ATTACHMENT B

Michael L. Bench
Consulting Arborist
ISA – WC 1897A

ARBORIST REPORT
AND
TREE PRESERVATION PLAN
5633 ARBORETUM DRIVE
LOS ALTOS, CALIFORNIA

PREPARED AT THE REQUEST OF
ERIC KENG, ARCHITECT
DL ARCHITECTURE AND PLANNING
616 RAMONA STREET, SUITE 21
PALO ALTO, CALIFORNIA 95060

PREPARED FOR
MR. WILLIAMS ZHANG

PREPARED BY
MICHAEL L. BENCH
CONSULTING ARBORIST

SITE OBSERVATIONS:
MAY 21, 2018

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Arborist Report
5633 Arboretum Drive
Los Altos, California

Table of Contents

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A Survey of the Existing Trees
Williams Zhang Property
5633 Arboretum Drive
Los Altos Hills, California

Assignment
I was asked by Mr. Eric Keng, Architect, to prepare an Arborist Report of the existing trees, Williams Zhang property, 5633 Arboretum Drive, Los Altos, California.

The plans provided for this report were: The Topographic Site Plan, prepared by Christensen and Plouff Land Surveying, dated 6-26-16; the proposed Site Plan, prepared by DL Architecture and Planning, Sheet SK-1, dated 4-1-21; and the Exterior Elevation Plans, prepared by DL Architecture and Planning, Sheets SK-3.1, dated 4-1-21.

Methods
The trunks of the trees were measured using a diameter tape at 4 feet above soil grade (referred to as DBH or Diameter at Breast Height), according to the International Society of Arboriculture (ISA) standards. The canopy height and spread were estimated using visual references only.

The condition of each tree was observed by visual assessment only from a standing position without climbing or using aerial equipment. No specialized equipment was used. Consequently, it is possible that individual tree(s) may have internal defects, which are not detectable by visual inspection. Invasive exploratory inspection and analysis is beyond the scope of this evaluation.

Observations
I inspected the trees on May 21, 2021.

A total of 52 trees are included in this report. Trees # 1-49 are located on this property. Trees # 50, 51, and 52 are located on neighboring properties. The canopies of Trees # 50, 51, and 52 extend on to this site, and no doubt their root systems extend onto this site as well.

I affixed a metallic tag on each tree bearing its number. With some exceptions, these tags are located at a height of approximately 5-6 feet generally facing the interior of the property. On the Italian cypress (*Cupressus sempervirens*) trees the tags were affixed a few inches above grade so they could be seen. No tags were affixed to the trees on the neighboring properties.

The 52 trees are listed by number on the attached List of Trees, which follows this text. These Data Sheets (2 pages) provide the basic information about each tree, including the species, the trunk diameter(s), height, spread, health, and an estimate of structural integrity. The health and structural integrity is rated on a scale of 1-5: (1) Excellent, (2) Good, (3) Fair, (4) Poor, (5) Extremely Poor.

I have marked up the Site Plan to show the locations of the 52 trees. I call this mark-up the Tree Map, which is included in the attachments.

Virtually all of the trees on this property are suffering from drought stress. Many trees have branch die-back and browning as a result of drought. A few trees have died. I included the dead trees to indicate the severity of the drought stress.

All of the coast redwood (*Sequoia sempervirens*) specimens have sparse and have browning in the top 1/3 of their canopies. These redwoods will continue to decline and some may die if irrigation is not provided this summer.

The Monterey Cypress (Hesperocyparis macrocarpa) specimens have significant die-back in their canopies, and it would not be surprising if one or more of these died this summer should irrigation not be provided.

For those trees expected to survive, irrigation must be provided immediately. If the existing irrigation system is not functional and cannot be made functional, temporary irrigation must be set up as soon as possible.

Risks to Trees by Proposed Construction
The plan proposes to demolish the existing residence, the pool, the garage, and the small building located at the southeast corner of the property, and to construct a new residence and driveway.

