

Arbor Culture Consulting



Client: KPPCSD

c/o Eileen Nottoli

Address: 59 Arlington Avenue

Kensington, CA 94707

Date: November 26, 2022

Summary

All of the pines are affected by pests and disease and are in a significant state of decline. Most have a low live-crown ratio (LCR), which is the ratio of live crown length to total tree height, and many have significant stem-girdling roots. Both of these conditions have been associated with tree failure. I recommend the trees adjacent to Kensington Park Road and Highland Boulevard be removed, as well as the two dead trees behind the community center. I recommend the dead and dying trees in the low traffic areas be retained for wildlife habitat, though consideration may be given to fire concerns, costs, and scheduling logistics. The oak should be pruned and retained.

Introduction and Assignment

Ms. Nottoli contacted me to assess a group of trees at Kensington Park that are being considered for removal. My assignment was to inspect the trees identified during our walk-through and provide a report. The report is to include a health and structure assessment; a suitability for preservation rating, based on the current condition of the trees and how they are interacting with the surroundings; and recommendations for removal or preservation.

Methods and Limitations

On November 22, 2022, I performed a visual assessment of the trees included in this report located at Kensington Park. I looked at pine trees along Kensington Park Road and Highland Boulevard, a small grove of acacias and a small grove of pines west of Windsor Avenue, an oak on the bank at the southeast corner of the basketball courts, and two pines east of the community center (Figures 1-2, pages 7-8). These trees were identified during a walk-through with Ms. Nottoli and correlate with the recently submitted tree removal proposals. The trees are referred to numerically starting south of the community center and going up Kensington Park Road to Highland Boulevard, then down to Windsor Avenue. The acacias and pines west of Windsor Avenue are numbered as two separate groups and the two pines east of the community center are numbered as one group. I examined the current condition of the trees and surrounding site, and took photographs of the trees for reference. A rating of (0) to (5) was assigned based on the relative condition of the trees (*Trees and Development... Matheny and Clark 1998*) with (0) indicating a dead tree and (5) being excellent. The suitability for preservation of the trees (good, moderate, poor) was assessed based on the health, structure,



age, and known species factors; and how they may interact with the immediate surroundings (Table 1: Tree Assessment, page 4). Photos are included for perspective and to demonstrate certain conditions that are described in the report, but photos of every tree and each tree with the same condition are not included. No soil or foliar samples were taken and no aerial inspection was performed. No laboratory testing or analysis was done.

Tree Observations

See Table 1: Tree Assessment, page 4.

Conclusion

Monterey pine (*Pinus radiata*)

All of the pines are in decline and suffering from a combination of issues. There is evidence of pine bark beetle (*Ips sp.*) which attacks the cambial (vascular) layer between the bark and wood resulting in girdling of branches and stems which then die. This is initially evident by yellowing and bronzing of the needles and then the death of branches and stems. Also present is the red turpentine beetle (*Dendroctonus valens*) which attack the cambial layer on the lower stem of older and/or stressed trees. This pest is distinguished by reddish pitch tubes and frass originating on the lower stem (Photos A, F, and O, pages 9, 10, and 13). In addition to these pests, many of the pines also have pine pitch canker disease (*Fusarium circinatum*) which is a fungal disease that causes infections (cankers) that can girdle branches, exposed roots, and the main stems (trunks) of pine trees. Multiple branch infections can cause extensive dieback in the crown of the tree and may lead to tree mortality (*UC IPM website*). Indications of pine pitch canker are large globular accumulations of sap, exudation of sap from bark lesions that stains the bark, and depressed areas of wood where cankers have restricted wood growth (Photos F, H, pages 10-11). All of the pines are in the process of significant cone production which is often a response of stressed or dying trees that are in a mortality spiral. Nearly all of the trees adjacent to Highland Boulevard have stem-girdling roots which is a known structural defect.

Blackwood acacia (*Acacia melanoxydon*)

The small grove of acacias west of Windsor Avenue is in decline. There is one dead tree and several others that have dead tops and will continue to decline (Photo P, page 13). There are also two other trees that appeared to be dead from my vantage point and may be coast redwood (*Sequoia sempervirens*).

Coast live oak (*Quercus agrifolia*)

This tree is growing on a steep bank southwest of the basketball courts. There are several exposed roots and they are growing over what appears to be a natural rock formation (Photo S, page 14). The canopy is sparse with some dead branches, similar to some other trees in the vicinity. There is no indication the tree is likely to fail.

Discussion and Recommendations

Monterey pine (*Pinus radiata*)

All of the pines are affected by pests and disease and are in a significant state of decline. Many overhang, or are within the fall distance of, high use pedestrian and vehicle paths, play areas, and some are within the fall distance of the high voltage utility lines and a nearby structure.



While Monterey pine can live well over a hundred years in their native coast habitats, their lifespan is reduced when grown as a landscape tree and in hotter, dryer areas. They will continue to decline and the likelihood of branch or tree failure will continue to increase. I recommend removal of trees #1-11 along Kensington Park Road, #12-21 along Highland Boulevard, and the two trees east of the community center (#25). Consider preserving the small grove of pines west of Windsor Avenue (#23) because the likelihood of them failing and hitting a target is low, and they provide valuable wildlife habitat.

