ATTACHMENT 10

Indigenous Tree Report

PREPARED FOR RAYMOND MUNRO

PROPERTY LOCATED AT: 910 LAIRD STREET, GLENDALE CA 91206

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October 26, 2017

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EXECUTIVE SUMMARY

This report is prepared at the request of the property owner and client, Raymond Munro, in accordance with Chapter 12.44 of the Glendale Municipal Code. A previous indigenous tree report was prepared on September 12, 2013 and addendums on September 9, 2015, June 27, 2016 and January 10, 2017 for hearings and meetings with the City. Comments were provided to the client from the Planning Department (Kathy Duarte and Jeremy Cawn) on October 5, 2017. The City of Glendale has requested that the original tree report be updated to reflect changes in the design plans and provide a detailed discussion of impacts.

This design has evolved over several years and the client has moved the structure and adjusted the footprint to minimize impacts to protected trees. Sycamore #1a and Oak #1b were thought to be on adjacent property and later found to be on the project site. Tree #2 has grown and is now considered a protected tree. Therefore, there are a total of 25 protected trees on the property.

The client is proposing to build a new, two-story 3,682 square foot house on a three-car garage on an 81,296-square foot vacant hillside lot at 910 Laird Street in Glendale (Formerly 2512 East Chevy Chase Drive). The property contains an oak-sycamore woodland transitioning into chaparral in the upper slope areas. There are two species of oak (Coast live oak and scrub oak) and one species of sycamore (California sycamore) on the property.

The proposed project requests minor impacts to 12 trees and moderate impacts to one tree for a total of 13 trees requested for encroachments. The natural grade and leaf litter is scheduled to be retained wherever possible and measures are scheduled to be employed such as silt fencing to protect the grade from sedimentation. The remaining 12 trees that are located away from construction and ingress/egress routes that will be protected and monitored during construction. ***No trees are requested for removal.***

Summary Table	Encroachments requested	No impacts	Total
Coast live oak *(Quercus agrifolia)*	11	10	21
California Sycamore (*Platanus racemosa)*	1	1	2
Scrub oak (*Quercus berberidifolia*)	1	1	2
Total	13	12	24

Proposed encroachments to 13 indigenous trees requested for approval:

- Grading for walls and pier footings near Sycamore #1a and Oak #2.
- Grading for cut and fill on driveway and garage entry adjacent to Oaks #3, 4, 5, 6, 9, 11, 18, 19, 20 and 21.
- Clearance pruning and root impacts to Sycamore #1a and Oak #2 to accommodate the new patio and walkway. Pruning for Oak #3 for construction of the house, garage and entry driveway.

Appendix 'A' contains the tree maps and Appendix 'B' contains tree photos.

INTRODUCTION

BACKGROUND

The City of Glendale recognizes protected indigenous trees as significant historical, aesthetic and ecological resources. The ordinance and 2016 addendum are designed to create favorable conditions for the preservation and propagation of native oak, bay and sycamore trees for the benefit of current and future residents of the City of Glendale. According to Glendale Municipal Code 12.44.010, protected indigenous trees are defined as:

Protected indigenous tree or tree means any tree with a trunk with is six (6) inches or more in diameter as measured at a height of fifty four (54) inches above the lowest point where the trunk meets the soil; or for a multi-trunked tree whose combined diameter of any two trunks is at least 8 eight (8) inches in diameter measured at 54 inches above mean grade, which is one of the following Southern California native tree species: California live oak (*Quercus agrifolia*), Engelmann oak *(Quercus engelmannii*), Canyon oak *(Quercus chrysolepis),* Scrub oak (*Quercus berberidifolia*), Valley oak *(Quercus lobata),* (*Quercus durata v. Gabrielensis*) (*Quercus durata*) or (*Quercus dumosa),* California bay *(Umbellularia californica*) or California sycamore *(Platanus racemosa).*

ASSIGNMENT

Rebecca Latta Consulting was retained to prepare an indigenous tree report which includes a tree map, photographs, health and structure evaluation, impact assessment of proposed improvements, recommendations and mitigation measures as required by 12.44.070 (A, B and C).

LIMITS TO ASSIGNMENT

The findings in this report are based solely on a visual inspection of the site and trees conducted on May 16, 28 and 5 of 2013, September 15, 2016 and October 23, 2017. Impact assessments were based on a site observations and site plans prepared by Elizabeth Herron Architecture, Los Angeles, dated October 16, 2017 and sections dated October 18, 2017. The tree inspections were ground level visual observations: root crown inspections and aerial inspections were not conducted.

PURPOSE AND USE OF THE REPORT

The purpose of this report is to document findings from the indigenous tree survey and investigation to the City of Glendale, Planning Department. This report is intended to be used by Raymond Munro to obtain an indigenous tree permit and to provide guidance to protect trees during construction activities. Upon submission, this report will become the property of Raymond Munro and its use will be at his discretion.

OBSERVATIONS

METHODS

Our office conducted a basic visual assessment for each protected tree on the property. A basic visual assessment is a 360-degree inspection from the ground that includes collection of height and diameter measurements. Trees are assessed for structure. Binoculars may be used for a crown inspection, a mallet for sounding hollows, a probe for inspecting cavities, and other tools as needed to determine structural, disease or insect issues.

Trees were measured at 54 inches from grade with a diameter tape using the American Forest Tree Measuring Guidelines. Canopies were measured in at least 4 cardinal directions and drawn on the tree map. Trees on adjacent property are not tagged. Each tree was assessed for defects such as depressions, nesting holes, structural defects, cavities, wounds, cracking bark, sap flow, insect damage, and deadwood. The inspection was conducted during daylight hours, under good weather conditions, and in light sufficient for detecting details such as surface decay and leaf color. The influence of adjacent trees and other factors affecting the growth of a subject tree, such as wires, cables, or nesting holes, were also taken into consideration when assessing tree condition.

A site plan was developed by Elizabeth Herron Architecture and impacts were assessed based on the scaled drawing from October 16, 2017. Our office laid the canopy, trunks and fencing locations on the site plan PDF from the architect.

SITE DESCRIPTION

The site is a vacant hillside lot in Chevy Chase canyon. There are existing homes on the lower slopes in the bottom of the canyon. The property contains a mixed stand of Quercus agrifolia dominant woodland with Sycamore *(Platanus racemosa)* and *(Scrub oak)* Quercus berberidifolia associations. The upslope chaparral vegetation consists of Toyon *(Heteromeles arbutifolia)* and Chamise *(Adenostema fasciculatum)*. (Vegetation defined using A Manual of California Vegetation 2nd Ed., Sawyer, Keeler Wolf, Evans. 2008).

California sycamore trees exist in the bottom of the canyons and the oaks occur on the slopes. Scrub oak occurs on the drier slopes and extends into the neighboring property to the east. The vegetation above the proposed house is existing chaparral. The site has evidence of old fire damage on Oak #17. A total of 25 indigenous trees were found including 21 coast live oaks, 2 scrub oaks and 2 California sycamore.

TREE DESCRIPTION TABLE

No.	Tag #	Common Name	DBH	Health (A-F)	Aesthetic	Height (ft)	Spread	Photo page #	Impacts	Comments
	1a	California Sycamore	35	B	7	55	45	30, 31	Clearance pruning of 20-30% for proposed patio/walkway, Root impacts of 20-30% for construction of new residence.	SYC BOR, SYC LB, DWD, ANTH, Located adjacent to a natural drainage. Old clearance pruning wounds. Old grading within protected zone.
	1b	Coast live oak	12	A	8	18	17	32	No impacts anticipated.	CRWN WHTFL, FR LF RLR, Unbalanced crown, suppressed by Sycamore #1.
	2	Coast live oak	6	A	9	16	16	33	Encroachment requested to prune 15-20% of the canopy to provide clearance to construct the proposed patio/walkway. Root impacts of 20% for construction of new residence for working room near the structure and pier foundations.	CRWN WHTFL, FR LF RLR
	3	Coast live oak	30	C-	6	40	55	34, 35, 36	Encroachment requested for driveway within the protected zone of the tree. Estimated impacts 20% of the root zone will have impacts to the top 12 inches of soil. Canopy impacts of 15-20% for clearance of the new structure and driveway.	CODOM, DWD, Oak ANTH, SYC BOR, CRWN WHTFL, FR LF RLR, DK, BORER, CRWN BUR, thinning canopy, Unbalanced crown. Low branches over driveway. Lean 10 degrees SW

No.	Tag #	Common Name	DBH	Health (A-F)	Aesthetic	Height (ft)	Spread	Photo page #	Impacts	Comments
	4	Coast live oak	30	C	3	15	45	37, 38	Encroachment requested for fill soil to construct the driveway. Estimated impacts to 2% of the root zone.	Oak ANTH, SYC BOR, CRWN WHTFL, FR LF RLR, DK, BORER, Ganoderma conks, tree failed years ago and is lying on the ground running west. A new upright branch is now making up most of the canopy.
	5	Coast live oak	16,6,9,5	C	6	30	25	39, 46	Encroachment requested for placement of fill soil to construct the driveway. Estimated impacts to 20% of the root zone.	SYC BOR, TRK BUR, CRWN WHTFL, FR LF RLR, BORER Erenium mite, Oak ANTH
	6	Coast live oak	11	C	4	25	20	40	Encroachment requested for cut and fill activities in the protected zone to construct the driveway. Estimated impacts to 10% of the root zone.	CODOM trunks, Lopsided canopy to S, 24-inch-long structural crack, SYC BOR, CRWN WHTFL, EHR SCL, BORER
	7	Coast live oak	18	C	6	35	50	41	No impacts anticipated	CODOM branches, Tree leans 30 degrees northeast. Seam of DK 3 feet at 4 feet from grade, SYC BOR, EHR SCL, BORER
	8	Coast live oak	12, 4	B	7	30	30	40	No impacts anticipated	Lopsided canopy, tree leans over roadway to east. SYC BOR, EHR SCL, FR LF RLR, BORER

No.	Tag #	Common Name	DBH	Health (A-F)	Aesthetic	Height (ft)	Spread	Photo page #	Impacts	Comments
	9	Coast live oak	12	B	7	35	40	40, 42, 46	Encroachment requested for grading (cut) activities in the protected zone to construct the driveway. Estimated impacts to 10% of the root zone	Lopsided canopy, FR LF RLR, Oak ANTH, BORER
	10	Coast live oak	25	C	6	38	42	43, 44	No impacts anticipated	CODOM, Rod iron fence from adjacent property damaging tree at base. SYC BOR, BORER
	11	Coast live oak	22	C	6	35	35	45	Encroachment requested for grading (cut) activities in the protected zone to construct the driveway. Estimated impacts to 18% of the root zone	CODOM, suppressed by adjacent treesLopsided canopy, lean 3 degrees southwest, Cracking bark, SYC BOR, ERH SCL, Erenium mite, BORER
	12	Coast live oak	23	C	6	40	45	46	No impacts anticipated	CODOM trunks, DK, old 12-inch branch failure, cracking bark, SYC BOR, EHR SCL, BORER
	13	Coast live oak	19, 14	B	7	40	45	49	No impacts anticipated	CODOM branches, Old swing in tree, old clearance pruning wounds, SYC BOR, STUBS, BORER
	14	Coast live oak	12, 15	C	6	30	35	50	No impacts anticipated	CODOM, Center-stripped, EHR SCL, SYC BOR, BORER
	15	Coast live oak	15	C	6	5	20	50	No impacts anticipated	Layiing on the ground to southeast, suppressed by adjacent trees, BORER