The removal of the concrete slab of the existing garage and of the adjacent existing driveway poses a significant risk to the root system of Tree # 4. The roots of Tree # 4 are expected to exist just under the surface of these surfaces. The garage and the paved driveway cover approximately 50% of the root system of Tree # 4. The root damage could be severe, unless done as instructed later in this report under the Tree Protection Plan.

The small out building located at the southeast corner of this site does not appear to have a significant foundation. It does not appear that there would be a severe risk to the neighboring Trees #50 and 51. Nevertheless, as a precaution, it would be essential to follow the same procedures for protecting the root systems of Trees # 50 and 51, as recommended for the preservation of Tree # 4 in the Tree Protection Plan.

Trees # 49, 5, 6, 23, and 24 are located in the footprint of the proposed new residence. Trees # 7, 8, 9, 10, 11, 25, and 35 are expected to be removed or severely damaged by demolition or grading/ compaction for the new residence. Trees # 29 and 30 are dead and

would be removed regardless of construction. Among these 12 trees, the largest specimens are Trees # 5, 6 and 7, which have trunks12 inches in diameter just above grade. In my opinion, the appropriate height to measure these specimens (*Cupressus sempervirens*) is at just above grade, because of the branching structure of this species.

Construction of the new driveway could pose another significant risk to Tree # 4 if the construction would be typical driveway construction. That is, excavation for 6-12 inches in depth, followed by compacted fill, followed by paving. Pervious pavers are sometimes offered as an alternative. It is commonly believed that pervious pavers is a better option with the belief that more roots would be better preserved. In actually, the stabilization requirements to install pavers removes all of the roots to stabilize the soil and compacts the new base materials so severe that new roots do not regenerate under the pavers. Thus, "pervious pavers" are not really pervious and are not a good alternative at many locations.

Tree Protection Plan

Demolition

1. I expect an excavator to be used for the demolition, the typical practice these days. However, an excavator or a skid steer tractor must not be used or driven inside the canopies of Trees # 4, 50 and 51 to demolish and remove the garage slab and the small outbuilding located at the southeast corner of this site.
   The area within the driplines of these trees, the demolition must be done by hand using hand equipment. The concrete slab must be broken into small pieces using a jack hammer and removed by hand using laborers. The objective is to preserve the roots directly under the concrete slab and the paving.
2. An excavator may be used to sit outside the dripline of Tree # 4 and the arm may be used to reach inside the dripline to grab bites of the garage building and pull the material outside the dripline for loading.
3. The concrete garage slab may be used to drive on until it is removed.
4. Immediately following the removal of the concrete slab and out building, the area inside the dripline of Trees # 4, 50, and 51 must be mitigated as follows:
   a. Cover the area inside the driplines with 6 full inches of wood chips. This work must be done by hand. It will likely take about 10 cubic yards of wood chips.
   b. Water the area down thoroughly with a sprinkler allowing the sprinkler to run for at least an hour to thoroughly soak the chips and the soil.
   c. Then fence the area to the edge of the dripline with Tree Protective Fencing, described in the next section – Protection During Construction.
5. The remainder of the existing residence and hardscape may be demolished and removed using an excavator or other equipment.
6. The area within the driplines of Trees # 4, 50 and 51 will be strickly "off limits" during the rest of demolition and construction.

Protection During Construction

7. It will be essential to provide temporary Tree Protective Fencing during the construction period to protect individual trees or groups of trees. Construction vehicles must not be driven or parking inside the driplines of trees. Additionally materials must not be stored or piled inside the driplines of preserved trees. I have indicated the recommended locations of Tree Protective Fencing on the attached map. This fencing must protect a sufficient portion of the root zone to be effective. In my experience, the protective fencing must:
   - Consist of chain link fencing and having a minimum height of 6 feet.
   - Be mounted on steel posts driven approximately 2 feet into the soil.
   - Fencing posts must be located a maximum of 10 feet on center.
   - Protective fencing must be installed prior to the arrival of materials, vehicles, or equipment.
   - Protective fencing must not be moved, even temporarily, and must remain in place until all construction is completed, unless approved by the Project Arborist.

