



October 14, 2024

Gordon K. Wong
GKW Architects
710E Mc Glinchy Ln., Suite 109
Campbell, CA 95008

Subject: **Arborist Report**
434 Crescent Ave., Sunnyvale CA

Dear Mr. Lui:

GKW Architects is proposing to redevelop the 434 Crescent Ave. site, in Sunnyvale California. Woodreeve Consulting was asked to prepare an **Arborist Report** for the project to meet the City of Sunnyvale requirements. This letter responds to that request.

Summary

Eight trees were assessed in the rear yard of the 434 Crescent Ave. property (#489-496). Seven of the trees were coast live oaks (*Quercus agrifolia*) and tree #493 was a Calif. pepper (*Schinus molle*).

Coast live oaks were generally semi-mature and multi-stemmed, with trunk diameters from 4" to 18", except for #492 and 496 which were both young. Three of the coast live oaks were in good condition, 4 were in fair condition, and #496 was in poor condition.

Calif. pepper #493 was also semi-mature and multi-stemmed. It was in fair condition but had a sparse crown and an active beehive at the base (an indication of internal decay).

Five of the trees met the City of Sunnyvale's criteria for a *Significant-size* tree, per Municipal Code Chapter 19.94, including #489-491, 493 and 495.

I reviewed Site Plan (Sheet G000), prepared by GKW Architects (dated 8.13.2024) to assess impacts to trees. The project proposes to remodel the existing single-family residence and construct 4 new townhomes in a 3-story building. A new driveway and two guest parking spaces would be constructed along the west side of the property.

Based on the current plans, all 8 trees would be impacted by the proposed changes, requiring their removal. This includes all 5 *Significant Size* trees.

I estimated the value of the 8 trees identified for removal as **\$54,250** and the value of the 5 *Significant-trees* as **\$51,200** (see the attached **Appraisal worksheet**). Table 3 provides the estimated value for individual trees.

Project and Site Description

The site has a small single-family, one-story home located at the north end of the property, adjacent to Crescent Avenue. The trees were located at the south end of the property, in the rear yard.

The project proposes to remodel the existing single-family residence and construct 4 new townhomes in a 3-story building, with two stories of living space above garages. A new driveway and two guest parking spaces would be constructed along the west side of the property.

Regulatory Context

The City of Sunnyvale Municipal Code Chapter 19.94 (Tree Preservation) protects trees of 'Significant Size' on private property and Municipal Code Chapter 13.16 (City Trees) protects all trees ≥ 4 " in diameter within the right-of-way along City streets.

Per Chapter 19.94:

- A "Tree" means any woody plant which has a trunk thirteen inches or more in circumference (4" in diameter) at four and one-half feet above ground level.
- "Significant size" means a tree thirty-eight inches or greater in circumference (≥ 12 " in diameter) measured four and one-half feet above ground for single-trunk trees.
- For multi-trunk trees "Significant size" means a tree which has at least one trunk with a circumference thirty-eight inches or greater (≥ 12 " in diameter) measured four and one-half feet above ground level, or in which the measurements of the circumferences of each of the multi-trunks, when measured four and one-half feet above the ground level, added together equal an overall circumference one hundred thirteen inches or greater (≥ 36 " in diameter).
- Heritage trees are designated by the Heritage Preservation Commission.

Project Limitations

The following plans were reviewed relative to the proposed development. These plans, especially if labeled 'Schematic', 'Preliminary' or 'Draft', do not typically include all the information required to make a complete and thorough assessment of impacts to trees. If plans are preliminary, the Arborist Report is considered preliminary.

- General Info and Site Plan (Sheet G000), prepared by GKW Architects (dated 8.13.2024).

Tree Resource and Condition

I visited the site on July 18, 2024. Eight trees were assessed in the rear yard of the 434 Crescent Ave. property and tagged as #489-496. Seven of the trees were coast live oaks (*Quercus agrifolia*) and tree #493 was a Calif. pepper (*Schinus molle*).

In general, the coast live oaks were semi-mature and multi-stemmed, with trunk diameters from 4" to 18". However, coast live oaks #492 and 496 were both young (6" and 9" in diameter). Three of the coast live oaks were in good condition (#490, 491 and 495), 4 were in fair condition (#489 and 492-494) and #496 was in poor condition.