No.	Tag #	Common Name	DBH	Health (A-F)	Aesthetic	Height (ft)	Spread	Photo page #	Impacts	Comments
	16	Coast live oak	50	C	8	65	50	50, 51	No impacts anticipated	CODOM branches, SYC BOR, BORER, Inspect yearly
	17	Coast live oak	18	B	7	40	30	52	No impacts anticipated	Canopy thinning, fire damage, EHR SCL, SYC BOR
	18	Scrub oak	4,4,4,4	B	7	12	15	53	Encroachment requested for grading (cut) activities in the protected zone to construct the driveway. Estimated impacts to 15% of the root zone	DWD, DBK, Wood rat nest at base. Protected native animal species.
	19	Coast live oak	25	C	7	45	45	55	Encroachment requested for grading (cut) activities in the protected zone to construct the driveway. Estimated impacts to 5% of the root zone	DWD, CODOM branches, thinning, fire damage, SYC BOR, EHR SCL, BORER
	20	Coast live oak	22	C	7	40	50	55	Encroachment requested for grading (cut) activities in the protected zone to construct the driveway. Estimated impacts to 2% of the root zone	DWD, CODOM branches, thinning, fire damage, SYC BOR, EHR SCL, SEAM of DK 2 feet long by ½ inch wide, BORER
	21	Coast live oak	20	B	8	40	45	56	Encroachment requested for grading (cut) activities in the protected zone to construct the driveway. Estimated impacts to 3% of the root zone	DWD, CODOM branches, thinning, fire damage, SYC BOR, EHR SCL, kinked and crossing branches
	22	Scrub oak	10	A	8	18	20	55, 56	No impacts anticipated	5% DWD, lean 5 degrees northwest

No.	Tag #	Common Name	DBH	Health (A-F)	Aesthetic	Height (ft)	Spread	Photo page #	Impacts	Comments
	23	Coast live oak	20	B	8	45	35	57	No impacts anticipated	DWD, CODOM branches, thinning, fire damage, SYC BOR, EHR SCL, lean 15 degrees northwest
	24	California Sycamore	30	B-	8	50	40	58	No impacts anticipated	ANTH, SYC BOR, SYC LB, Lean 35 degrees over Chevy Chase Road

TABLE ABBREVIATIONS

ARMIL = Armillaria root rot suspected

ANTH = Anthracnose disease

BORER = Wood boring beetle

CANK = Canker

CHLOR = Chlorotic

CIR ROOT = Circling roots

CODOM = Codominant leaders*

CPTD SOIL = Compacted soil

CRWN DBK = Crown dieback

CRWN WTFL = Crown whitefly *(Aleuroplatus coronatus)*

CRK = Crack

DK = Decay

DWD = Deadwood

EHR SCL = Ehrhorn's scale

EPI = Epicormic shoots

FL CUT = Flush cut

FR LF RLR = Fruit Leaf Roller *(Archips argyrospila)*

HANG = Hanger

MCH DMG = Mechanical damage

PSHB = Polyphagous shot hole borer

PWR LNS= Power lines

RCNT FAIL = Recent branch failure

SCALE = Scale insects

SCORCH = Scorched needles or foliage

SOOT = Sooty mold STRIP = Lion's tailed, center stripped

SYC BOR = Sycamore borer *(Synathedon resplendens)*

SYC LB = Sycamore lace bug (*Corythucha confraternal)*

TORT BTLE = Eucalyptus tortoise beetle

TRK BUR = Trunk buried**

TRK INJ = Trunk injury

VRT WLT= Verticillium wilt

WEEP = Weeping sap WLT = Wilt Disease

XYLE = Xylella (Bacterial Blight)

Insects and Diseases

CROWN WHITEFLY (ALEUROPLATUS CORONATUS)

Crown whitefly live on sap. They excrete honeydew that can be sticky or covered with sooty mold. The honeydew can attract ants who discourage predatory insects that might otherwise eat the aphids. These insects are native, naturally occurring and causing only minor aesthetic damage

FOURTH INSTAR NYMPH OF CROWN WHITEFLY. PHOTO BY JIM GEIGER PHD 2010

CROWN WHITEFLY ON COAST LIVE OAK

FRUIT LEAF ROLLER (ARCHIPS ARGYROSPILA)

The fruit leaf roller takes the edge of the leaf and pulls it over to make a place to lay eggs that is protected from the elements. It can be unsightly, but no control is necessary.

HEARTWOOD ROT (GANODERMA SPP.)

Ganoderma fungus causes a white rot or butt rot of hardwood trees and shrubs. It is common in local oak species. The presence of fruiting bodies usually indicates an advanced level of decay in the wood. The spores can land on open pruning wounds or other damaged plant tissue. Fruiting bodies or conks usually develop near the soil line or in the lower trunk.

GANODERMA CONK IS AN INDICATOR OF HEARTWOOD ROT

INVASIVE SHOT HOLE BORER (ISHB)/FUSARIUM DISEASE COMPLEX

Note: Signs of ISHB were seen on the property. I recommend regularly inspecting the trees for early signs of this destructive beetle. Polyphagous shot hole borer (Euwallacea spp.) and other invasive shot hole borers and the fungus Fusarium euwallaceae are an insect/fungal disease complex that attacks over 260 species of trees. Polyphagous means glutton in Latin. The insect is an ambrosia beetle the size of a sesame seed that carries the fungus and farms it in tree hosts. It prefers California sycamore, willow, maple, oak and box elder. It will attack other trees if the preferred hosts are unavailable. The insects reproduce as much as 3x per season. The fungus clogs the nutrient and water transport systems of the plant. If insect populations are high, trees can be damaged or killed.

At this time, management options are still under investigation. The recommended treatments are to chip, grind or heat the infested material to reduce the emergence of the beetle. Preventative systematic insecticides have been tried with varying success (personal observation).

LEFT: DAMAGE FROM PSHB/FUSARIUM ON COAST LIVE OAK; RIGHT: DAMAGE TO WOOD FROM *FUSARIUM EUWALLACEA*

PACIFIC FLATHEAD BORER

The Pacific flathead borer (Chrysobothris mali) is a species of beetle that lays eggs in cracks and crevices in the bark. The larvae are borers. Damage from this insect is usually associated with plant stress such as above average summer temperatures and sunburned bark. Maintaining healthy trees is the best way to prevent damage from these borers. Avoiding pruning in the summer months minimizes potential damage from sunburn.

PACIFIC FLATHEAD BORER TAKEN BY HARSI S. PARKER 2009
ACCESSED ON 5/5/2013 AT WWW.BUGGUIDE.NET/VIEW/290361

SYCAMORE ANTHRACNOSE

Sycamore anthracnose was observed in the tree, which causes leaf discoloration and twig dieback. Dead leaves may remain attached to killed twigs. Spores of anthracnose are spread by splashing and rain. The disease prefers wet conditions. Generally, the disease is not serious, but can cause defoliation and dieback in years with very wet spring conditions.

SYCAMORE BORER *(SYNATHEDON RESPLENDENS)*

The western sycamore borer (Synathedon resplendens) is a species of moth that attacks both sycamore and oak trees. The larvae are borers. Oaks and sycamores tolerate extensive boring from this native insect, which occurs on the west coast from Washington to southern California. The insect often inhabits portions of the trunk and scaffold branches with decay. As the infestations become severe, bark begins cracking off as the tree tries to restore the bark layer. No control is necessary or possible.

SYCAMORE BORER TAKEN BY HARSI S. PARKER 2009 ACCESSED ON 5/5/2013 AT
www.bugguide.net/view/290361

SYCAMORE BORER DAMAGE ON OAK
PHOTO TAKEN BY REBECCA LATTA 2013.

EHRHORN'S SCALE *(MYCETOCOCCUS EHRHORNI)*

Ehrhorn's scale is a small reddish scale insect that occurs in colonies with the cottony fungus (Septobasidium canescens). It manifests itself as gray, pink or white encrustations on the undersides of oak branches. It is my observation that heavy infestations can slow oak growth.

PHOTO OF EHRHORN'S SCALE TAKEN IN MAY 2014
**PHOTO BY REBECCA LATTA*

DRIPPY NUT DISEASE

Drippy nut (*Brenneria quercina*) is a disease characterized by dripping, sticky sap oozing from affected acorns and caps. The oozing is caused by a bacterium that enters the acorn when an insect such as a filbert weevil deposits eggs into the acorn. The disease is usually worse in warm weather. Sticky dripping sap can be seen on the ground under the trees.

DRIPPY NUT DISEASE ON SCRUB OAK ABOVE LA CANADA FLINTRIDGE
**PHOTO BY REBECCA LATTA*

DISCUSSION

IMPACT ANALYSIS

Based on our investigation and analysis, 13 trees total are proposed for encroachments. No indigenous trees are proposed for removal.

GRADING – FOR THE CONSTRUCTION OF PROPOSED RESIDENCE AND GARAGE

Sycamore #1a and Oak #2 are proposed for impacts to the root protection zone from the construction of walls and pier footings. Since the grading will be upslope of the trees, silt fences and fiber roll will be erected and maintained to prevent sedimentation. Preserve leaf litter. If no duff or leaf litter exists, the roots should be protected with a 4-inch layer of mulch.

Exploratory trenches and holes are recommended for all wall and footing locations to determine potential damage to roots to allow the opportunity to span, bridge or adjust footing locations in coordination with the project arborist.

This impact is anticipated to be minor to moderate, depending on root locations. All work to be done under observation by the project arborist.

GRADING – CUT AND FILL TO CONSTRUCT DRIVEWAY

Trees # 3, 4, 5, 6, 9, 11, 18, 19, 20 and 21 are proposed for impacts for cut and fill. There is old grading damage on the property that has pushed excess soil on the base of the trees. During the construction process, fiber roll and silt fences will be used to prevent any new fill soil from settling on the trees and any old fill should be removed. The impacts to the trees range from 5% of the protected root zone to 25% of the protected root zone.

During construction, the roots of the trees should be protected with ¾ inch plywood stapled together with metal clips to spread the load. In the steeper areas, steel shake plates should be employed to protect tree roots from compaction damage from equipment.

Prior to grading, a meeting is recommended with the project arborist after the surveyor has staked out the grade to determine adjustment to protect tree roots from damage.

PRUNING – CLEARANCE OVER DRIVE AND STRUCTURE, WORK ROOM

Sycamore 1a, Oak #2 and Oak #3 will require pruning to provide clearance for the new structure, garage and driveway.

- Sycamore 1a has a long low branch that will interfere with the new structure. I recommend pruning in the winter when the tree is dormant. The canopy impact will be approximately 20-30%. At least 5 feet of clearance may be required near the structure to allow room to work.

Smaller branches can be tied or wrapped and gently pulled out of the way for some activities. This work should be done by a qualified arborist.

- Oak #2 will require pruning to accommodate the new structure to the east. It is estimated that 10% of the canopy will need to be removed. This is a young tree that can be pruned to direct growth upwards and away from the structure.
- Oak #3 has low branches over the driveway that will need to be pruned prior to construction for access and structural clearance under observation by the project arborist. The minimum necessary pruning should be done and no more than 15% live wood should be removed. The trees should be inspected for wildlife prior to pruning by a qualified biologist. This pruning is a moderate impact for the tree. Combined with the impact from the driveway, the tree may experience some stress. Quarterly monitoring is recommended during construction to evaluate tree health.

FUTURE IMPACTS

Additional arborist input is recommended to guide the location and construction of utilities for the project. These decisions are yet to be made. Trenches will be required for water, gas, power and sewer. The trench should be run under (bored) under the root zone of oak trees or kept outside of the protected zone. Meters and utility boxes should be placed outside the protected zone of trees. Since these plans were not available to review, these plans should be provided to the project arborist prior to construction to avoid preventable damage to oak trees.

Any changes to the design that might impact protected trees during construction should be brought to the attention of the project arborist.

CONCLUSIONS

The impacts from the pre-existing and proposed encroachments at 910 Laird Road were assessed and it was determined that proposed impacts are not anticipated to cause long term damage to protected oak resources as long as protection measures are implemented. The project has been carefully designed to minimize damage to these beautiful native trees and preserve them for screening, cooling shade, wildlife habitat and rainwater interception. Yearly inspection, pruning and soil health improvements are recommended for the trees during and after construction.

RECOMMENDATIONS

These recommendations were developed to minimize any preventable construction related damage to the trees and mitigate for any prior damage. It is important to preserve soil structure and fertility by physically protecting the soil from compaction and other maintenance activities that destroy fine roots. A copy of the tree report will be kept in with the official plans and available to the contractor and LA County Forestry inspectors.

