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Planning Division



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REPORT DATE: February 25, 2022

REPORT TYPE: ARBORIST REDWOOD TREE ASSESSMENT

SITE LOCATION: 52-54 Fremont Road, San Rafael, California 94901 **A.P.N.:** xx

INSPECTION DATE(S): 11/ 20/2021; 1/7/22; 1/11/22; 1/21/22; and 2/24/22

ARBORIST(S): James Lascot

CLIENT / FIRM: Mr. Mark Hanf, property owner

PURPOSE/ISSUE: Arborist assessment of redwood trees and the impacts from the proposed development.

INSPECTION / REPORT TYPE: Visual inspection from the ground with excavation, but without coring, boring or sampling. This is an abbreviated report and more detailed report can be produced upon request.

SUMMARY: There are seven subject redwood trees that we were asked to assess that are located near or within the area of the proposed development. All the subject trees were proposed for removal within the proposed plans. The subject trees consisted of all native coast redwood trees with two Heritage size trees (T5 and T11) and five Protected size trees (T6, T7, T8, T9, and T10). It was my understanding that all the subject tree removals were approved within the priorly approved plans by the San Rafael Planning Department, but the project had been appealed to the City Council and there was much concern regarding the tree removals. I was asked to assess the impacts of the proposed development and if any of the proposed tree removals could be preserved.

I found that one subject Heritage size redwood (T11) and two Protected size trees (T7 and T8) had codominant trunks that are considered significant chronic structural defects within the arboricultural industry and were considered poorly suited specimens for preservation despite the proposed development. There appeared to be no mitigation measures that could preserve these trees from the proposed development. I agreed that these trees should be removed.

There was one large Heritage size redwood trees T5 that had a proposed soil cut for a retaining wall for the rear (south) portion of the proposed house structure. The proposed cut would have removed approximately 25%-33% percent of the root zone of this tree. In my experience I have

found that coast redwood trees, when located within or near their native habitat could survive this amount of root loss and remain viable with long-term health. I had recommended that we perform an exploratory excavation to determine what roots were located within the area of the soil cut to better determine the actual root locations and the viability of preserving this tree. The exploratory excavation was performed using hand tools, preserving any roots over two-inches (2") in diameter. The excavation was at the area of the proposed soil cut to a depth of approximately 24" and in some areas, close to this tree, 36" in depth. There were no significant roots over two-inches in diameter found within the area of the proposed cut. There was a significant root (approx. 6" diameter) directly below the tree that but did not appear to be heading in the direction of the proposed cut. We had to decide whether to dig deeper within the topsoil to see if we could find any more significant roots before hitting bedrock, where not significant roots were likely to be found but we had decided that was too deep a cut and soil stability would become an issue if we continued our exploratory excavation any deeper.

During the process of exploratory excavation, we discovered that this tree (T5) had a major trunk cavity on the backside (northwest) of this tree. Further investigation found that this tree had a significant gap in the and that the trunk of this tree was hollow at its base. The trunk decay was significant, but the tree had already compartmentalized the wound. The cause of the hollow trunk appeared to be from a prior fire incident.

In conclusion, I have determined that the Heritage tree T11 with Protected trees T8 and T9 are so close to have a significant and chronic structural defect (co-dominant trunks) that make them poor specimens for preservation. I also find that there are no mitigation measures that could reasonably spare them from the currently proposed development. It should also be noted that these trees may also have internal trunk damage if they were exposed to the same fire incident as tree T5, but the examination of the trunks has not been performed at this time. I would recommend removal of these tree due to poor structural integrity and the for the proposed development.

Tree T5 also has a significant structural defect (trunk is hollow at its base) and would normally be recommended for removal of this tree due to poor structure and for the proposed development.