Blackwood acacia (*Acacia melanoxylon*)

There are dead and dying trees in this grove and they will all continue to decline. They are in an undeveloped area with no discernable pedestrian paths in the immediate area. Consider preservation of these trees because the likelihood of them failing and hitting a target is low, and they provide valuable wildlife habitat.

Coast live oak (*Quercus agrifolia*)

The oak should be preserved. Future pruning should consist of removing dead branches one inch in diameter or greater. Care should be taken to limit the removal of any live foliage to only what is necessary to meet the minimum clearance needs.

Submitted by,
Thomas Dodge



Table 1: Tree Assessment

Tree #	Species	Condition 0=dead 5=excellent	Suitability for Preservation	Comments
1	Monterey pine (<i>Pinus radiata</i>)	1	Poor	Large deadwood and recent branch failures. There are dead sections at the base and evidence of beetle infestations (Photos A-B, page 9).
2	Monterey pine (<i>Pinus radiata</i>)	1	Poor	Co-dominant stems with significant decline throughout the canopy and evidence of beetle infestations.
3	Monterey pine (<i>Pinus radiata</i>)	1	Poor	Significant decline throughout the canopy and evidence of beetle infestations. Low LCR, all foliage is on the southwest side of the tree over the path.
4	Monterey pine (<i>Pinus radiata</i>)	1	Moderate	Small tree with co-dominant stems.
5	Monterey pine (<i>Pinus radiata</i>)	1	Poor	Significant decline throughout the canopy and evidence of beetle infestations. Low LCR, all foliage is on the southwest side of the tree over the path.
6	Monterey pine (<i>Pinus radiata</i>)	1	Poor	Significant decline throughout the canopy and evidence of beetle infestations. Low LCR.
7	Monterey pine (<i>Pinus radiata</i>)	1	Poor	Significant decline throughout the canopy and evidence of beetle infestations and pine pitch canker. Low LCR, all foliage is on the southwest side of the tree over the path.
8	Monterey pine (<i>Pinus radiata</i>)	1	Poor	Topped, with large co-dominant stems and significant decline throughout the canopy. A lean toward the playground and evidence of beetle infestations. See Photo D, page 10.
9	Monterey pine (<i>Pinus radiata</i>)	1	Poor	Significant decline throughout the canopy and evidence of beetle infestations. Low LCR, all foliage on the southwest side of the tree over the path.
10	Monterey pine (<i>Pinus radiata</i>)	1	Poor	Topped, with large co-dominant stems and significant decline throughout the canopy. A lean toward the playground and evidence of beetle infestations. See Photo E, page 10.
11	Monterey pine (<i>Pinus radiata</i>)	1	Poor	Significant decline throughout the canopy and evidence of beetle infestations. Severe pine pitch canker infection and overhanging the path. See Photos G-H, pages 10-11.
12	Monterey pine (<i>Pinus radiata</i>)	1	Poor	Topped, with co-dominant stems. Low LCR and large girdling root at the base. Evidence of beetle infestations and pine pitch canker infection. Within the fall distance of the high voltage utility lines on the east side of Highland Blvd.
13	Monterey pine (<i>Pinus radiata</i>)	1	Poor	Topped, with co-dominant stems. Low LCR and a depressed area of limited growth that may indicate a large girdling root below grade (Photo J, page 12). Evidence of beetle infestations and pine pitch canker infection. Within the fall distance of the high voltage utility lines on the east side of Highland Blvd.



Tree #	Species	Condition 0=dead 5=excellent	Suitability for Preservation	Comments
14	Monterey pine (<i>Pinus radiata</i>)	1	Poor	Topped, with co-dominant stems and a low LCR. Large girdling root at the base, and fiber buckling on the lower stem which occurs when the linear load exceeds the wood strength (Photo K, page 12). Evidence of beetle infestations and pine pitch canker infection. Within the fall distance of the high voltage utility lines on the east side of Highland Blvd.
15	Monterey pine (<i>Pinus radiata</i>)	1	Poor	Topped, with co-dominant stems. Low LCR and large girdling root at the base. Evidence of beetle infestations and pine pitch canker infection. Leans to the south and is within the fall distance of 92 Highland Blvd. See Photo I, page 11.
16	Monterey pine (<i>Pinus radiata</i>)	1	Poor	Topped, with co-dominant stems. Low LCR, girdling root at the base, and a trunk wound on the lower stem. Evidence of beetle infestations and pine pitch canker infection.
17	Monterey pine (<i>Pinus radiata</i>)	1	Poor	Topped, with co-dominant stems. Evidence of beetle infestations and pine pitch canker infection. Low LCR and canker lesions on the lower stem.
18	Monterey pine (<i>Pinus radiata</i>)	1	Poor	Topped, with co-dominant stems. Evidence of beetle infestations and pine pitch canker infection. Low LCR and a bow toward the west.
19	Monterey pine (<i>Pinus radiata</i>)	1	Poor	Topped, with co-dominant stems, a low LCR, and significant decline in the canopy. Fiber buckling on the lower stem which occurs when the linear load exceeds the wood strength.
20	Monterey pine (<i>Pinus radiata</i>)	1	Poor	Topped, and all but one of the co-dominant stems have been removed. Significant stem decay from grade up about 10 feet, and a large cavity at the base. This tree is an imminent risk and should be removed as soon as scheduling will allow. See Photo M, page 12.
21	Monterey pine (<i>Pinus radiata</i>)	1	Poor	Significant decline throughout the canopy and a large girdling root at the base. Evidence of beetle infestations and pine pitch canker. See Photos N and O, page 13.
22	Blackwood acacias (<i>Acacia melanoxylon</i>) west of Windsor Ave.	1	Moderate	The small grove of acacias west of Windsor Avenue is in decline. There is one dead tree and several others that have dead tops and will continue to decline. There are also two other dead/dying trees here that may be coast redwood (<i>Sequoia sempervirens</i>). See Photo P, page 13 and Figure 2: Site Sketch B, page 8.
23	Monterey pines (<i>Pinus radiata</i>) west of Windsor Ave.	1	Moderate	There is one dead tree in this small grove of pines. There is decline throughout the canopies and evidence of beetle infestations and pine pitch canker. One of the trees leans to the south over an informal path that leads up from Arlington Ave. See Photos Q, R, pages 13-14 and Figure 2: Site Sketch B, page 8.