The project arborist will be present when any work occurs within or near the dripline of the protected trees, and any work that is expected to encounter tree roots is performed. Fencing to be installed at the dripline of identified trees prior to the start of construction.

Construction Staging and Spoils

Staging areas for fencing materials to be outside the protected zone of any oak tree. Hauling routes and staging areas to be established prior to construction. Equipment to be kept completely outside of the protected zone of any protected oak tree. Spoils from excavation to be placed on tarps outside the protected zone of oak trees. Containment tubs to be provided for concrete wash out that is required for the job.

Equipment Idling

Equipment will not idle under the driplines of trees to be preserved. Significant burn can occur to leaves and bark from exhaust and heat.

Fencing

Install protective fencing around protected trees as shown on the protected tree map. THE PROJECT ARBORIST AND THE CONSTRUCTION TEAM WILL MEET TO DETERMINE FENCING LOCATIONS PRIOR TO CONSTRUCTION. Fencing is required to be inspected by the project arborist prior to construction. Prior to any construction activity, chain-link. The fencing will remain in place until construction is complete.

Chain-link fencing will be at least five feet tall and will be mounted on two-inch diameter galvanized iron posts. This fencing will remain in place throughout the duration of the construction and will not be moved during construction. A three-foot access gate will be installed in each enclosure. Orange flexible fencing will not be used.

Within the fenced enclosures, no digging, trenching, soil compaction, or other soil disturbance will be allowed and the fenced enclosures will be kept clear of building materials, waste, and excess soil.

Grading and Excavation

No grading is required to complete the proposed construction. Footings will be pre-dug by hand under observation by the project arborist to determine if locations need to be adjusted to protect roots over two inches.

Inspection

Trees will be inspected on a periodic basis by the project arborist. The relative age, condition and targets under the tree should determine the inspection frequency. It is the responsibility of the property owner to establish and implement an appropriate inspection schedule based on the recommendation provided by the project arborist.

Irrigation Water Management

It is recommended that the Holmes continue to perform basic irrigation inspections and seasonal schedule modifications to manage water efficiently on the property. This should include a check for misaligned or tilted sprinkler heads, broken heads, runoff onto paved surfaces and water on the trunks of trees or shrubs. These inspections should include inspections for soil moisture in the root zones of the valley oak trees to determine if deep watering is necessary in a low rainfall year during the rainy season.

Mulch

Apply a 4-inch deep bark or wood chip mulch under the dripline of each tree where mulch is absent. Keep the mulch at least 6-12 inches away from tree trunks. Mulches encourage beneficial fungus (such as Trichoderma spp.), retain moisture, suppress weeds, and improve soil structure.

Healthy soil promotes healthy tree growth, protects soil from heat and retains moisture. Mulch, leaves or other organic material encourage earthworm and microbial activity. Earthworms aerate the soil, bringing nutrients to the roots.

Pruning

Oak #1 is recommended for clearance pruning over the house. Pruning should occur between July and October using a qualified tree pruning contractor familiar with coast live oak.

Any clearance pruning or root pruning needed will be conducted or supervised by an ISA (International Society of Arboriculture) Certified Arborist using Best Management Pruning Practices (2008) part of ANZI A300 or equivalent. Trees should be inspected yearly and pruned as needed, not on a set schedule. More information is available at www.isa-arbor.com.

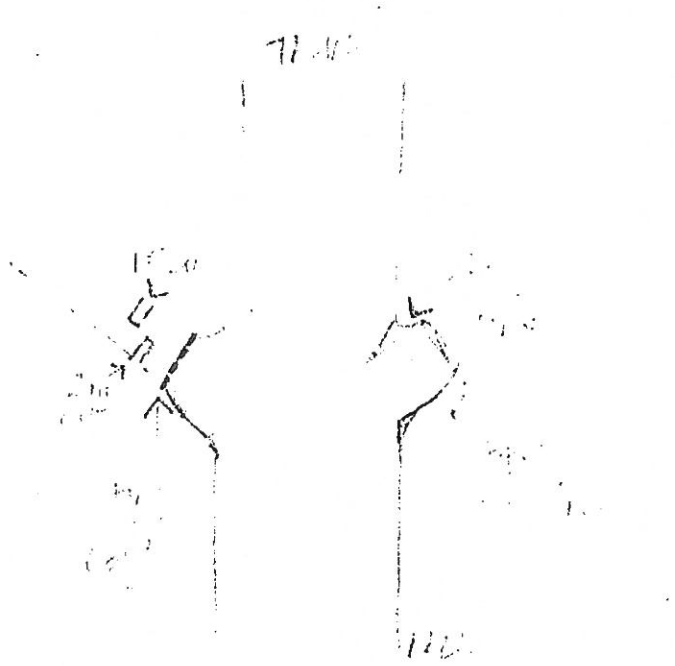


Diagram of how to make a proper pruning cut on a large branch using a 2-part cut.

**CAUTION: Removing too much foliage can weaken trees by depleting energy reserves and increasing susceptibility to insects and disease. Climbing spikes will not be used under any circumstances and are only acceptable for dead trees and climber rescue operations. **

Root Pruning

Roots over two inches in diameter are recommended to be retained and footings relocated. All excavation for footings to be observed by the project arborist.

If roots need to be cut it is recommended that the area be dug out and the roots cut back one to two inches behind the soil line. After the cut is made, cover the cut root with moist soil. The cut should be made with a sharpened, sterilized hand-pruning tool (not a chainsaw or sawzall). Roots should be pruned at the branch bark ridge, when possible. Indiscriminate cuts can cause vigorous resprouting toward hardscape.

Extensive root loss can destabilize trees and cause them to go into decline. Removing large roots takes significant root mass and feeder roots. All root pruning will be supervised by the project arborist.

Soil Protection

Provide a minimum of ¾ inch thick plywood joined together with metal clips over any bare dirt in the root zone of protected trees in areas where equipment needs to pass or where there is heavy foot/car traffic. This is to prevent compaction damage to roots.

Avoid mechanical injury and compaction to roots, root flares, trunks and branches. Break and lift off asphalt and concrete by hand or using small equipment under the dripline of any tree to be retained. A qualified arborist is recommended to be present to observe the area with the roots exposed, prior to undertaking any root pruning or grading.

Staging areas should be established before construction for materials and equipment. Washout areas should be provided for paint/stucco and concrete or other substances to contain the chemicals. These chemicals can harm tree roots. The washout and staging areas should be outside of the protected zone of protected trees and dripline of trees to be retained. The purpose is to limit preventable compaction to tree roots. Compaction reduces soil air space and limits gas exchange required for healthy tree growth.

Watering Trees During Construction

The tree/root protection zone should be irrigated sufficiently with clean, potable water to keep the tree in good health and vigor before, during and after construction. Trees should be soaked so that water reaches a depth of 2 to 3 feet in the root zone (under the canopy) and then allowed to dry out between watering. Soil moisture should be checked periodically with a small shovel or soil probe. In some areas, irrigation spray is hitting the trees and spray needs to be redirected away from the trunks to create a ten to fifteen-foot dry zone at the base of the trees.

GLOSSARY

CODOMINANT

Two tree trunks or branches of equal size. These trunks or large branches called scaffolds are often weakly attached and have the potential to split apart because there is included bark between them. Central Leader The main single trunk of a tree with upright form.

DECLINE

Declining trees are defined as having a permanent and progressive reduction in health, vigor and/or structural stability that can eventually lead to its death or structural failure. Declining trees may typically be over mature, suffering from old wounds or other impacts that has interrupted the living system resulting in impeded growth and followed by the depletion of energy reserves that are normally stored in the root mass resulting in the reduction of health, condition and stability.

INCLUDED BARK

Occurs between two or more codominant trunks or branches. Bark grows inward instead of outward. The strength of the attachment is weak. Decay can exist where the trunks meet.

MULTIPLE SPROUTS

Branches that begin where a tree has been topped or a stub cuts have been made. These branches can eventually compete with each other. The number of sprouts should be reduced to avoid branch failures.

PATHOGEN

A disease-causing organism that has potential to harm plant tissue and cause tree decline.

TREE PROTECTION ZONE

Glendale defines the tree protection zone as the edge of the actual tree canopy plus one foot. For trees that are small or asymmetrical, the protection zone is a minimum of 15 feet from the trunk (a 30-foot circle). Arborists define the dripline of the tree where the woody and non-woody tissues (roots) that support the tree exist in the soil. The roots provide structural support and absorb water, nutrients and exchange gases for the health of the tree. The actual root-feeding zone is often two to three times the size of the tree canopy.

STRUCTURAL OR ANCHOR ROOTS

Roots that provide support and anchor the tree to the ground. These roots normally are found in the top three feet of soil and extend about ten to fifteen feet from the trunk.

STUB CUTS

Cuts that are made to twigs, branches and main branches made too far outside the branch collar where specialized plant tissue can help to seal the wound. The most common response to stub cuts is a proliferation of sprouts near the cut that are weakly attached. Large stub cuts can lead to decay and decline in trees.

*Codominant leaders, or trunks, are equally sized and both act like the tree's central leader. Codominant leaders may be weakly attached to each other due to narrow branch angles and included bark.

**Trunk buried means excess soil covers the anchor roots and lower part of the trunk. Trees with buried trunks are more susceptible to opportunistic pathogens (diseases) such as oak root rot (Armillaria mellea) and Phytophthora root rot (Phytophthora spp.).

TREE HEALTH RATINGS

A subjective alphabetical rating (e.g., "A" = best and "F" = worst) was assigned to rank the overall health of the tree(s). This rating is based on the structural and biological functions of the trees. Health ratings are defined as follows:

A – Excellent: Overall healthy appearance with good vigor, shoot growth, leaf color and size, minimal or no disease or insect infestation, no buried crowns (the area where roots join the stem was not covered with soil), good callus tissue formation, and limited or no fire damage.

B – Good: Less than 25% of overall health of tree affected by disease, stress, decay, insect infestation, or fire damage. Tree can have minor correctable defects that could be addressed with pruning or root crown excavations.

C – Fair: Between 25% and 50% of tree significantly affected by disease, stress, decay, insect infestation, or fire damage. Tree can have thinning canopy, circling or poorly developed roots, sunburned bark and borer damage. Tree may have defects, including internal wood decay, insect infestations, and root decay.

D – Struggling: More than 50% of overall health of tree affected by disease, stress, decay, insect infestation, or fire damage. In older trees, significant wood decay may be present.

F – Dead: Exhibits no signs of life or is not expected to recover.

AESTHETIC RATING

An aesthetic assessment was performed for each tree taking into consideration the form of the crown, broken branches, cabling and bracing and deadwood. The contribution of the tree to the grove, wildlife value and environmental benefits were considered along with the overall visual contribution to the properties. Trees were given a 1-10 rating, low to high.