Calif. pepper #493 was also multi-stemmed, with trunk diameters from 10" to 15". It was in fair condition but had a sparse crown and an active beehive at the base (an indication of internal decay).

The photos and descriptions on the following pages provide an overview of the trees and their health and structure. A description of each tree is provided in the **Tree Data Form** and their locations are shown on the **Tree Location Map** (see attachments).



Photo 1 (above): Looking south at the group of trees growing in the rear yard of the 434 Crescent Ave. property. Seven of the trees were coast live oaks, including 5 semi-mature trees and 2 young trees. Condition was good for 3 of the coast live oaks, fair for 4 and #496 was in poor condition. Calif. pepper #493 was centrally located and in fair condition.



Photo 2 (above L): Looking southwest at coast live oaks #489-491, growing along the eastern fence line. Several stems had been removed from the west side of the trees and they were sprouting below the cuts. **Photo 3** (above R): Looking west at coast live oak #492, growing along the southern fence line. It was suppressed and had a strong lean to the south.



Photo 4 (L): Calif. pepper #493 was multi-stemmed and in fair condition. Several stems had been removed. The canopy was sparse and there was an active beehive in a cavity at the base of the tree on the south side.

Inset below shows the location of the cavity and beehive (circle).



Photo 5 (L): Looking southeast at coast live oak #494. The tree was a stump sprout with poor form and structure. It had several stems measuring from 4" to 7" in diameter that had fused at the base (inset below). It was in fair condition due to its vigor but had Low suitability for retention due to its poor form and structure.





Photo 6 (above L): Looking southeast at coast live oak #495, growing along the southwestern corner of the property. The tree measured 18" in diameter and was in good condition but had a relatively small crown for the size of the trunk. There were old topping points in the upper crown.

Photo 7 (above R): Looking east at coast live oak #496 (circle). This young tree had partially failed at the base. It had a strong lean to the north over the adjacent driveway, and roots were visibly uplifted. It was in poor condition.

Protected status

Five of the trees met the City of Sunnyvale's criteria for a *Significant-size* tree, per Municipal Code Chapter 19.94. Specifically, all the *Significant-size* trees had at least one trunk measuring ≤ 12 " in diameter. This includes trees #489-491, 493 and 495.

Suitability for Retention

Irrespective of impacts from development, some trees are inappropriate for retention. Suitability for retention ratings incorporate tree health, structure, species characteristics, tree age and longevity and tree-site conflicts. The goal is to identify trees that are healthy, well-structured and that can tolerate impacts from proposed site changes.

Factors affecting Suitability for Retention ratings, include:

- **Tree health and structure:** The better the health and structure, the more tolerant of development impacts and the less likely the tree will fail. Tree #496 is an example of a tree with a high likelihood for failure.
- **Species characteristics:** Species differ in their tolerance to root loss, grade changes, hydrological changes and pruning. In addition, some species are listed as invasive, as defined by the California Invasive Plant Inventory Database (<https://www.cal-ipc.org/plants/profiles/>) and are considered inappropriate for retention.

- **Tree age and longevity:** Older trees are less capable of responding to site changes and disturbance and can be expected to have shorter life-spans than younger trees.
- **Tree-Site Conflicts:** Where large-growing species have been planted in tight spaces or beneath overhead utilities and require ongoing maintenance (root or crown pruning), they may not be appropriate for retention. The tree may have simply outgrown the available space, or the species may produce fruit/litter that represents a mismatch between the tree and its planting location.

Table 1 provides a summary of the Suitability for Retention ratings. Trees in the High category represent the best opportunities for successful tree preservation. Those in the moderate category may be preserved but will require more space, management and monitoring to successfully preserve. I generally do not recommend retaining trees in the Low category.

Table 1: Suitability for Retention
 434 Crescent Ave., Sunnyvale CA

High	These are healthy, well-structured trees that can be expected to continue to provide benefits for many years.	None of the trees were considered Highly suitable for retention.
Moderate	These are trees with moderate health and structural defects that can be managed but which may not be correctable. They can be expected to continue to provide benefits, but may have a shorter life-expectancy and require more management than Highly suitable trees.	4 Coast live oaks(#489-491 and 495) were of Moderate suitability for retention.
Low	These are trees in decline or with structural defects that can't be managed. The tree may be inappropriately located on the site, requiring ongoing management, often to the detriment of tree health and structure. Any benefits the tree provides are limited and outweighed by the costs of management.	3 Coast live oaks (#492, 494 and 496) and Calif. pepper #493 were of Low suitability for retention.