8. Trees, which will suffer any amount of root loss or canopy loss, must be irrigated throughout the entire construction period during the dry months (any month receiving less than 1 inch of rainfall). Irrigate a minimum of 10 gallons for each inch of trunk diameter every two weeks. A soaker hose or a drip line is preferred for this purpose, but the soaker hose(s) must be located near the dripline (not near the trunk) to be effective. I recommend irrigation be provided to **all** trees planned to be preserved partially as a result of some construction damage and partially because these trees are suffering from drought stress. If the existing irrigation system cannot be used, a temporary water supply must be provided. A water truck would not supply sufficient water, as a water truck provides a surface splash. The water must be applied so that moisture would penetrate to a minimum depth of 15-18 inches.

9. If any underground utilities would be installed, it will be essential that the location of trenches be planned outside the drip lines of trees. Should this not be feasible for any trees, I recommend that the Project Arborist be consulted for mitigation options, if any.

10. Construction of the new driveway inside the dripline of Tree # 4 will require:
    a. Removing the Tree Protective Fencing up to the dripline of Tree # 50 and scraping off the wood chips. This must be done by hand using hand tools.
    b. New concrete would be an acceptable material for the driveway, provided there would be **no** grading. The concrete must be poured on top of the existing grade.

11. Materials must not be stored, stockpiled, dumped, or buried inside the driplines of protected trees.

12. Excavated soil must not be piled or dumped, even temporarily, inside the driplines of protected trees.

13. Any pruning must be done by an arborist certified by the ISA (International Society of Arboriculture) and according to ISA, Western Chapter Standards, 1998.

14. Any pathways or other hardscape inside the driplines of protected trees must be constructed completely on top of the existing soil grade without excavation.

15. New sprinkler irrigation must not be designed to strike the trunks of trees, because of potential high risk of disease infection.

16. Landscape irrigation trenches must be a minimum distance of 10 times the trunk diameter from the trunks of protected trees.

17. Landscape materials (cobbles, decorative bark, stones, fencing, etc.) must not be installed directly in contact with the bark of trees because of the risk of serious disease infection to the trunks.

18. The plants that are planted inside the driplines of oak trees must be of species that are compatible with the environmental and cultural requirements of oaks trees. A publication about plants compatible with California native oaks can be obtained from the California Oak Foundation, 1212 Broadway, Suite 810, Oakland 94612.