APPENDIX 'A' – TREE MAP

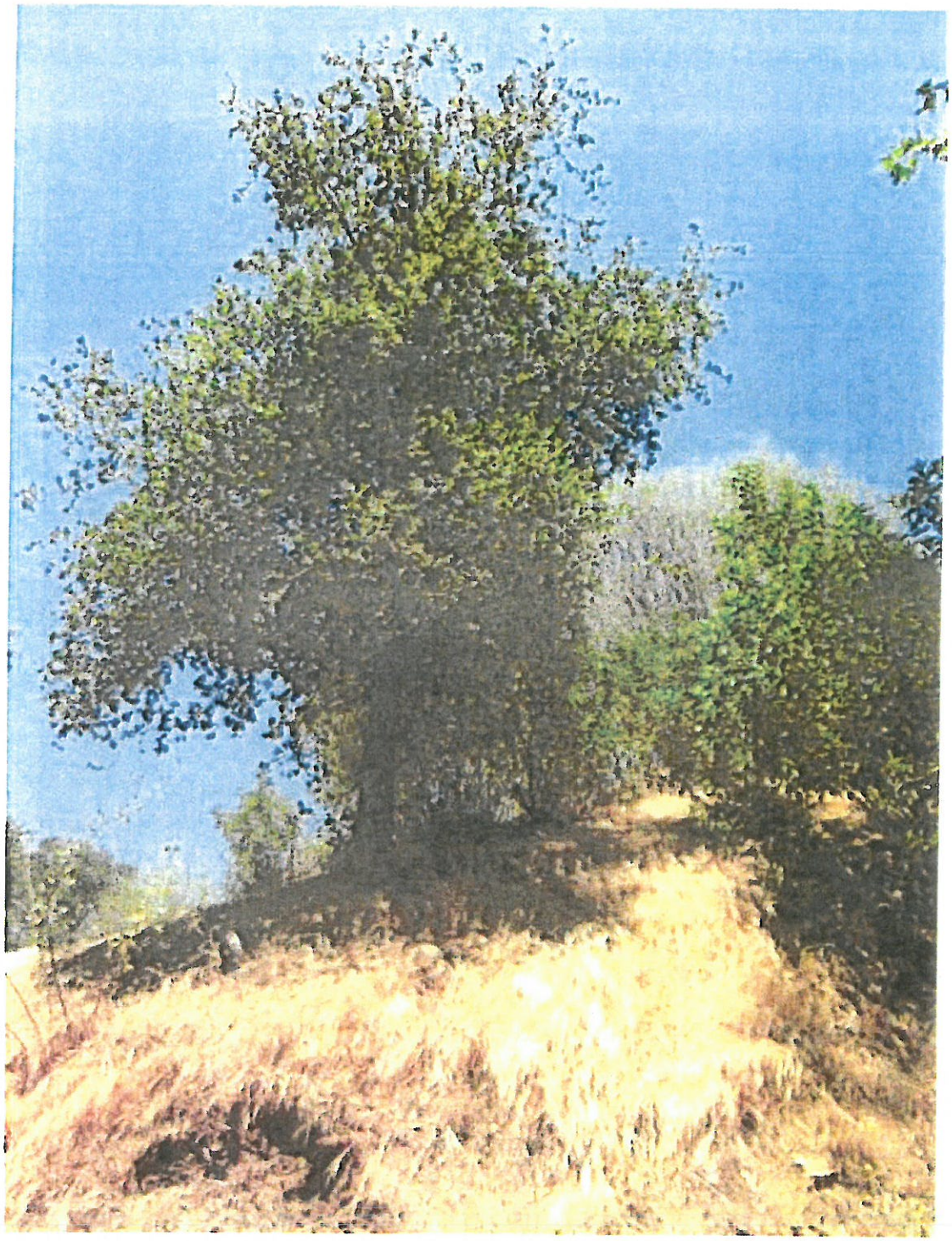

910 Laird Drive Protected Tree Map
LEGEND
Tree protective zone
5 foot protective fencing

APPENDIX 'B' – TREE PHOTOS

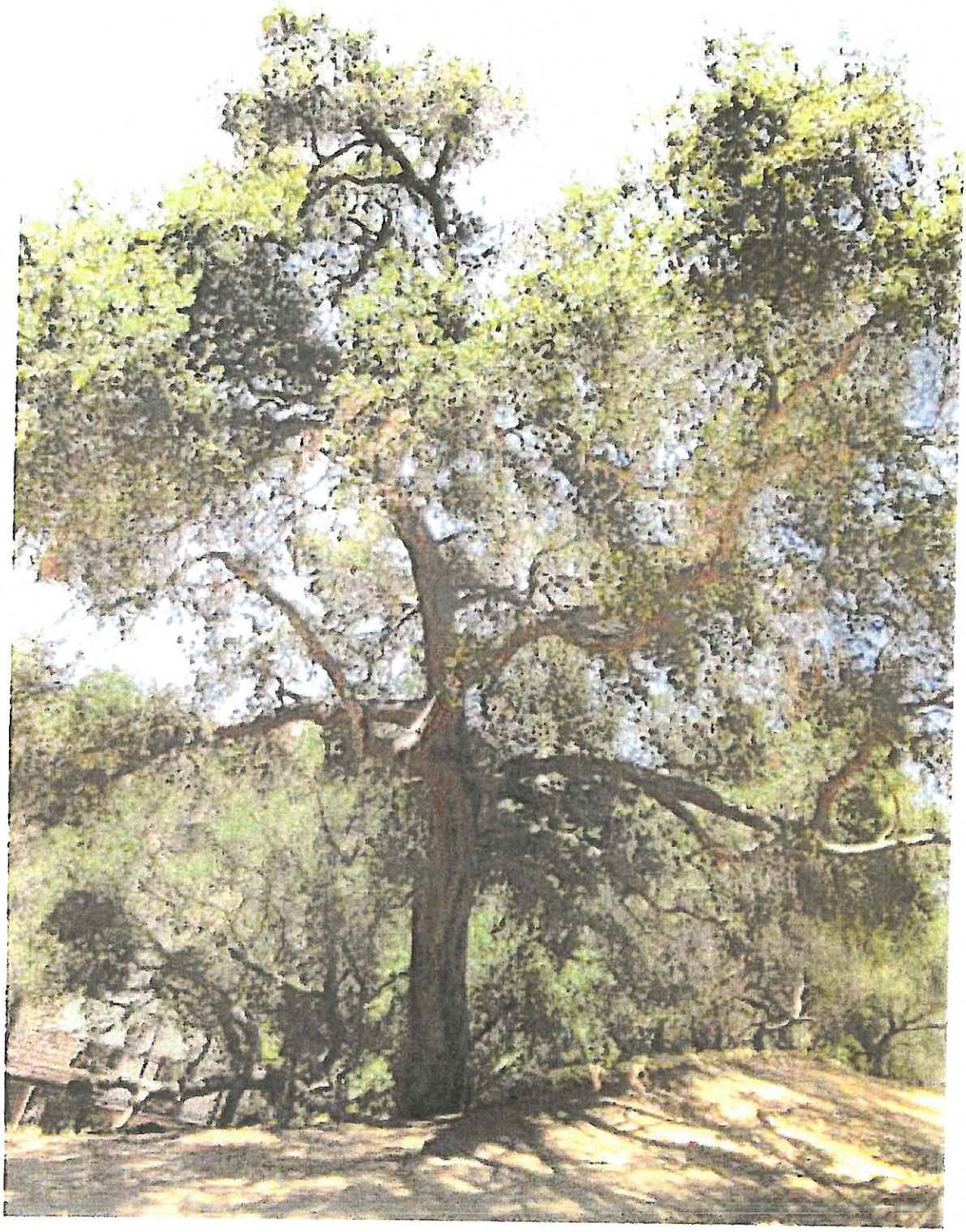
SYCAMORE 1A

SYCAMORE 1A AT BASE WITH COAST LIVE OAK 1B ON RIGHT

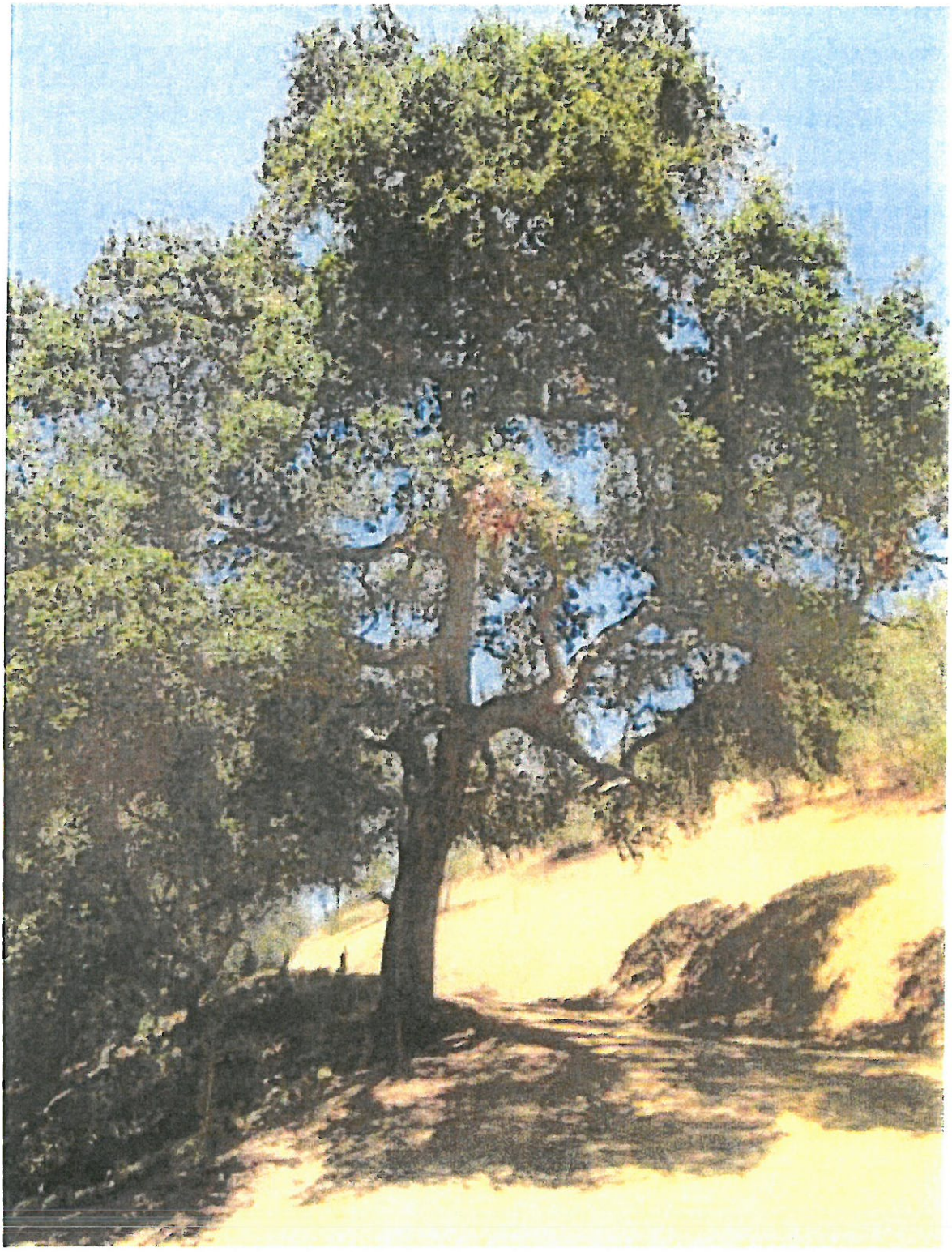
OAK 1B



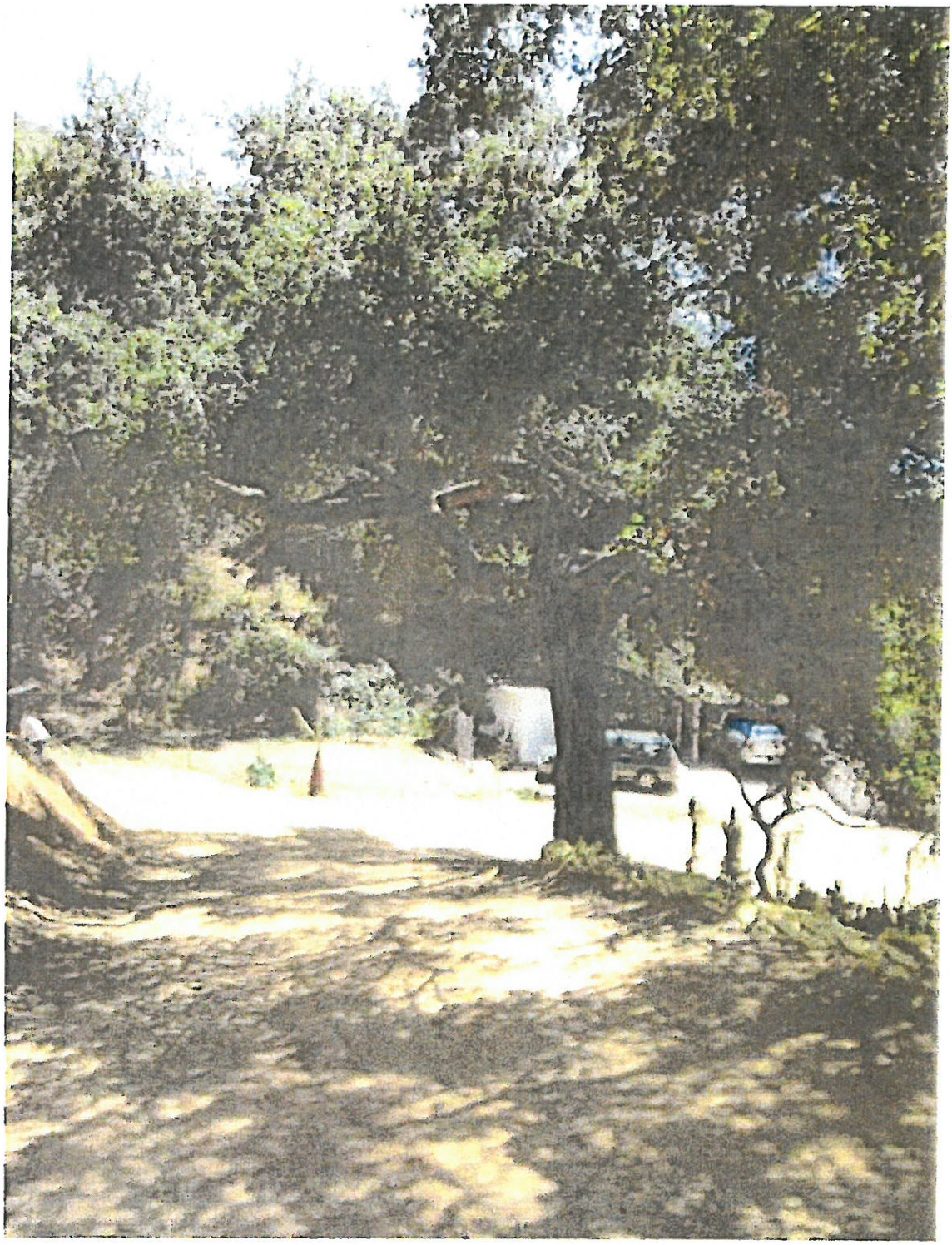