Project Impacts

The project proposes to retain and remodel the existing single-family residence and construct 4 new townhomes in a 3-story building south of the existing residence. Townhomes would have two stories of living space above garages. A new driveway and two guest parking spaces would be constructed along the west side of the property.

I reviewed the following plan(s) to estimate impacts to the trees. The plans included sufficient information about the proposed changes, including trunk locations for all the trees, to make an accurate assessment of impacts to the trees.

- Master Planting Plan (Sheet L1 - dated 8.13.2024), and General Site Plan (Sheet G000 - dated 9.12.2024), prepared by GKW Architects.

Primary impacts to trees would be associated with the following:

- Construction of the new townhome building,
- Construction of the driveway and guest parking.

Removed Trees

Based on the current plans, all 8 trees would be directly impacted by the proposed changes, requiring their removal. This includes all 5 *Significant Size* trees.

Specific impacts to trees would include:

- Trees #489-491 and #495 and 496 would be directly impacted by the townhome building and/or parking.
- Trees #493 and 494 would be within a few feet of the proposed townhome building and/or parking.
- Tree #492 is of Low suitability for retention and is considered inappropriate for retention.

Table 2: Assessment of Impacts
 434 Crescent Ave., Sunnyvale CA

Tree #	Species	Diameter	Significant	Disposition	Impacts
489	Coast live oak	16,13	Yes	Remove	Within building footprint
490	Coast live oak	14,12	Yes	Remove	Within building footprint
491	Coast live oak	18,15,10	Yes	Remove	Within building footprint
492	Coast live oak	6	No	Remove	Low suitability for retention
493	Calif. pepper	15,14,12,10	Yes	Remove	Impacted by building footprint
494	Coast live oak	7,7,5,4	No	Remove	Within 4' of parking
495	Coast live oak	18	Yes	Remove	Within parking
496	Coast live oak	9	No	Remove	Within building footprint

Color coding:

Root loss within 1x DBH

Root loss within 2x DBH

Root loss within 3x DBH

Root loss ≥5x DBH

Estimate of value

As part of their development application requirements, the City of Sunnyvale requires the value of all the trees be established using the 'current edition of the *Guide for Plant Appraisal*'.

The 10th Edition of the *Guide for Plant Appraisal*, is the current edition (published in 2018 by the International Society of Arboriculture). Together with its companion document, *Species Classification and Group Assignment* (published in 2004 by the Western Chapter of the International Society of Arboriculture), they describe the industry standard methods used in tree and plant appraisal.

The *Guide* describes several approaches to appraising the value of plants and trees. The most appropriate in the case of widely available landscape plants is the *Trunk Formula Technique*, a reproduction method based on the following factors:

- Tree size, as measured in terms of trunk diameter at 4.5' above the ground.
- Tree condition, as described in the **Tree Data Form**.
- Functional limitations, which account for interactions between the tree and site that limit future plant development.
- External limitations, which account for factors outside the control of the tree owner, such as ordinances that impact tree management. In this case, there were no external limitations noted.

I estimated the value of the 8 trees identified for removal as **\$54,250** and the value of the 5 *Significant-trees* as **\$51,200** (see the attached **Appraisal worksheet**). Table 3 provides the estimated value for individual trees.

Table 3: Estimated value of trees identified for removal
 434 Crescent Ave., Sunnyvale CA

Tree #	Species	Diameter	Significant	Estimated Value (\$)
489	Coast live oak	16,13	Yes	7,800
490	Coast live oak	14,12	Yes	8,750
491	Coast live oak	18,15,10	Yes	16,550
492	Coast live oak	6	No	550
493	Calif. pepper	15,14,12,10	Yes	12,150
494	Coast live oak	7,7,5,4	No	1,850
495	Coast live oak	18	Yes	5,950
496	Coast live oak	9	No	650
Total				54,250

Please let me know if you have any questions regarding my observations or recommendations.