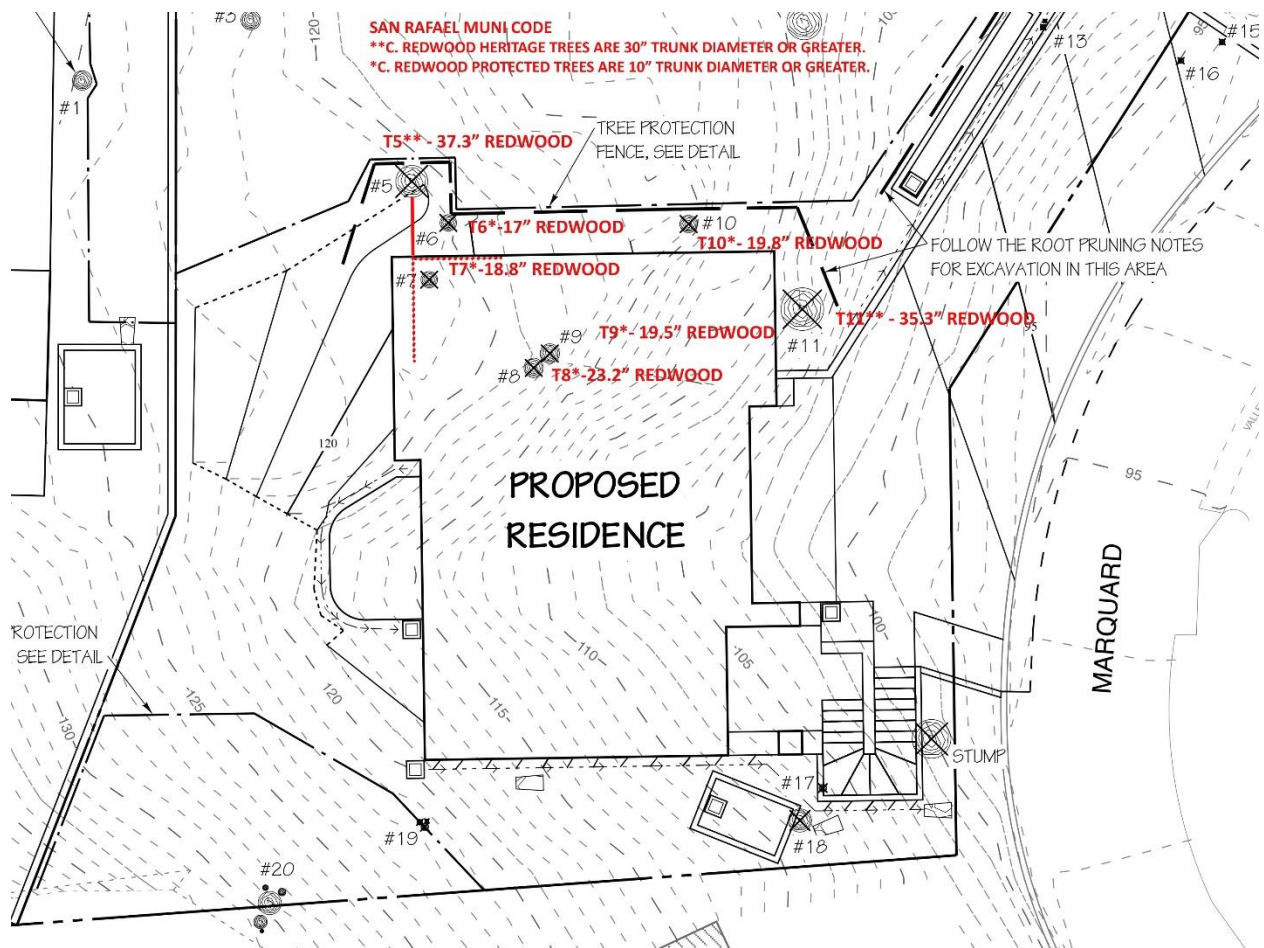
I have discussed another option with the owner, and I find, if public sentiment is to be considered in preserving this tree, that this tree could be preserved, with long-term viability, with proper mitigation. Most arborist would not preserve this tree, but I feel confident that I could preserve this tree although no arborist would guaranty its long-term viability, and neither would I. The remedy, although a bit unorthodox, is to approve the current project, in its current form, with the removal of this tree, and allow the owner to attempt to save this tree. I could

provide a Tree Protection Plan as a condition of approval and all attempts could be made to preserve this tree.

TREE LOCATION: See Tree Map shown as a portion of the approved Tree Plan 1/11/21.