COAST LIVE OAK #2 ON SLOPE



OAK #3 – LOOKING SOUTHWEST



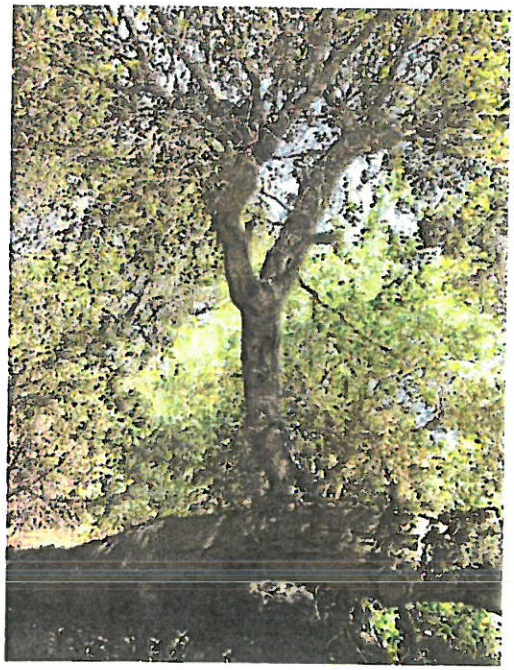
OAK #3 – LOOKING EAST



OAK #3 LOOKING SOUTHWEST

OAK #4 -- UPROOTED AND REESTABLISHED IN A NEW POSITION

OAK #4 – LOOKING NORTH

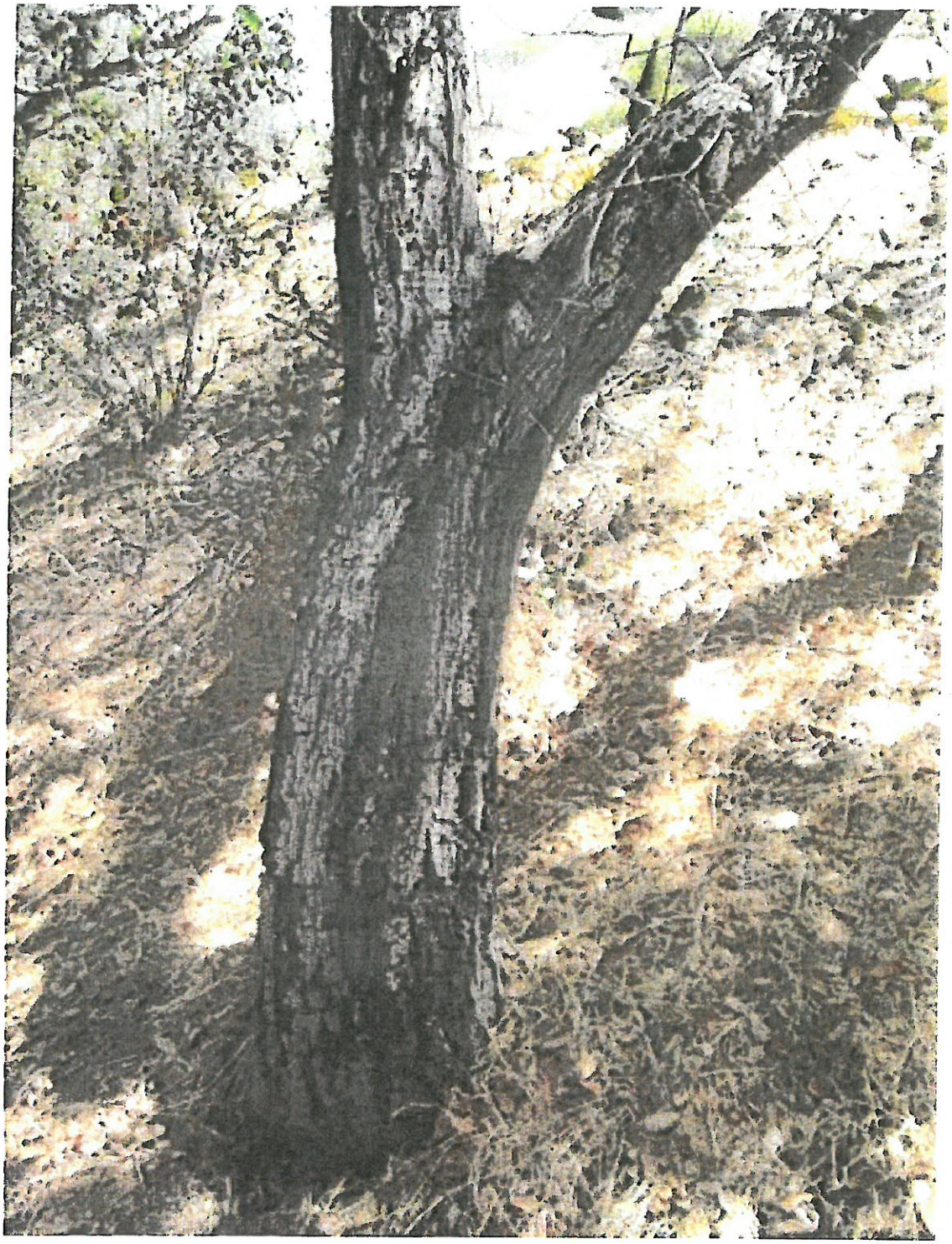


UPRIGHT SPROUT ON OAK #4

OAK #5 – PHOTO TAKEN IN 2013, STUB CUTS HAVE BEEN CLEANED UP (2015)

