractual arrangements are made, including payment of additional fees for such services as described by the consultant or in the fee schedules or contract.
7. Advanced Tree Care has no warrantee, either expressed or implied, as to the suitability of the information contained in the reports for any purpose. It remains the responsibility of the client to determine applicability to his/her particular case.
8. Any report and the values, observations, and recommendations expressed therein represent the professional opinion of the consultants, and the fee for services is in no manner contingent upon the reporting of a specified value nor upon any particular finding to be reported.
9. Any photographs, diagrams, graphs, sketches, or other graphic material included in any report, being intended solely as visual aids, are not necessarily to scale and should not be construed as engineering reports or surveys, unless otherwise noted in the report. Any reproductions of graphs material or the work product of any other persons is intended solely for the purpose of clarification and ease of reference. Inclusion of said information does not constitute a representation by Advanced Tree Care or the consultant as to the sufficiency or accuracy of that information.