Respectfully submitted,

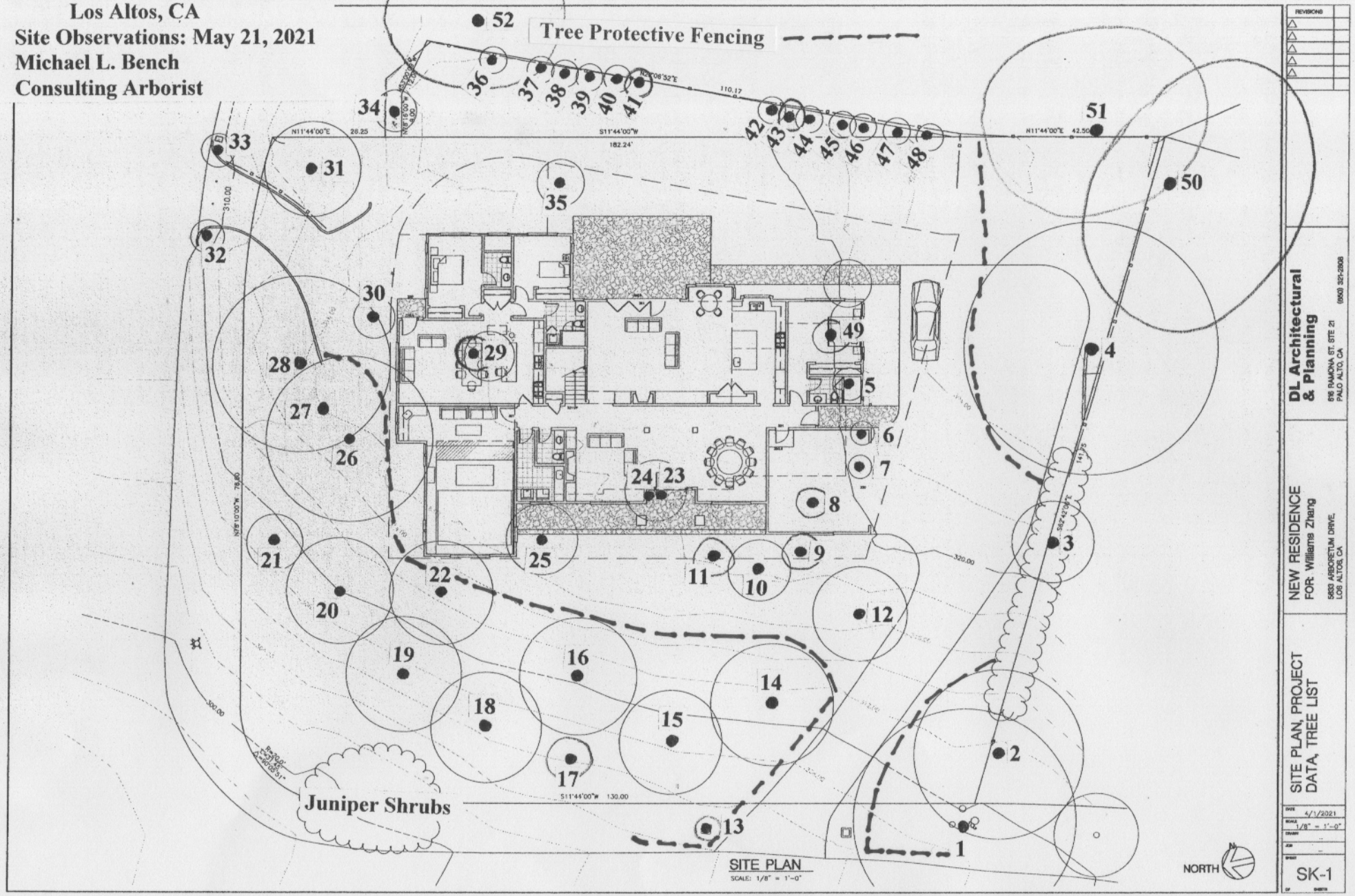
Michael L. Bench, Consulting Arborist
International Society of Arboriculture Certification # WE 1897A
American Society of Consulting Arborists Member

Attachments: List of Trees
Tree Map
Tree Protective Fencing Map
Assumptions and Limiting Conditions