OAK #5 – CLOSEUP OF BASE

CORNER OF OAK #6 ON LEFT, OAK #7 IN MIDDLE, OAK# 8 ON LEFT REAR

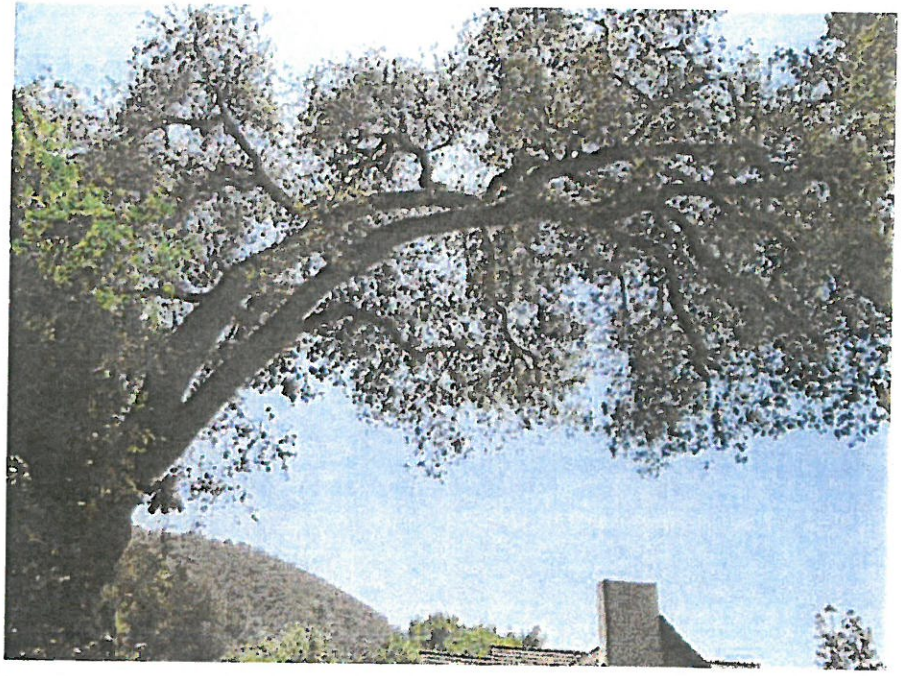


OAK #7

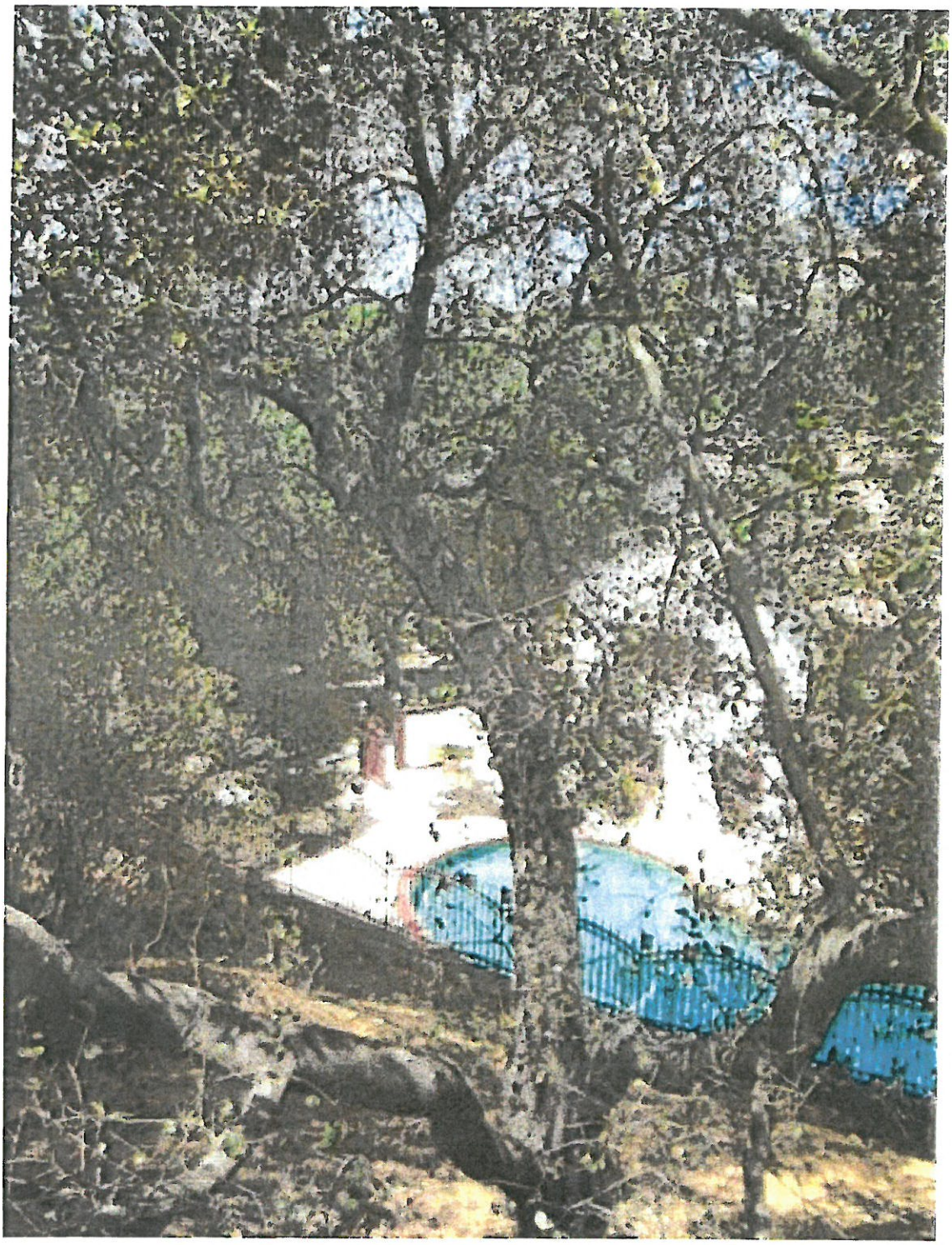
OAK #9

OAK #10 – DAMAGED BY NEW FENCE (2013) BELONGING TO NEIGHBOR

CLOSE UP OF DAMAGE TO OAK #10 FROM FENCE

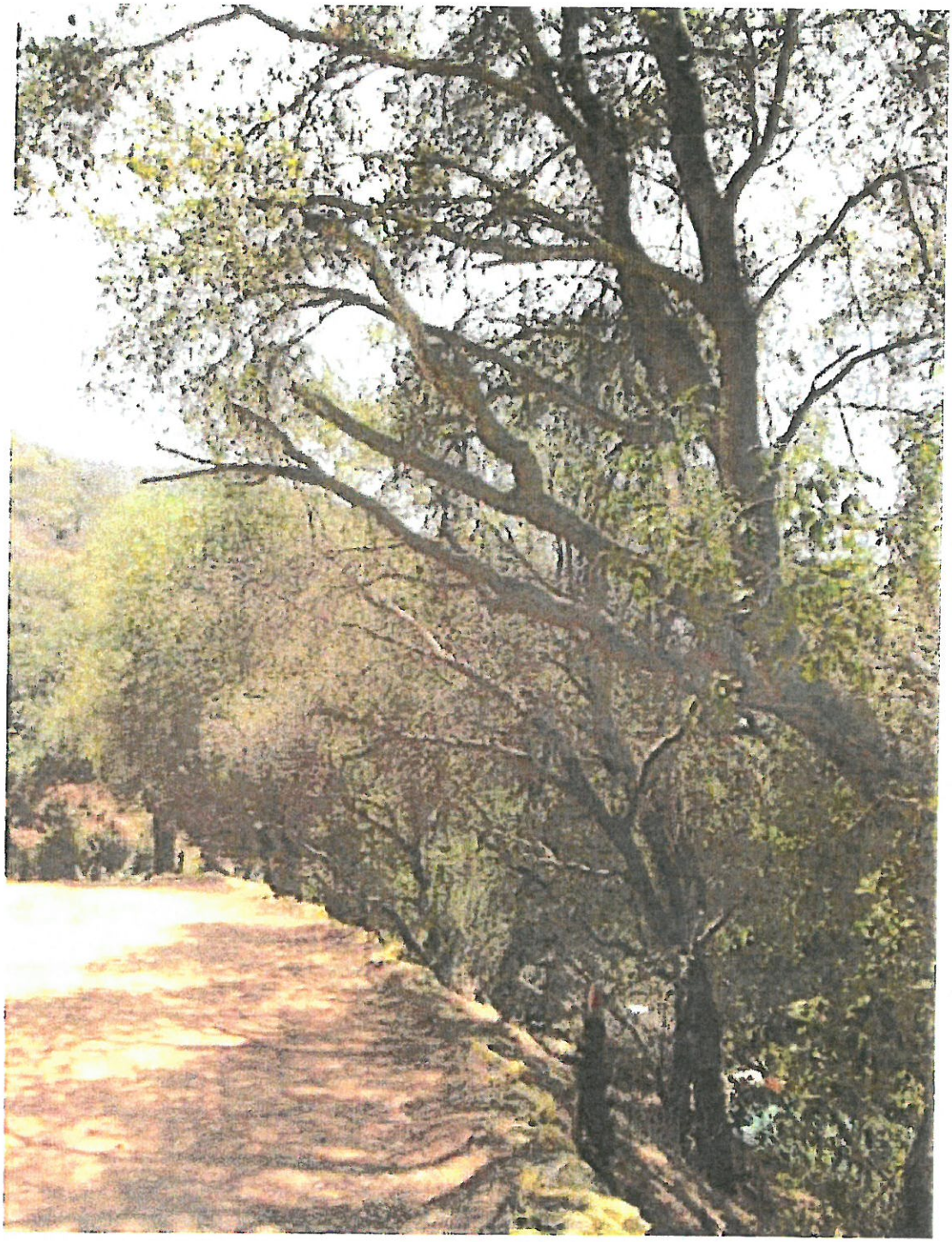


OAK #10 HANGING OVER ADJACENT PROPERTY LOOKING SW



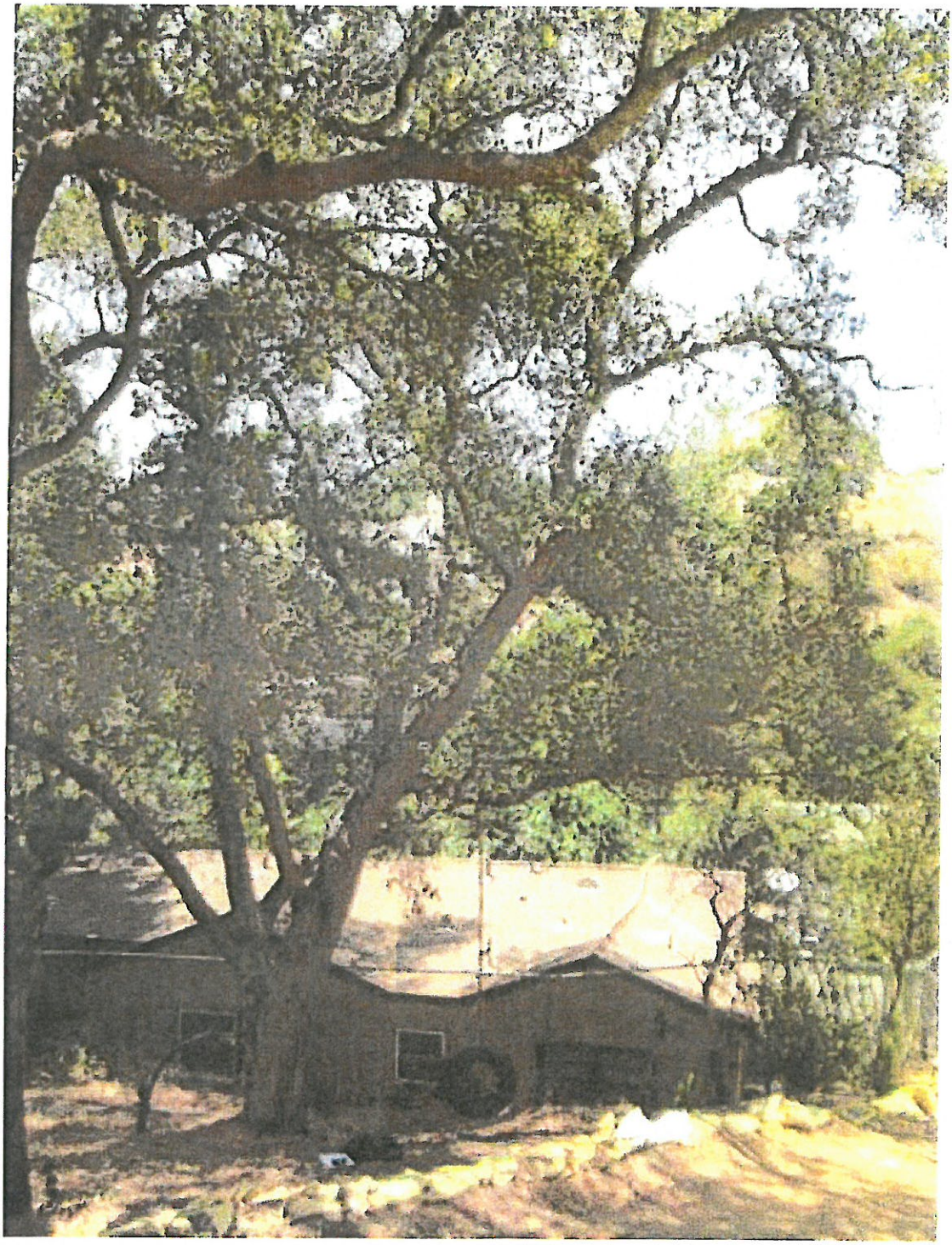
OAK #11 – LOOKING SW

OAK #12 ON RIGHT AND OAK #11 ON LEFT



LOOKING SOUTH TO OAKS, 12, 11, 9 AND 5 (PHOTO TAKEN IN 2013, TREES HAVE MOSTLY RECOVERED AND STUBS HAVE BEEN REMOVED)

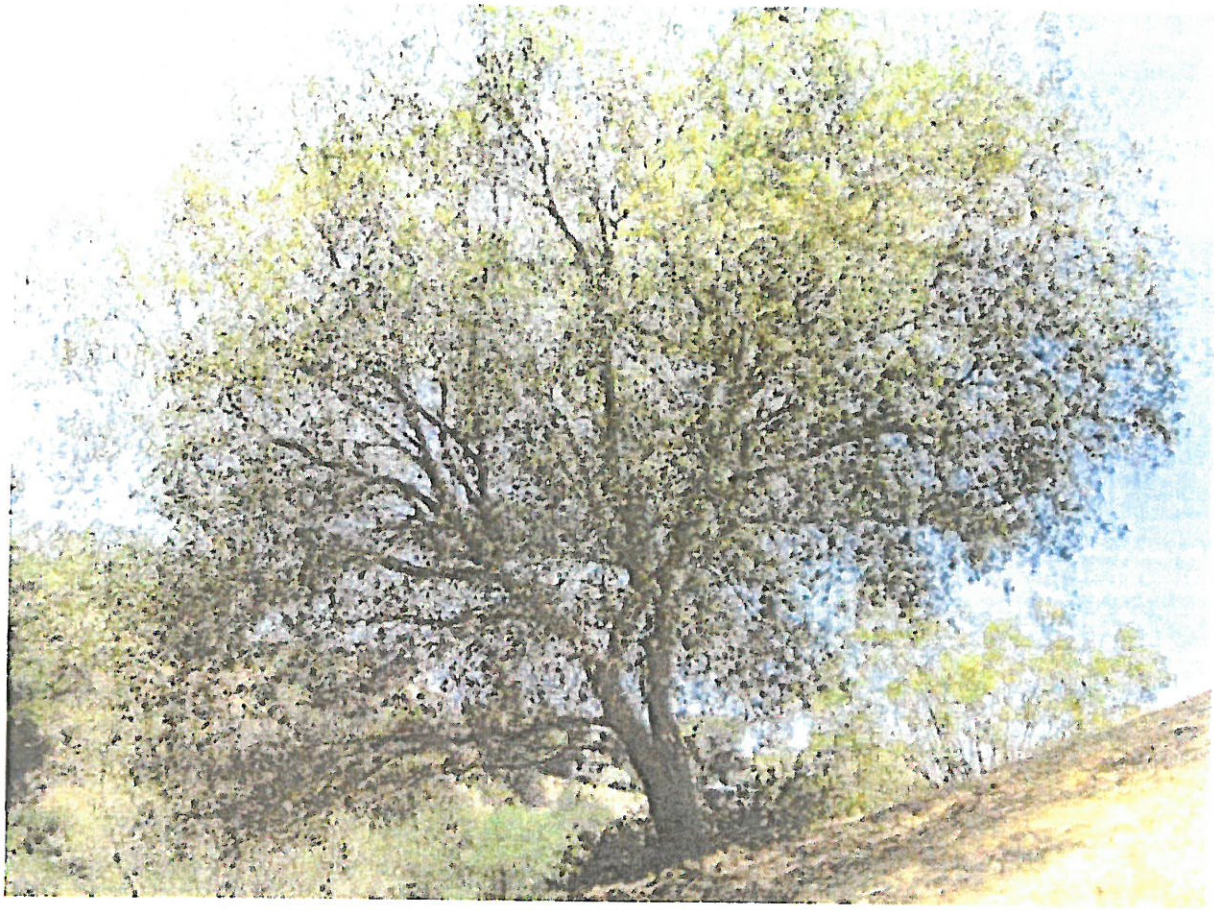
CLOSE UP OF OLD BRANCH FAILURE ON OAK #12