Woodreeve Consulting



John Leffingwell
 Board Certified Master Arborist #WE-3966B
 Registered Consulting Arborist #442

Exhibits: **Appraisal Worksheet**
 Tree Data Form
 Tree Location Map

General Limitations

- My assessment of the trees is based on a visual evaluation of external conditions and defects observable from the ground. While defect-free trees do fail, especially under extreme wind loading or wind and rain, identifying trees with observable defects is a critical step in enhancing safety.
- Trees are dynamic, living entities that change over time. My assessment of the tree(s) is based on their condition at the time of my inspection. Trees should be inspected annually to monitor for changes in health and structure and following storms. Initiating these inspections is the tree owner/manager's responsibility.
- Trees require management to perform well in a giving setting. Periodic pruning, mulching, pest management and irrigation are typically required.
- Any legal description provided to the consultant is assumed to be correct.
- Care has been taken to obtain all information from reliable sources; however, the consultant can neither guarantee nor be responsible for the accuracy of information provided by others.
- Sketches, drawings, and photographs in this report are intended for visual aids. They are not necessarily to scale and should not be construed as engineering or architectural reports or surveys unless expressed otherwise.
- Information contained in this report covers only those items that were examined and reflects the conditions of those items at the time of inspection.
- The inspection is limited to visual examination of accessible items without dissection, excavation, probing, or coring.

Largest commonly available = 24" box

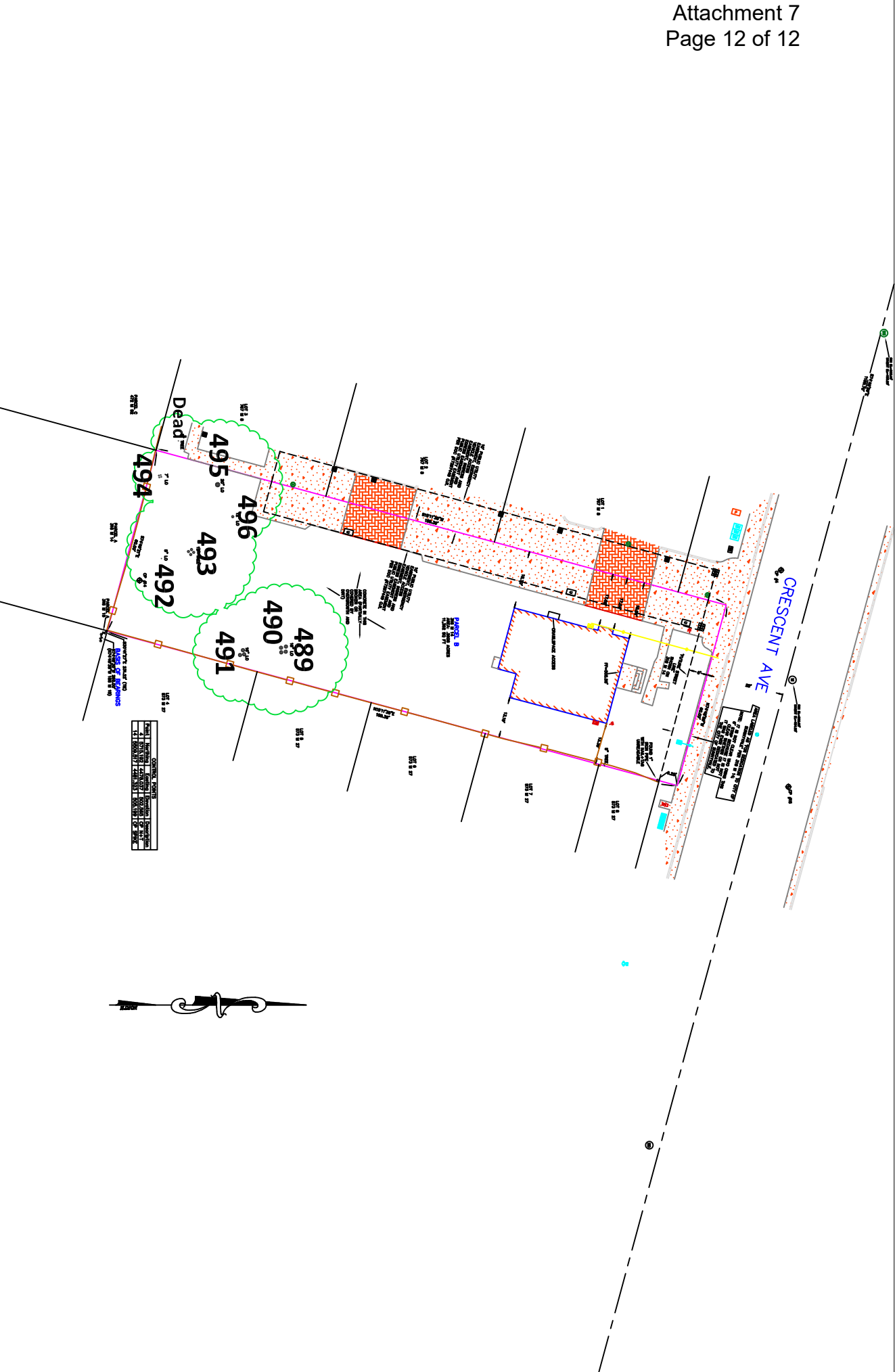
Tree No.	Species	Trunk Diameter	Cross sectional Area	Condition 0 to 1.0	Functional limitation	External limitation	Replacement tree Diameter XS area		Total Cost	Unit Tree cost	Appraised Trunk area	Basic tree cost	Appraised value	Rounded value (\$50)
489	Coast live oak	16,13	334	0.5	0.7	1	2.2	3.8	250	65.78947368	334	22,224	7,778	7,800
490	Coast live oak	14,12	267	0.7	0.7	1	2.2	3.8	250	65.78947368	267	17,816	8,730	8,750
491	Coast live oak	18,15,10	510	0.7	0.7	1	2.2	3.8	250	65.78947368	510	33,803	16,563	16,550
492	Coast live oak	6	28.2744	0.5	0.5	1	2.2	3.8	250	65.78947368	28.2744	2,110	528	550
493	Calif. pepper	15,14,12,10	523	0.5	0.7	1	2.2	3.8	250	65.78947368	523	34,658	12,130	12,150
494	Coast live oak	7,7,5,4	109	0.5	0.5	1	2.2	3.8	250	65.78947368	109	7,421	1,855	1,850
495	Coast live oak	18	254.4696	0.7	0.5	1	2.2	3.8	250	65.78947368	254.4696	16,991	5,947	5,950
496	Coast live oak	9	63.6174	0.3	0.5	1	2.2	3.8	250	65.78947368	63.6174	4,435	665	650
Total														54,250