	Field Data Sheet	Trunk DBH (Diameter in Inches at Breast Height)	Canopy Size	Condition Rating: 1 - 5 1=Excellent 2=Good 3=Fair 4=Poor 5=Very Poor	DBH = Dia. at 48 inches (E) = Estimated CD w/ IB = Co-Dominant Leaders with Imbedded Bark, a Structural Weakness (BF) = Below Lowest Fork
Tree #	**Tree Name**	**DBH In Inches**	**Height / Spread**	**Health / Structure**	**Notes**
1	Coast Redwood (Sequoia sempervirens)	17 / 15 / 14 / 12	20 / 30	2 / 4	Topped for Line Clearing; Tree wraps Around Power Pole
2	Coast Live Oak (Quercus agrifolia)	13	35 / 30	2 / 1	
3	Wild Plum (Prunus cerasifera)	5 / 4 / 2 / 2	15 / 20	3 / 1	Canopy Die-Back from Drought Stress
4	Coast Live Oak	19	50 / 55	1 / 2	
5	Italian Cypress (Cupressus sempervirens)	12	60 / 10	2 / 1	Canopy Die-Back from Drought Stress
6	Italian Cypress	12	55 / 10	2 / 1	
7	Italian Cypress	12	50 / 10	2 / 1	Canopy Die-Back from Drought Stress
8	Italian Cypress	4	12 / 5	2 / 1	
9	Aristocrat Pear (Prunus calleryana 'Arictocrat'	4	15 / 10	2 / 1	Canopy Die-Back from Drought Stress
10	Monterey Cypress (Hesperocyparis macrocarpa)	5	20 / 15	3 / 1	Canopy Die-Back from Drought Stress
11	Victorian Box (Pittosporum undulatum)	6	20 / 15	5 / 3	Significant Canopy Die-Back from Drought Stress
12	Coast Redwood	10	20 / 15	Dead	From Apparent Drought Stress
13	Italian Cypress	8	20 / 6	1 / 1	
14	Coast Redwood	23	60 / 30	3 / 2	Top 1/3 of Canopy Sparse; Browning
15	Coast Redwood	19	60 / 30	3 / 3	Top 1/3 of Canopy Sparse; Browning
16	Coast Redwood	16	75 / 35	3 / 1	Top 1/3 of Canopy Sparse; Browning
17	Coast Redwood	3 / 3 / 2	10 / 12	2 / 4	Topped at Grade
18	Coast Redwood	18	50 / 30	3 / 1	Top 1/3 of Canopy Sparse; Browning
19	Coast Redwood	18	60 / 30	3 / 1	Top 1/3 of Canopy Sparse; Browning
20	Coast Redwood	8	15 / 15	3 / 1	Sparse Canopy Overall; Browning
21	Coast Redwood	6	15 / 15	4 / 2	Significant Canopy Die-Back from Drought Stress
22	Victorian Box	8 / 8 / 6 / 5 / 5	30 / 30	3 / 1	Branch Tip Die-Back from Drought Stress
23	Italian Cypress	5 / 3	20 / 6	2 / 1	Slight Browning
24	Italian Cypress	5 / 3	20 / 6	2 / 1	Slight Browning
25	Japanese privet (Ligustrum japonicum)	7	20 / 20	2 / 1	Severe Sunscald on Trunk
26	Monterey Cypress	23	50 / 50	4 / 2	Significant Browning from Drought Stress

	Field Data Sheet	Trunk DBH (Diameter in Inches at Breast Height)	Canopy Size	Condition Rating: 1 - 5 1=Excellent 2=Good 3=Fair 4=Poor 5=Very Poor	DBH = Dia. at 48 inches (E) = Estimated CD w/ IB = Co-Dominant Leaders with Imbedded Bark, a Structural Weakness (BF) = Below Lowest Fork
Tree #	**Tree Name**	**DBH In Inches**	**Height / Spread**	**Health / Structure**	**Notes**
27	Monterey Cypress (Hesperocyparis macrocarpa)	17	-------	Dead	Laying on the Ground
28	Monterey Cypress	18 / 12 / 8	50 / 50	4 / 2	Significant Browning from Drought Stress
29	Japanese Maple (Acer palmatum)	6 / 5 / 3	10 / 10	Dead	Apparently from Drought
30	Cypress Species	5 / 3	10 / 10	Dead	Apparently from Drought
31	Coast Redwood (Sequoia sempervirens)	16	45 / 30	3 / 1	Sparse Canopy w/ Browning from Drought Stress
32	Italian Cypress (Cupressus sempervirens)	8	15 / 6	1 / 1	
33	Italian Cypress	8	15 / 6	1 / 1	
34	Monterey Cypress	10 / 9	40 / 30	2 / 3	CD w/ IB; Some Canopy Browning
35	Japanese privet (Ligustrum japonicum)	9	15 / 15	3 / 3	Browning & Die-Back from Drought Stress
36	Monterey Cypress	5	20 / 20	2 / 1	Significant Browning from Drought Stress
37	Monterey Cypress	8	20 / 20	2 / 1	Browning from Drought Stress
38	Monterey Cypress	6 / 6	20 / 20	2 / 1	Some Browning from Drought
39	Monterey Cypress	6 / 6	20 / 20	2 / 1	Some Browning from Drought
40	Monterey Cypress	8	20 / 20	2 / 1	Some Browning from Drought
41	Monterey Cypress	11	20 / 20	2 / 1	Some Browning from Drought
42	Monterey Cypress	11	20 / 20	2 / 1	Some Browning from Drought
43	Monterey Cypress	10	20 / 20	2 / 1	Some Browning from Drought
44	Monterey Cypress	9	20 / 20	3 / 1	Some Browning from Drought
45	Monterey Cypress	10 / 8 / 5	20 / 20	3 / 1	Some Browning from Drought
46	Monterey Cypress	6	20 / 20	4 / 3	Topped & Browning from Drought Stress
47	Monterey Cypress	8	20 / 20	5 / 4	Significant Browning from Drought Stress
48	Monterey Cypress	11	20 / 20	3 / 1	Significant Browning from Drought Stress
49	Italian Cypress	6	15 / 6	2 / 1	Some Browning from Drought
50	Coast Live Oak (Quercus agrifolia)	40 (E)	50 / 50	1 / 1	
51	Coast Live Oak	30 (E)	50 / 60	1 / 1	
52	Coast Live Oak	20 (E)	50 / 45	1 / 1	