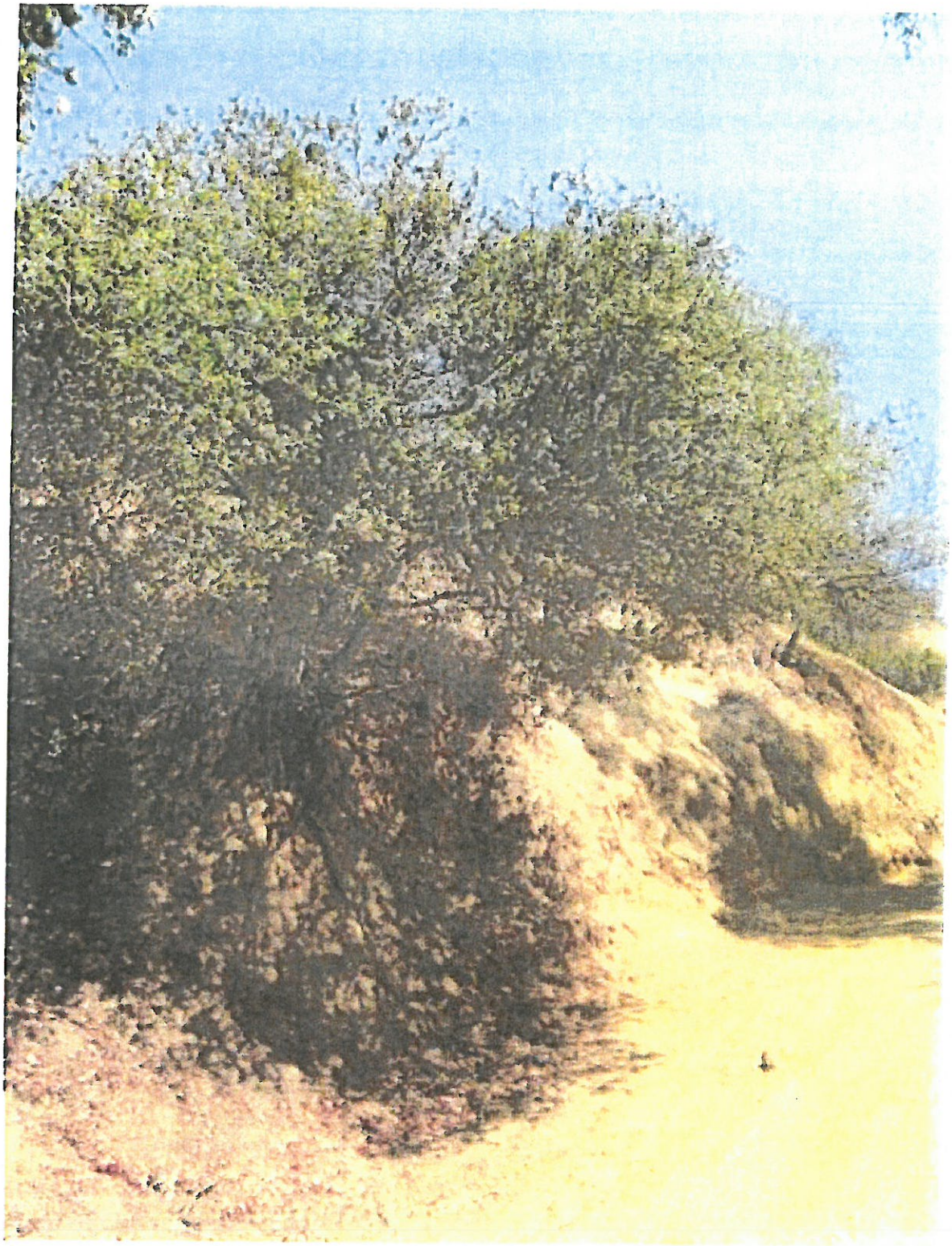
OAK #13 – LOOKING NORTH

OAKS 14 ON FAR RIGHT, 15 MIDDLE AND 16 NEAR FENCE AT BACK

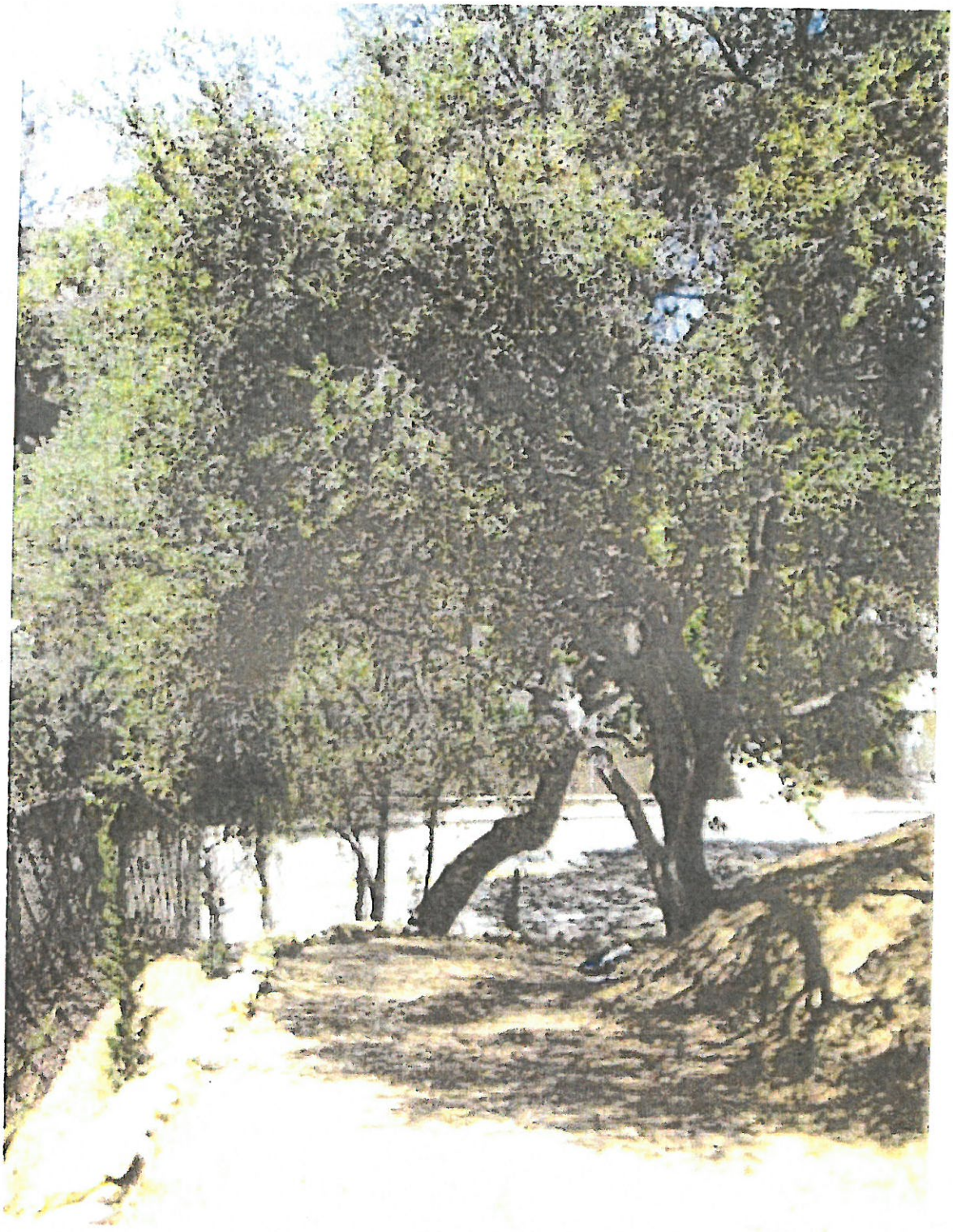
THE BASE OF TREE #16 – CO-DOMINANT TRUNKS