NOTE:

- 1) Within the proposed plan, redwood T5 root losses are approximated at 25%.
- 2) Minimizing overcut of foundation will also minimize root losses to Redwood T5.
- 3) Redwood trees T8 and T9 should be considered the same tree with two co-dominant trunks with imbedded bark and a chronic structural defect.
- 4) redwood t11 has two co-dominant trunks with embedded bark and a chronic structural defect. Its location on a steep slope contributes to determining it a hazardous tree.



SUBJECT TREE No. T5: Coast Redwood (*Sequoia sempervirens*)

DESIGNATION: Heritage size tree (over 50-inches measured at 24-inches above grade).

HEALTH: Apparently healthy foliage, shoot growth, and no signs of disease or pests.

CONDITION: Poor; this tree is hollow at its base with an approximately thirty-six inch (36") cavity. The cavity has burn marks throughout. The opening at the base of the trunk is approximately 23 inches wide. The height of the cavity within the trunk was not determined but may be estimated as approximately 4-6 feet above soil grade. Most of the structural roots appear intact.

DISCUSSION: The subject is a mature native tree located approximately five feet of the proposed rear corner of the proposed residence. Exploratory excavation to a depth of 24"-36" was performed on 1/7/22 and 1/21/22 and further examinations on 2/24/22. There was one 3" diameter root that was found in the trench, but it was likely coming from tree T6 and not from tree T5. There were no other significant roots (over ½ inch diameter) within the proposed soil cut of the retaining wall from this tree. One six-inch (6") was discovered at the base of the trunk but did not appear to be in the direction of the proposed soil cut. The trunk cavity at the base is significant but most structural roots appeared intact.

CONCLUSION: Due to the amount of significant negative attributes of this tree and location in proximity to the proposed development, the removal of this should be considered.

RECOMMENDATIONS:

Option 1: Removal of this tree for the reasonable economic enjoyment of the property. The stump should be ground or removed as it will re-sprout from its stump.

Option 2: Approve its removal but every effort will be taken to preserve this tree.

PHOTOGRAPH 1 - Subject tree No. T5 (right), T6 (center), and T7 (left).



PHOTOGRAPH 2 - Subject redwood tree No. T5 following root excavation. Note: There is a six-inch root directly below the trunk but does not appear to be headed toward proposed soil cut.



PHOTOGRAPH 3 - Subject redwood tree No. T5 showing a closer view of the six-inch root directly below the trunk but does not appear to be headed toward proposed soil cut.



PHOTOGRAPH 4 - Subject redwood tree No. T6 showing the presence of a three-inch (3") root. Note: This root does not appear to be from redwood T5.



PHOTOGRAPH 5 - Subject redwood tree No. T6 showing a closer view of a three-inch (3") root. Note: This root does not appear to be from redwood T5.



PHOTOGRAPH 6 - Subject redwood tree T6 (near left) and tree T7 (far right). Down slope is tree T10 (left) and tree T11 (right). Note: No roots over ½ inch were found in any of trenches.



PHOTOGRAPH 7 – Following the exploratory excavation a root sprout was found between redwood tree No. T6 (right) and T7 (left). Note: root sprouts are not considered significant roots for the health of parent trees.



PHOTOGRAPH 8 - Subject redwood trees No. T8 (left) and T9 (right) can be considered one tree with co-dominant trunks with embedded bark which is a chronic structural defect.



PHOTOGRAPH 9 - Subject redwood tree No. T11 with co-dominant trunks with embedded bark which is considered a chronic structural defect.



PHOTOGRAPH 10 - Subject redwood tree No. T5 showing trunk cavity.



PHOTOGRAPH 11 - Subject redwood tree No. T5 showing trunk cavity.



PHOTOGRAPH 12 - Subject redwood tree No. T5 showing trunk cavity.



PHOTOGRAPH 13 - Subject redwood tree No. T5 showing trunk cavity.



PHOTOGRAPH 14 - Subject redwood tree No. T5 showing trunk cavity.



A handwritten signature in black ink, appearing to read "James Lascot", written over a horizontal line.

James Lascot
Principal / Consulting Arborist
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