Tree Map And Tree Protective Fencing Plan
A Mark-Up of the Site Plan
Site: 5633 Arboretum Drive
Los Altos, CA
Site Observations: May 21, 2021
Michael L. Bench
Consulting Arborist



Tree Map
A Mark-Up of the Site Plan
Site: 5633 Arboretum Drive
Los Altos, CA
Site Observations: May 21, 2021
Michael L. Bench
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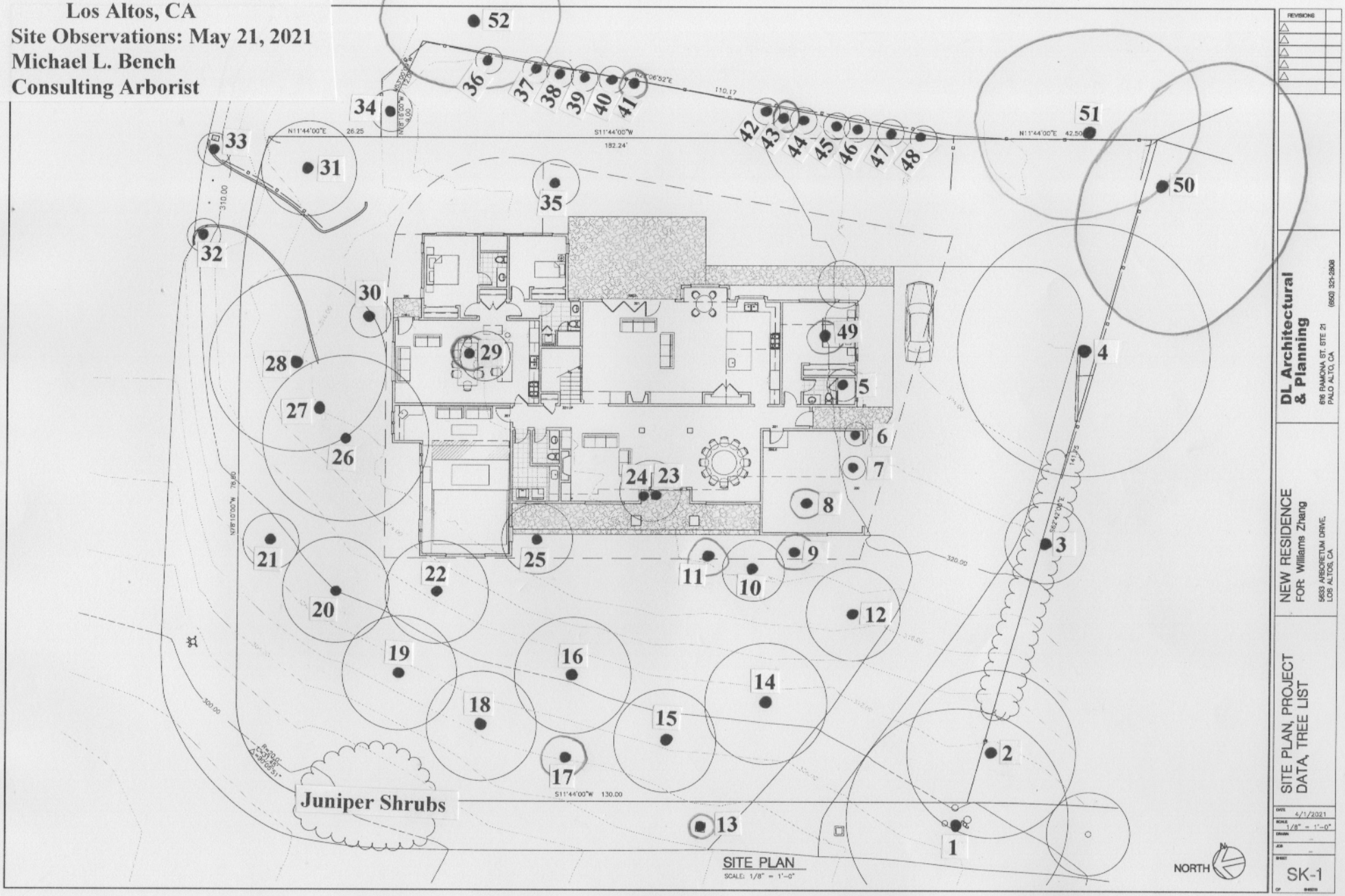