Tree #	Species	Condition 0=dead 5=excellent	Suitability for Preservation	Comments
24	Coast live oak (<i>Quercus agrifolia</i>)	3	Good	The structure of this tree is good, but the health is struggling (Photo S, page 14). Many local coast live oaks are struggling from years of drought, and there are similar oaks on this property. See Discussion and Recommendations for care recommendations.
25	2-Monterey pine (<i>Pinus radiata</i>)	0	Poor	There are two dead trees near the playground that should be removed as soon as scheduling will allow. See Photo T, page 14.



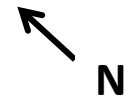


Figure 1: Site Sketch A



Figure 1: Site Sketch B



Photo A, tree #1

Pitch tubes and frass from red turpentine beetle.



Photo B, tree #1

Stem damage and dead sections of basal flare.

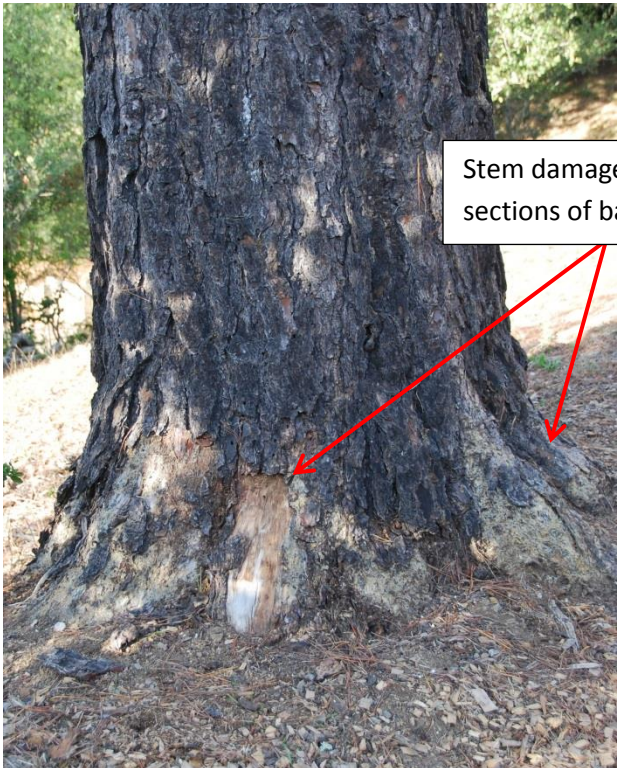


Photo C, trees #2 - #6

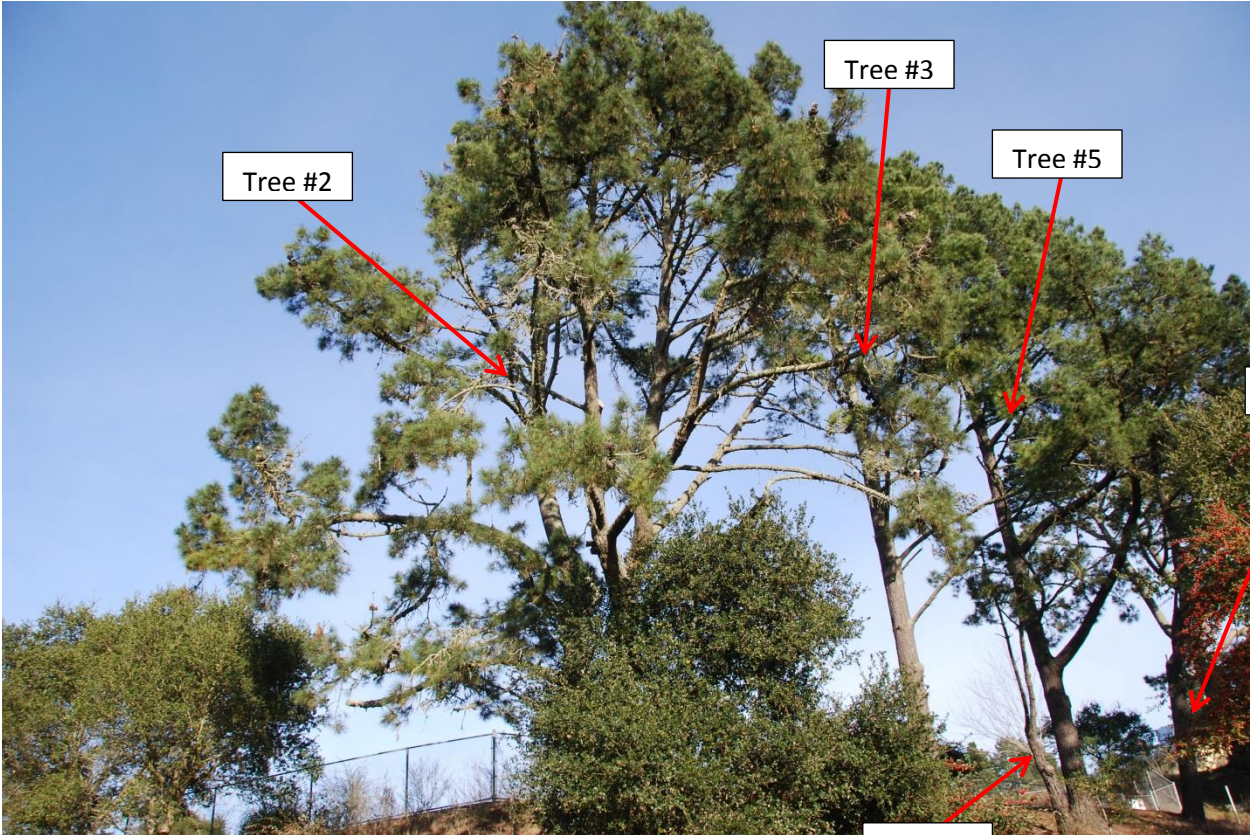


Photo D, tree #8

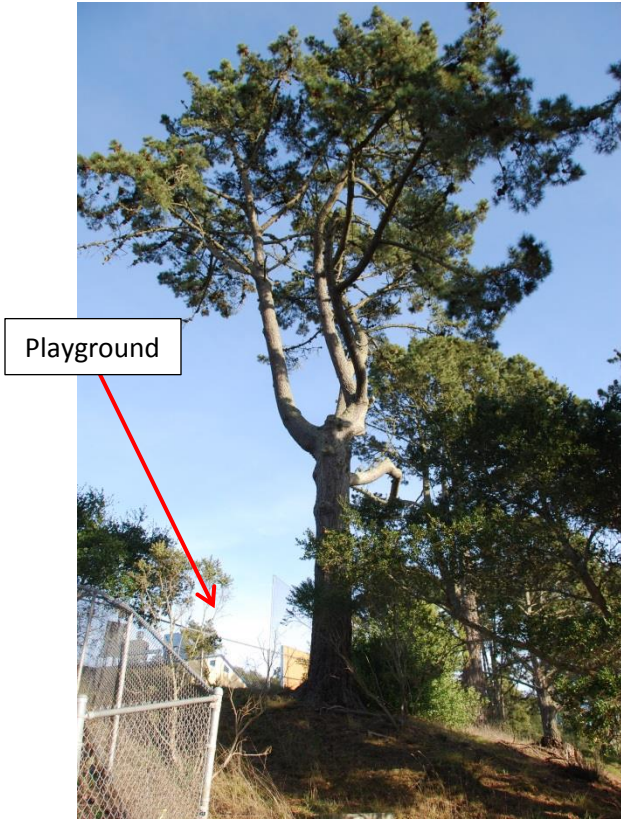


Photo E, trees #9 and #10

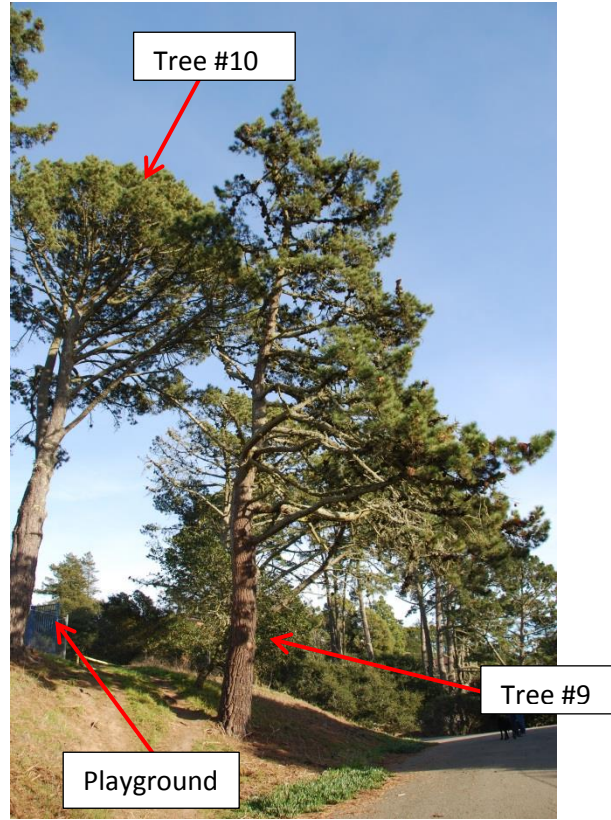


Photo F, tree #10

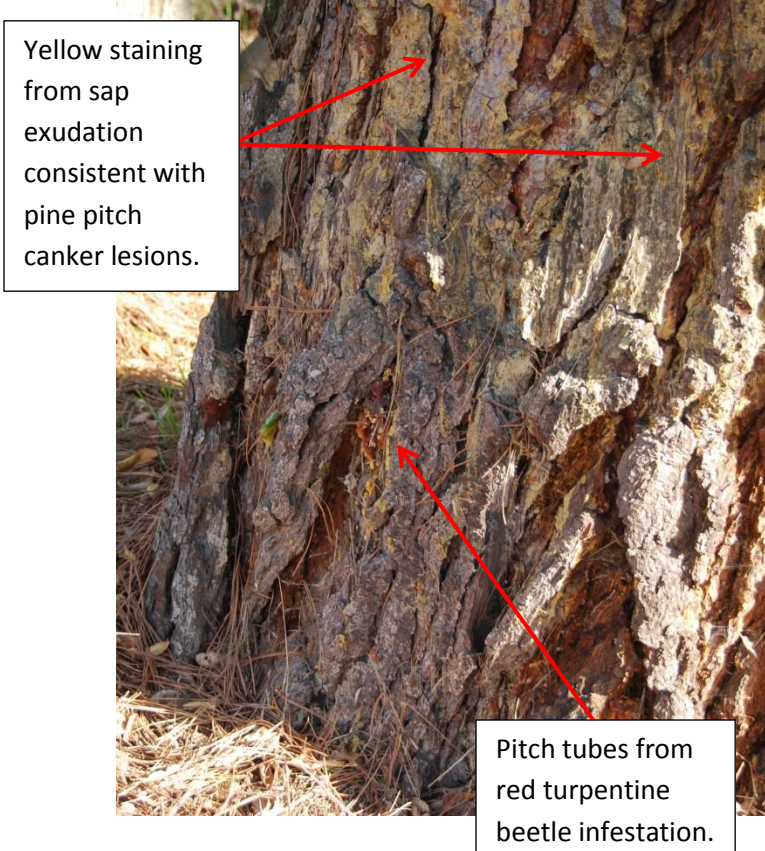


Photo G, tree #11

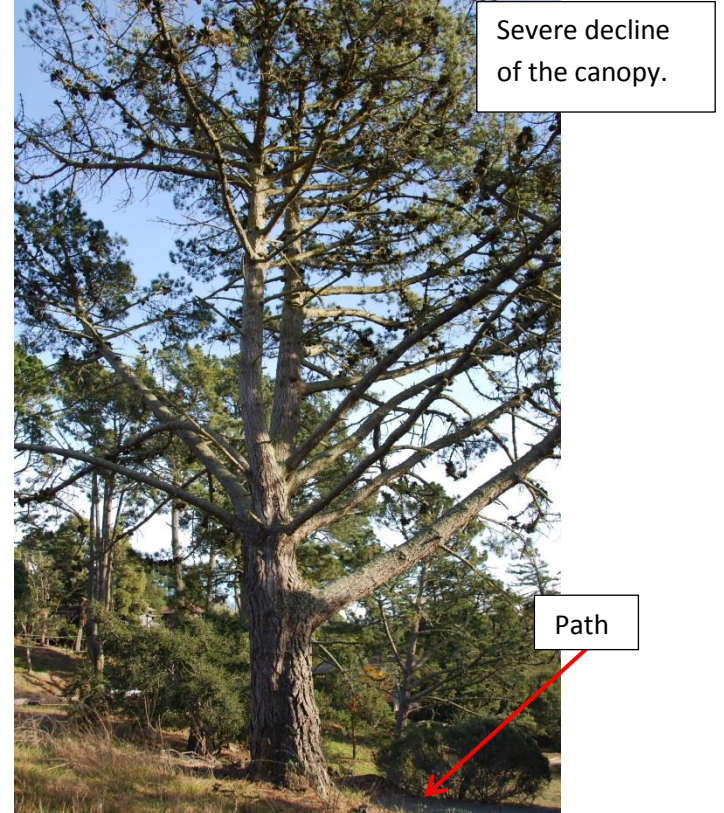
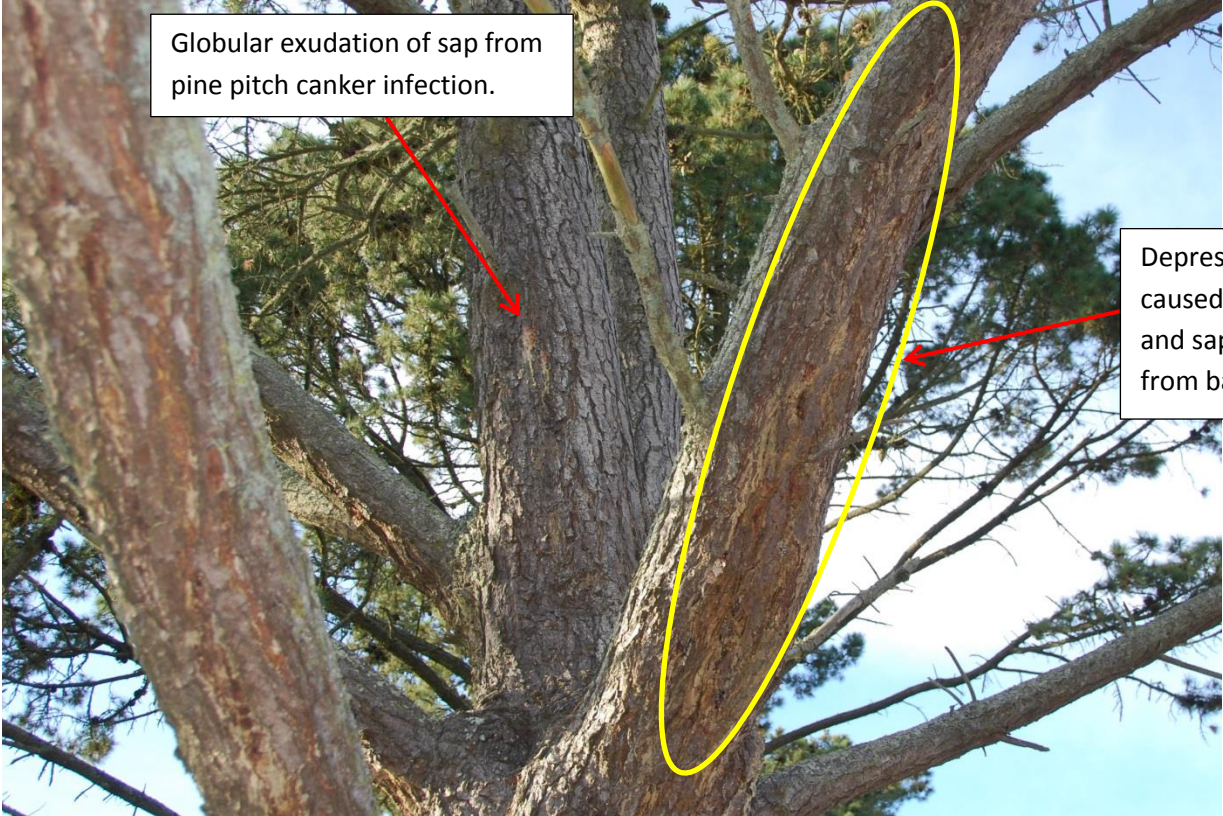