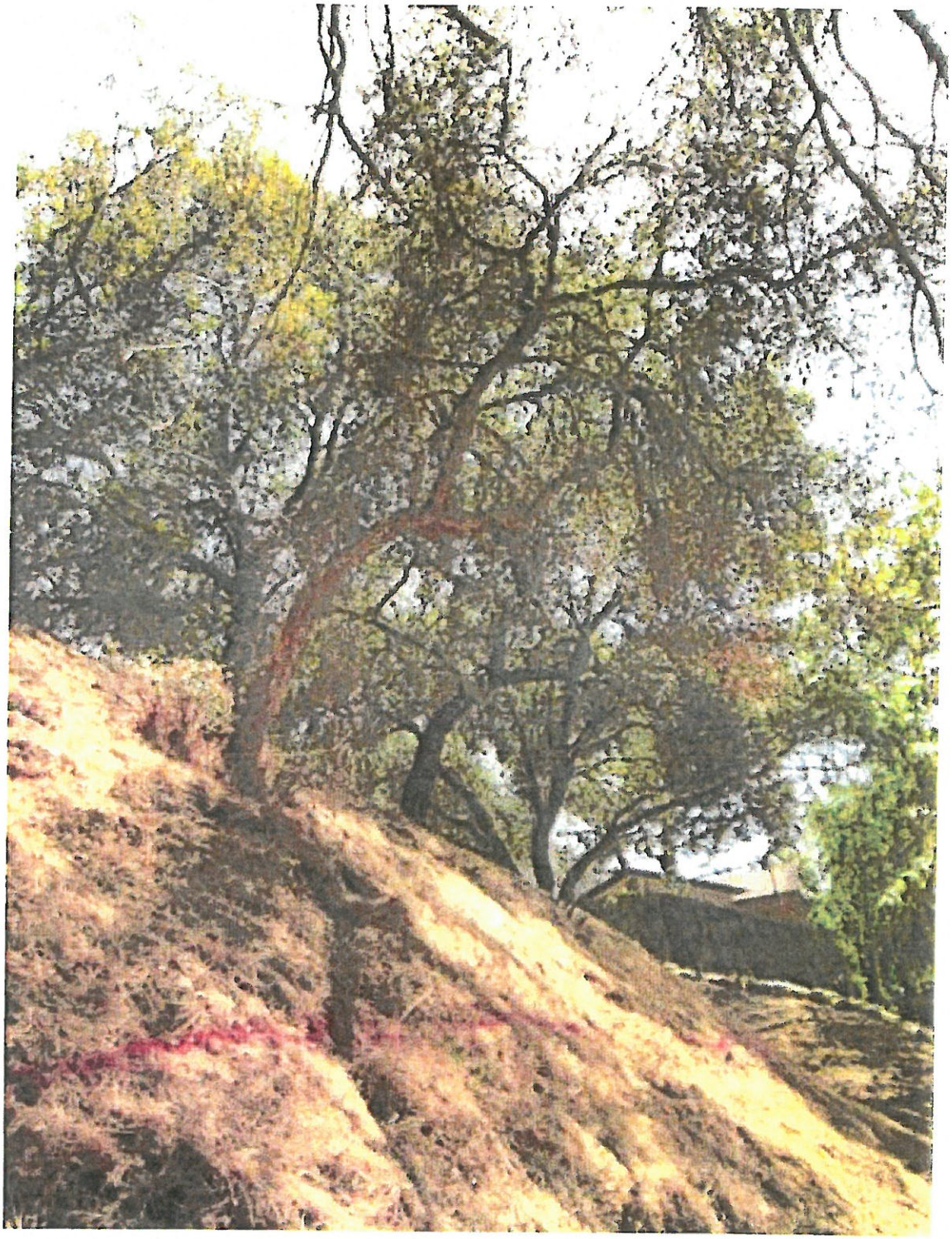
OAK #17 – LOOKING NE



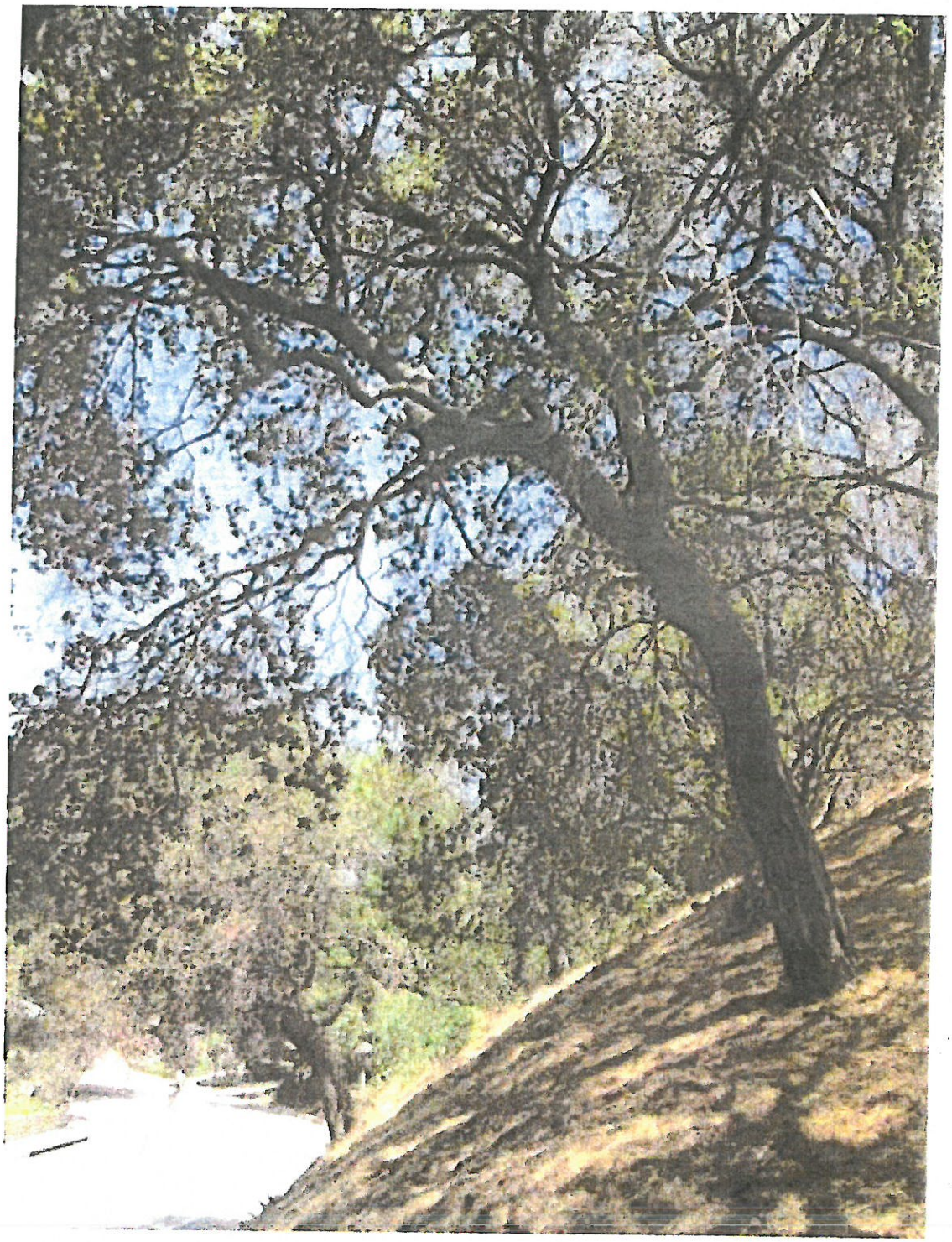
SCRUB OAK #18 – NATIVE WOOD RAT NEST AT BASE (PROTECT)



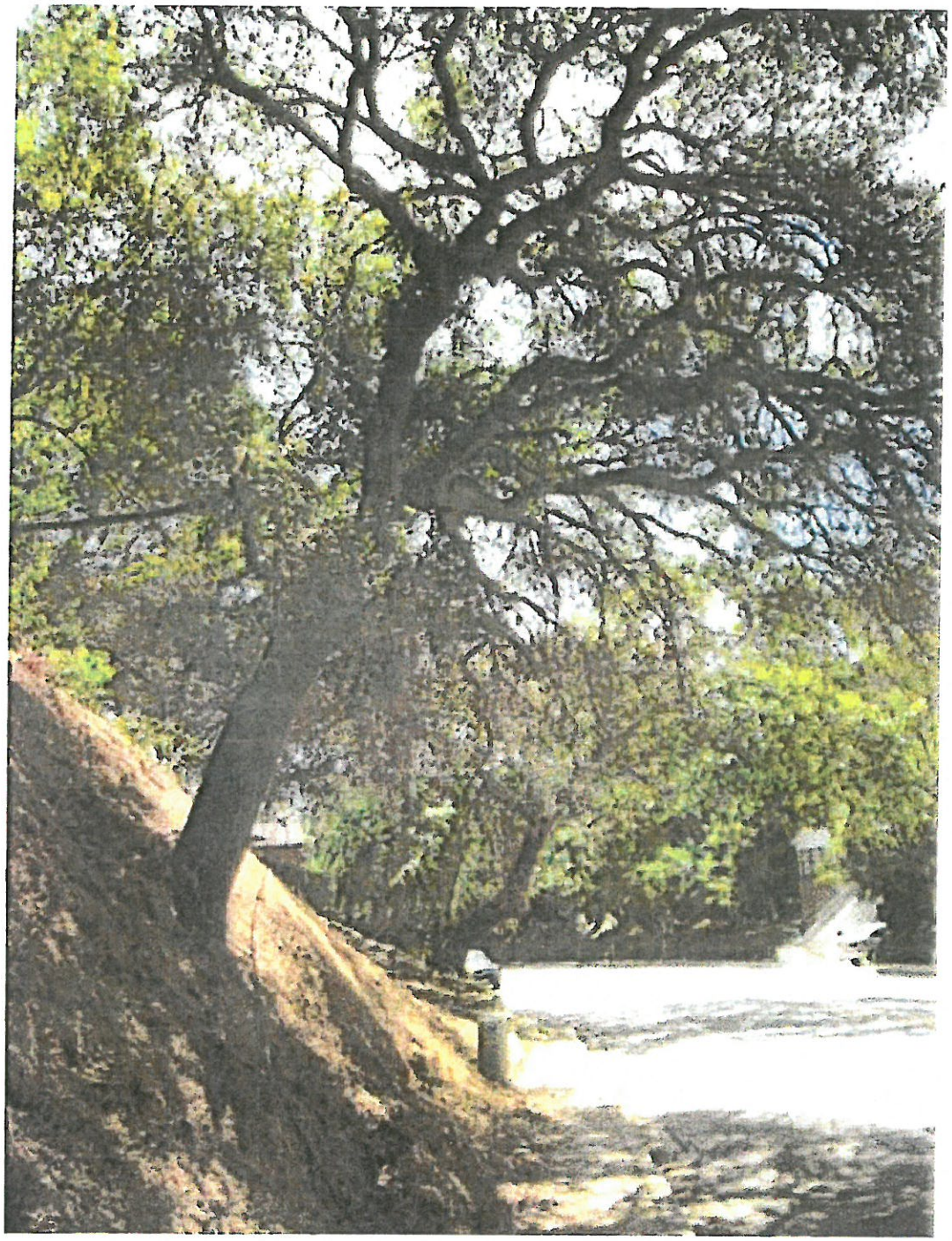
OAK #19 – LOOKING TOWARDS CHEVY CHASE



OAK 19, 22 AND 20 GOING LEFT TO RIGHT



COAST LIVE OAK #21 ON RIGHT AND SCRUB OAK #22 ON LEFT



OAK #23 ON SLOPE ABOVE CHEVY CHASE

CALIFORNIA SYCAMORE #24 OVER STREET ON CHEVY CHASE

APPENDIX 'C' - ASSUMPTIONS

ASSUMPTIONS AND LIMITING CONDITIONS

1. Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however, Rebecca Latta Consulting can neither guarantee nor be responsible for the accuracy of information provided by others.

2. The consultants shall not be required to give testimony or attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services.

3. Loss or alteration of any part of this report invalidates the entire report.

4. Possession of this report or a copy thereof does not imply right of publication or use for any purpose other than the person to whom it is addressed, without the prior expressed written or verbal consent of the Rebecca Latta.

5. Neither all or any part of the contents of this report shall be conveyed by anyone, including the client, to the public through advertising, public relations, news sales or other media without the prior expressed or written consent of Rebecca Latta Consulting particularly as to value conclusions, identity of consultant, or reference to any professional society or institute or any initialed designation conferred upon the consultant as stated in their qualifications.

6. This report and values expressed herein represent the opinion of the Rebecca Latta Consulting and the fee is in no way contingent upon the reporting of a specified value, stipulated results, the occurrence of subsequent event, nor upon any finding to be reported.

7. Unless expressed otherwise: (1) information contained in this report covers only those items that were directly examined and reflects the condition of those items at the time of inspection(s) and (2) the inspection is limited to macro-level visual examination.

8. ADVISEMENT: The client is advised that should physical or biological concerns be evidenced for any specimen evaluated in a report, prudent further investigation, detailed analysis or remedial action may be required. Trees are living organisms that respond to environmental changes influencing the development, health and vigor of the specimen(s).

APPENDIX 'D' – CERTIFICATE OF PERFORMANCE

CERTIFICATE OF PERFORMANCE

I, Rebecca Latta, certify that:

- I have personally inspected the trees described in this report and have accurately stated my findings. The extent of the evaluation is stated in the attached report;
- I have no current or future interest in the vegetation or the property that is the subject of the report and no bias with respect to the parties involved;
- The analysis, opinions, evaluation, investigation and conclusions have been prepared using accepted arboricultural practices;
- I performed the work myself and prepared the report and reviewed the report, except as specifically indicated in the report;
- 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 the results if the assignment, attainment of stipulated results or the occurrence of any subsequent events.
- I further state that I am a member in good standing with American Society of Consulting Arborists and the International Society of Arboriculture. I have been involved in the practice of arboriculture and the care and study of trees for 25 years.

Signed: Rebecca Latta Date: October 26, 2017

Rebecca Latta

Owner, Rebecca Latta Consulting, Glendora CA
rlattaconsulting@gmail.com
ISA Certified Arborist WE4264A
ISA Tree Risk Assessment Qualified
Member, American Society of Consulting Arborists

CERTIFIED ARBORIST ISA

ASCA AMERICAN SOCIETY of CONSULTING ARBORISTS