Tree Data

434 Crescent Ave.
Sunnyvale, California
July 2024



TREE No.	SPECIES	TRUNK DIAMETER (in inches)	SIGNIFICANT SIZE	CONDITION 1=POOR 5=EXCELLENT	SUITABILITY FOR RETENTION	COMMENTS	Dripline (ft.)			
							N.	S.	E.	W.
489	Coast live oak	16,13	Yes	3	Moderate	Codominant trunks at 2'; 13" stem topped at 8'; 16" stem very one sided NW.	22	5	8	22
490	Coast live oak	14,12	Yes	4	Moderate	Codominant trunks at 2'; 14" stem upright; 12" stem leans W.; weak stem attachment/included bark.	10	15	8	25
491	Coast live oak	18,15,10	Yes	4	Moderate	Multiple attachments at 1'; 10" stem topped at 7'; 15" stem upright; 18" stem leans SW; entire crown one sided SW. ; 3" branch flopped onto adj. building E.	8	25	15	30
492	Coast live oak	6	No	3	Low	Suppressed beneath tree #493; leaning and one sided S.	5	18	8	8
493	Calif. pepper	15,14,12,10	Yes	3	Low	Multiple attachments at 1'; one stem upright, others lean away; sparse crown; several stems removed; active bee hive at base S.	20	25	18	18
494	Coast live oak	7,7,5,4	No	3	Low	Multiple attachments at base; stump sprout; poor form and structure; leaning & one sided S.	8	15	12	15
495	Coast live oak	18	Yes	4	Moderate	Multiple attachments in upper crown; fair form and structure; old topping points.	18	15	18	15
496	Coast live oak	9	No	2	Low	Partial failure at base; strong lean NW. over adj. driveway; roots lifted out of ground.	20	0	5	12



434 Crescent Avenue / Sunnyvale, CA

Prepared for: GKW Architects / Campbell, CA

July 2024

Notes: no scale

Base map provided by: Wilson Land Surveys / Los Gatos, CA

Tree Location Map



WOODREEVE
CONSULTING

5627 Telegraph Avenue, Suite #385
Oakland, CA 94609
510.387.5241