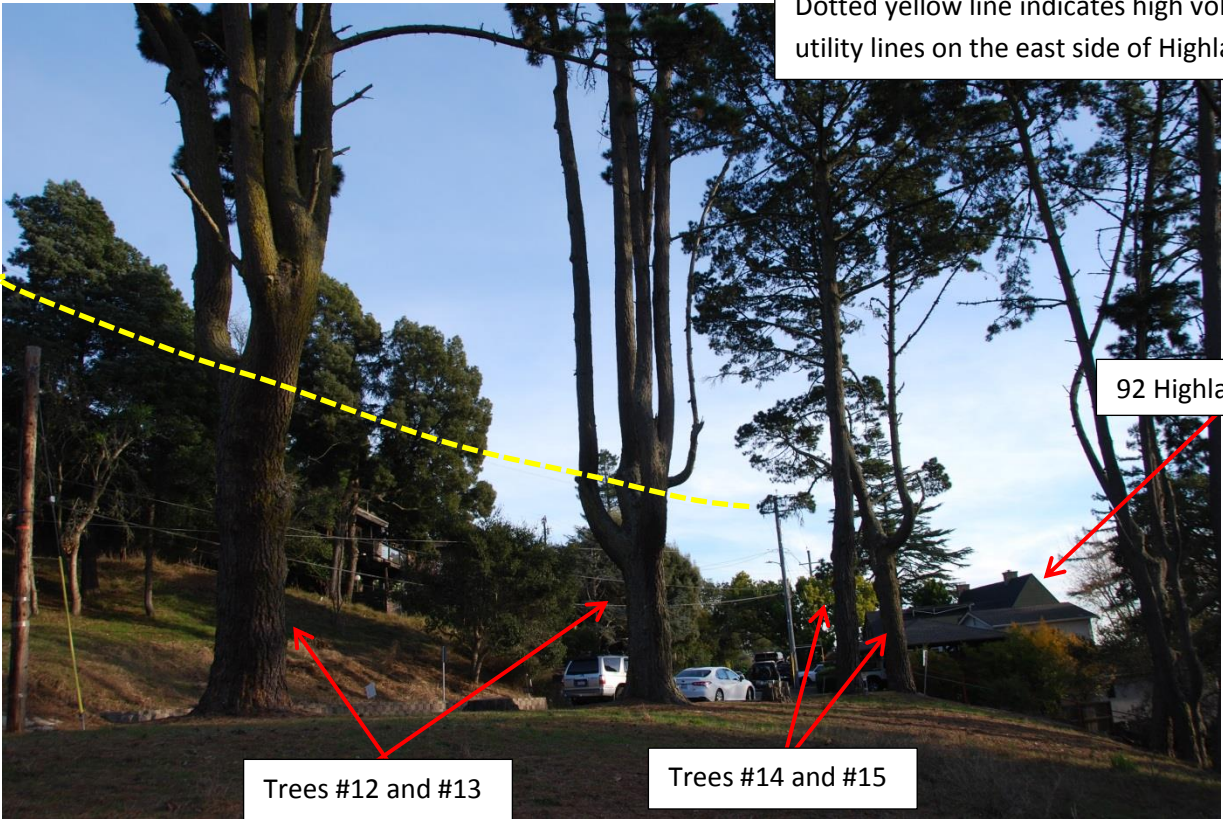
Photo H, tree #11



Globular exudation of sap from pine pitch canker infection.