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Site Observations: May 21, 2021
Property: Williams Zhang Property Subject: Existing Trees
5633 Arboretum Drive
Los Altos, California

Assumptions and Limiting Conditions

1. Any description provided to the consulting arborist/appraiser is assumed to be correct. No responsibility is assumed for legal matters in character nor is any opinion rendered as to the quality of any title.

2. The consulting arborist/appraiser can neither guarantee nor be responsible for the accuracy of information provided by others.

3. The consulting arborist/appraiser shall not be required to give testimony or to attend court by reason of this report/appraisal unless written arrangements are made, including payment of additional fees for services.

4. Loss or removal of any part of this report invalidates the entire report/appraisal.

5. Possession of this report, or any copy thereof, does not imply right of publication or use for any purpose by any person other than to whom this report is addressed without written consent of this appraiser/consultant.

6. This report and any appraised values expressed herein represent the opinion of the consultant/appraiser. Further, the appraiser/consultant's fee is in no way contingent upon the reporting of a specified value or upon any finding or recommendation reported.

7. Sketches, diagrams, graphs, photos, etc., in this report are intended as visual aides and are not done necessarily to scale and should not be construed as engineering information or specifications.

8. This report makes every attempt to be in conformity with generally acceptable evaluation/diagnostic/appraisal methods and procedures, as recommended by the International Society of Arboriculture.

9. No tree described in this report/evaluation has been climbed, unless otherwise stated. As such, structural defects that could only have been discovered by climbing are not reported. Likewise, a full root collar inspection, consisting of the excavation of soil around the tree for the purpose of uncovering major root defects/weaknesses, has not been performed, unless otherwise stated. I take no responsibility for any root defects, which were not uncovered by such an inspection.

Consulting Arborist Disclosure Statement
As a consulting arborist, I provide opinions, recommendations, and appraisals about trees based on observations, information provided, education, and experience. I recommend procedures in the attempt to reduce the risk of branch and tree failures, to improve the health of trees, and/or to enhance the beauty of trees. Clients my choose to accept or to disregard my recommendations, or may seek the advice of others.

I cannot detect every defect or condition, which may cause a structural failure of a tree. Trees are living organisms, highly variable and subject to numerous environmental influences. Trees sometimes fail unpredictably in ways we do not fully understand. Conditions, flaws, or weaknesses are often hidden inside stems/trunks or below ground and, thus, elude detection. I cannot guarantee the health and safety of any tree. Likewise, remedial treatments, like medicine, cannot be guaranteed.

Trees cannot be controlled but can be managed to a limited degree. To live rear trees is to accept some degree of risk. The only way to eliminate all risk, associated with trees, is to eliminate all trees.