Depressed section caused by canker, and sap exudation from bark lesions.

Photo I, trees #12 - #15



Dotted yellow line indicates high voltage utility lines on the east side of Highland Blvd.

92 Highland Blvd.

Trees #12 and #13

Trees #14 and #15



Photo J, tree #13

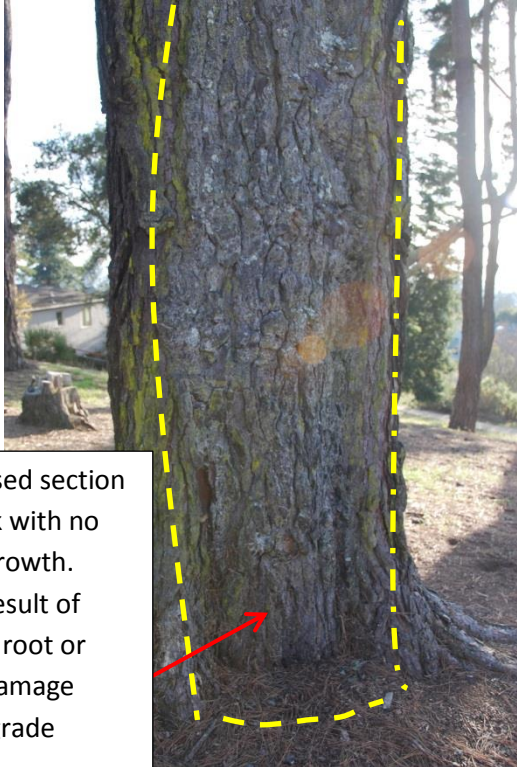


Photo K, tree #14

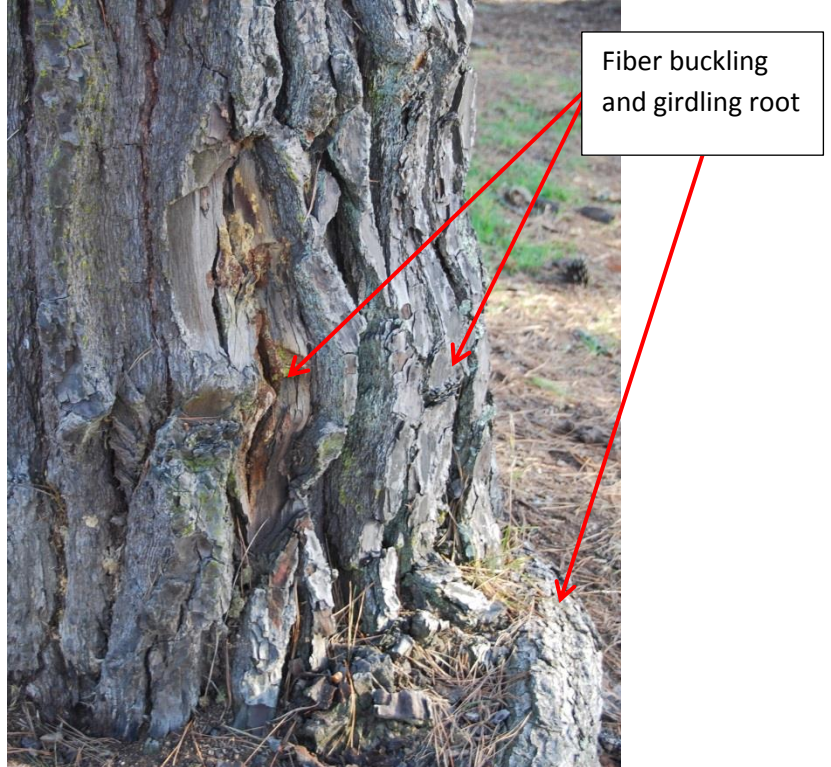


Photo L, trees #16 - #20



Photo M, tree #20

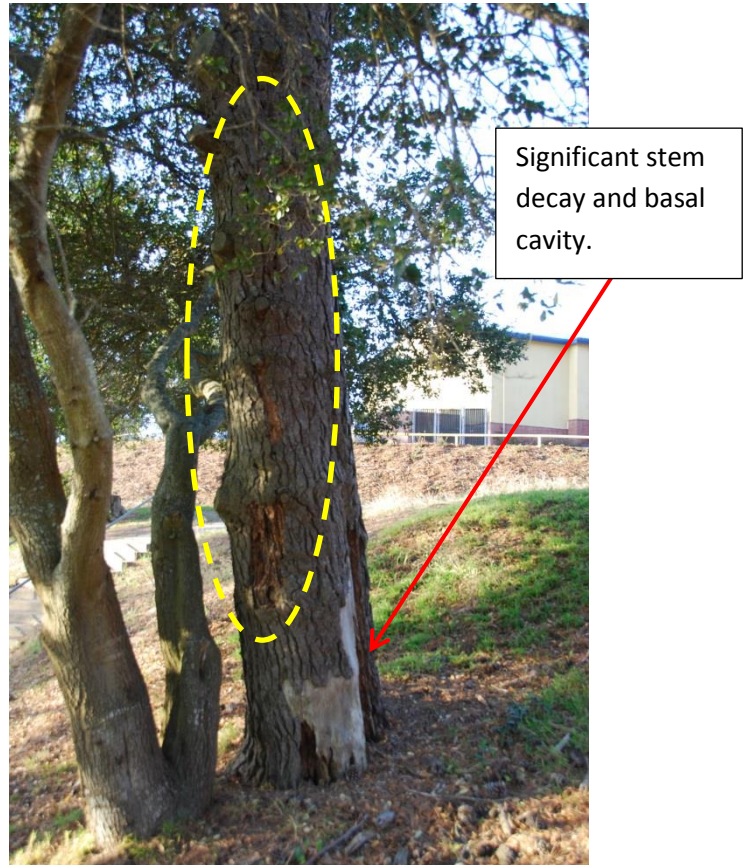


Photo N, tree #21



Photo O, tree #21

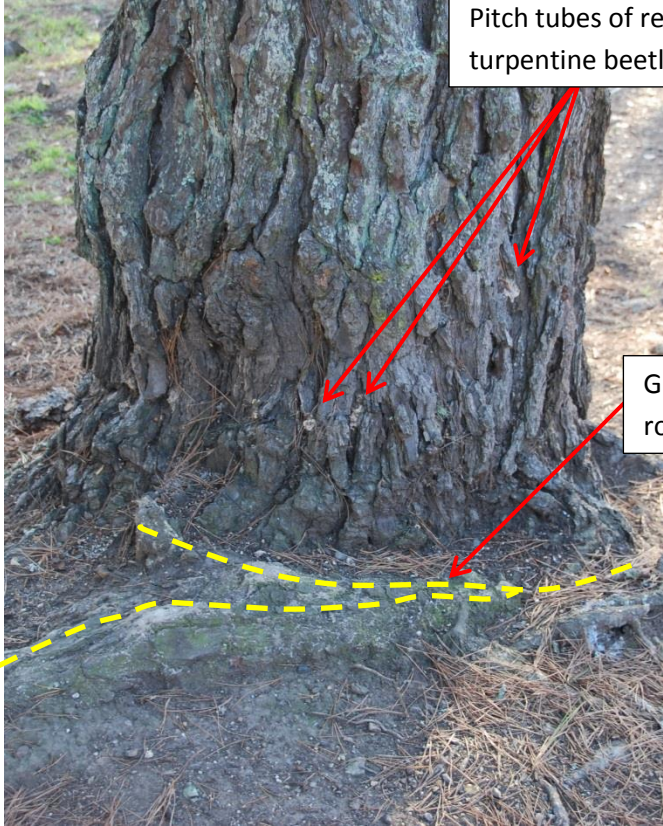


Photo P, #22 Acacias



Photo Q, #23 Pines



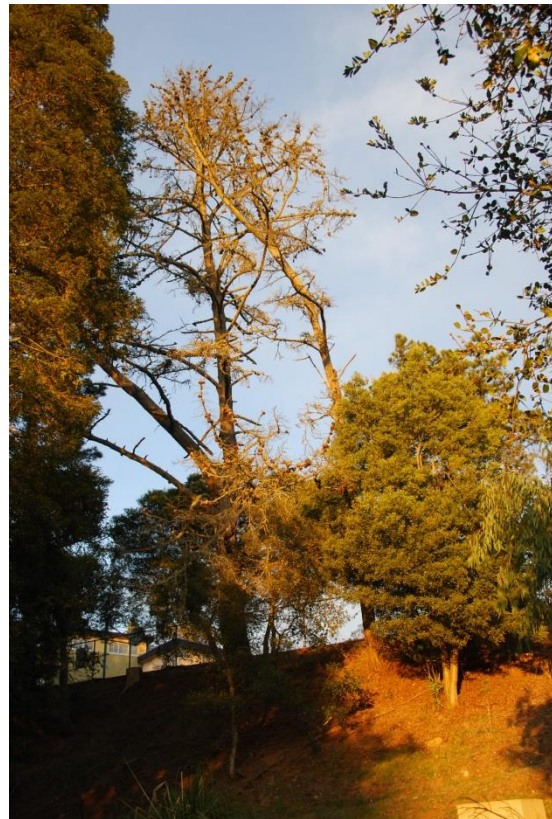
Photo R, #23 Pines



Photo S, tree #24



Photo T, #25





Arbor Culture Consulting

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Any legal description provided to the consultant is assumed to be correct. Any titles or ownership of properties are assumed to be good and marketable. All property is appraised or evaluated as though free and clear, under responsible ownership and competent management.

All property is presumed to be in conformance with applicable codes, ordinances, statutes, or other regulations.

Care has been taken to obtain information from reliable sources. However, the consultant cannot be responsible for the accuracy of information provided by others.

The consultant shall not be required to give testimony or to attend meetings, hearings, conferences, mediations, arbitrations, or trials by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services.

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